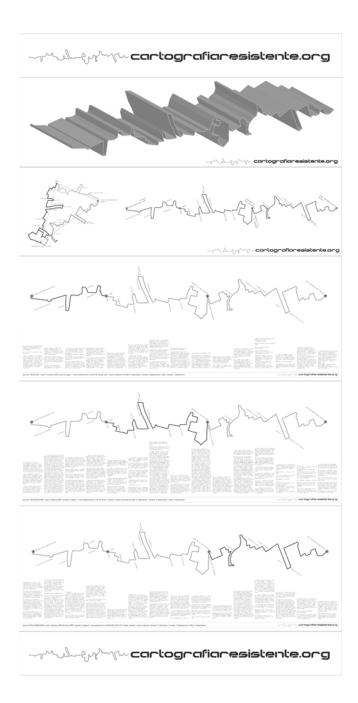
Cartografia Resistente: An Experience of Participatory Mapping Implementing Open Source Technology

1 Framework

As a consequence of the economical globalization process, the concept of 'city' is being strongly redefined in its nature by connective processes transcending its scale, dimensions, and institutional status (Moulder 2002). The city limits are redefined by means of communication, while urban space is increasingly mediated by electronic devices (Graham and Marvin 2001; Reinhold 2002). Media, as well as mobility, assume a fundamental role in the construction of new diasporic identities substituting traditional forms of citizenship (Appadurai 1996). Nowadays, we think about urbanity as a spatial condition more related to access protocols, culture and communication than to physical constraints and form (Virilio 1984). The urban field is no longer defined by administrative or physical borders, by quantitative demographic parameters, by political autonomy or homogeneous cultural identity alone, but by the capacity to be connected and to develop specific roles in a global net, to access distribution systems and to be visible on the global stage (Castells 1996; Harvey 2006; Sassen 2007). While material production of goods is displaced to peripheral or dispersed locations, symbolic production assumes an increasing relevance in structuring the urban economy (Lash & Urry 1994). On the other hand, the concept of community is increasingly less dependent on contiguity and co-presence and more on shared interests, on networks, and cultures. (Castells 1997)

In a similar scenario, the space experienced by urban dwellers is increasingly a mediated/mediatic landscape, strongly influencing the common perception of the physical environment (Mitchell 1996). The everyday life space of the citizen tends to conflate with an exogenous, privatized and commoditized *mediascape* that provides the effective environment (or *platform*) for an increasing quantity of personal interactions.



Such a mediated space becomes one of the fundamental reincarnations of the declining public space, opening a controversial debate (Tripodi 2004a). On the one hand, geographical representations, planning visions and, in general, all spatial narratives constituting what Henri Lefebvre (1974) characterized as conceived space are mainly determined by concentrated powers, strong economical and political actors which exercise a subtle and often neglected hegemony on media channels. On the other hand, such top-down spatial narratives, that historically have always been the product of concentrated powers and specialized institutions, are ostensibly challenged today by a new distributed capacity of representation (Colini 2004) developed in the overarching lived space. Preliminary assumption of this paper is that the increasing complexity of urban reality calls for new complex, plural, flexible forms of narrative in order to describe the fast evolution of the human and cultural landscape in present time. New digital technologies are not only essential tools for describing the emerging urban reality, but also constitutive elements of such a reality (Baudrillard 1993); thus, the search for new narratives should provide not only essential means for the transmission of contemporary urban cultures, but also for the reproduction and the empowerment of local communities. They respond to a necessity of establishing new forms of commons, linking up representations of space to spaces of representation.

Yet new technological developments provide a variety of tools that can be used in order to build shared knowledge from a bottom up perspective. In particular, much attention is currently being placed on locative technologies that, in connection with the explosion of the social web, offer an unprecedented capacity of building and sharing data bases on local contexts (Gordon 2007). Nevertheless, the results in terms of concrete participative action and community empowerment do not seem to be impressive. Driven mainly by commercial purposes, the development of such tools still seems to be lacking the capacity to build actual social empowerment and to enable effective practice of knowledge sharing, rather instigating a fragmentary explosion of egocentered representations, as the so called blogosphere often appears to be. Furthermore, one of the critical points of this paper is to underline the excessive relevance given to locative features based on global positioning systems, fostering a form of surveillance syndrome while not engendering an effective thickness of the resulting knowledge in regards to the lived space of citizens. On the contrary, the capacity to associate objects with coordinates in a Cartesian grid is only one partial and limited way to map the complex reality of urban life, that calls for differentiated, multiple forms of narrative. Last point at stakes here is the control of the physical environment hosting the socially built representational landscape. As a matter of fact, the so-called web 2.0 development faces the uncontested domination of corporate entities that tend to monopolize the construction of global geographical databases, creating a situation where the common production of knowledge becomes subordinate to infrastructural systems provided by corporate economy. Such a concentration calls for a radical reflection on the development and sustainability of the incoming public sphere, one which is reliant upon the premise of a privately owned, designed, and managed infrastructure.



2 Case study

The Cartografia Resistente (Resistant Cartography) project, initiated in 2004 in Florence as a laboratory of urban exploration, is an offspring of similar considerations and concerns. The aim of the project was to develop a psychogeographical practice of assessment and representation of the city of Florence, from a bottom up, shared and politically committed perspective, producing different, antagonist visions for the city: a city increasingly affected by a global capitalist economy, victim of overwhelming fluxes connected to tourism economy, and pathologically crystallized as a profitable cultural heritage (Tripodi 2004b; Colini et al. 2008). The final, ambitious objective was the shared construction of an alternative urban atlas of Florence, while developing a specific communication platform accessible to the widest public. The project was started by an informal group brought together by a critical perspective on the city's transformation, mostly activists that formerly shared experiences of conflict for social space and young people squatting dismissed areas or creating temporary autonomous zones (Paba 2002, Maggio 2004). The group involved students coming from different disciplines, activists and citizens, and some students and scholars of urban planning and architecture, among which I assumed a coordination role. The laboratory was first developed in the context of the Elettro+, a self-managed cultural center gathering numerous cultural and social projects (Tripodi 2006), but successively went on as an independent and nomadic experience sharing a virtual space.

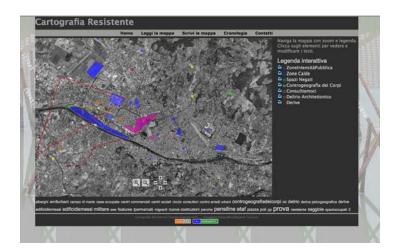
As a first step, during a two days kick-off workshop, the group established its objectives through an articulated brainstorming. The discussion spread in multiple directions, generating many suggestions, identifying possible fields of application. It highlighted different aspects of the urban configuration that would have been interesting to investigate, in order to produce maps and other possible narratives about the political, the physical and the mental landscape of the city of Florence. A first wish list of assessment operations included such maps as one of the "intensity of public life", one of the denied – inaccessible, prohibited – spaces, one of "bodies' counter-geography" – everyday life practices redefining planned spaces – a map of powers, and so on. This first phase revealed a variety of different approaches, interests and personal competences of the participants; that on one side represented a risk of being dispersed and ineffectual, but on the other side was a richness to be exploited and a stimulat-

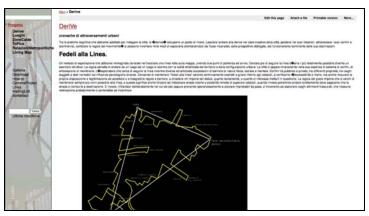
ing challenge to imagine plural and articulated forms of representation for the complexity of the urban reality we all were immersed in.

The project was ambitious, although totally lacking any financial and logistic resource. The participants' involvement was on an entirely voluntary basis. A central problem was how to tackle this task given the limited time provided by activists and amateurs, occasionally supported by a professional interest on the topic. The successive step has been to adopt collaborative online tools to acquire and organize the collected information: having an online data storage is an effective way to coordinate a distributed and discontinuous document activity and a relatively cheap way to make the produced work accessible. Indeed, we activated a website responding to the double objective to be a workshop for elaboration and a publication site. The leading concept here was to cancel the distance between provider and consumer of information, between cartographer and inhabitant, between who analyzes the urban space's reality and who lives in and is subjected to that reality. Potentially, everyone can participate in the elaboration of the dynamic atlas, adding or modifying an item, describing a place or an event or offering a different interpretation. It is a model corresponding to the philosophy of many social web experiences, as for instance wikipedia, indymedia et cetera, but at that moment, almost 4 years ago, even for ourselves many implications of this model weren't clearly formulated.

The configuration initially adopted used an open source collaborative writing software *wiki* and a photo gallery. The wiki system allows to insert text, add pages and upload different sort of files. The gallery collects images organized in folders. Access to the edit function is without restriction, as a generic username and password are published on the site itself. We defined some basic analytic categories to organize the collected materials: places, exploration paths, topics – categories that will be soon completed and developed with the use. This was the starting point for assembling a collective narration, later integrated with a map enabling participants to tag texts and images on a topographic representation. After researching the OS software freely available, we chose *WorldKit*¹, providing a map that users can modify online, adding points, lines and areas and connecting them with text pages, pictures and hyperlinks.

¹ http://worldkit.org/





A photographic aerial view of Florence has been uploaded as cartographic base.² The online map allowed to superimpose different layers to which were assigned *grosso modo* the same analytical categories present in the wiki. Layers can be turned on and off by the user. At this point, the online map provided a further simple and intuitive way to index and navigate the contents of the website. An open database, prefiguring our atlas, was taking form. Important detail, all the parts of the system, wiki, gallery and map, were hosted by independent,

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 $^{^2}$ That raised an issue about rights on cartographic data, the need for conceiving cartography as a common resource and the ongoing European directive Inspire. See Jo Walsh, <code>Exploring the Eurospatial Cartel</code> accessible at http://www.cartografiaresistente.org/twiki/bin/view/Main/CartografiaOpenSource

non-commercial servers, part of activist networks. This was an important ethical choice in order to maintain total control of our material, but also a source of trouble and instability, due to the reduced reliability of such providers.

3 Exploration

The second step has been to start a physical exploration of the urban space, balancing the knowledge mediated by digital devices with a concrete experience of the territory, and introducing a psycho-geographical approach (Sadler 1998). Somehow, two opposite but not irreconcilable attitudes merged in the collective: on one side, a more *situationist* vision, influenced by the tendency to "get lost" in the city, by a certain *flanérie*, consequently interested in noncartesian forms of representation of the landscape (La Cecla 1988; Solnit 2005). On the other side, a more analytical and critical vision, interested in developing a critical gaze on city's transformation, on speculative processes, on politics and repression, providing practical information and supporting activism and any form of resistance to the dominant processes. These two souls constitute since the beginning the core of the CR project, feeding an interesting creative tension that still has not been sedated, without one prevailing over the other.



Indeed, we started a practice of urban drifts (derive), exploring Florence's periphery and exploring, at the same time, new modes of looking at the city (Careri 2002). The first cycle, named "triangulation", has been carried out tracing a triangle on the map of Florence, a highly symbolic form indeed, connecting three pivotal landscape elements of the Northern zone of Florence, in the part of the city subjected to the most important expansive processes: the former FIAT factory, a dismissed brownfield being reconverted in tertiary and residential area, the hugest, contested speculative development project in Florence today; the IKEA building, an emblem of the global post-modern non-place; and the Sollicciano prison, a modern and progressive version of an extreme total institution in the Foucaultian view. Three places representing an interesting combination of powers and symbolisms, but which could be also considered as a total pretext. The idea was to try to follow as faithfully as possible the straight line drafted on the map, dealing in practice with all the implicit limits of the territory, with all its natural, legal and psychological borders, confronting all sort of obstacles that one can run into walking through the city. The attempt to follow an abstract line on the field becomes a way to read the fragmentation, the parcelization and the chaotic distribution of internal borders of the city.

The route has been accomplished in four full days, one segment being too long for a single day trip, distributed in several weeks. Participants took note of the experience in different ways, writing, taking pictures, capturing sounds or videotaping. A variety of impressions and unexpected discoveries, places, characters and signs inhabits the territory; details vary from the minimum scale to the huge; turns, dead ends, divagations and recognitions; incoherencies, ruptures, connections and disconnections. The city appeared in its unboundable and multifaceted nature.

A choral narration has therefore been weaved, starting from single contributions, from personal impressions, using the *Wiki* as a notebook, connecting text with images and other files uploaded on the internet. ³ An open, dynamical narrative developed, open in progress, progressively enriched adding comments, digressions and links. To tell a linear course in the city evolves rhizomatically, connecting categorically similar objects and images, opening up internal links to related topics as well as enabling related external links in the internet. Starting from the specificities we run onto in the concrete explo-

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 $^{^3\} http://www.cartografiaresistente.org/twiki/bin/view/Main/Derive$

rations, we identified general phenomena and topics triggering new classifications: this consequently engendered new clusters of pages in the hypertext and new layers in the map. Starting from a very practical, linear, contextual experience of the city, we ended with tackling a complexity of different aspects and implications composing the urban reality. The analytical categories initially adopted in the website multiplied through the practical confrontation with the territory and generated subcategories: in addition to linear paths of explorations, to punctual places traditionally indexed in alphabetical order, and to general topics, we individuated, for instance, "hot zones", areas of the city particularly affected by transformations and conflicts. The observed transformations led us to ask who was producing such transformations: we therefore started a classification regarding the so called *metro-political relations*, gathering information about economical and institutional stakeholders as well as grassroots organisations and all kind of subjects participating in transformative and discursive actions about the city.

In other words, from a first direct observation of phenomena captured in contact with the urban surface, we started to question which forces where behind them, and tried to make manifest obscured influences transforming the physical and social landscape of the city. Different sources were progressively added to the direct observation, gathering contributions from citizen committees, grassroots organizations, but also from mainstream media, local political forces and from the official websites of stakeholders as public and private companies etc. The hypertextual structure of the *Wiki* helped to emulate the hypertextual nature of the city, and the ease of the system in creating new pages and new links allowed to reproduce its multifaceted complexity of relations, even at risk of reproducing also its chaotic, labyrinthic, ultimately unspeakable character.

Successively, in summer 2005 the experience of the three initial *derives* has been elaborated in a public multimedia exhibition at the *Elettro+*. The materials collected through online collaborative tools were proposed in diverse output forms, experimenting multiple kinds of narrative. Again, all the work was voluntary and the operation was conducted almost with no funds, but creativity and enthusiasm made it possible.



The whole installation was organized around a huge layout of the triangle traced on the floor: three photographic sequences were suspended over the course, coupled with a *cut-up* of texts taken from the website. An audio installation reproduced fragments of sound-scape. Video installations and interactive computer stations completed the exhibition.⁴ Furthermore, a computer connected to the website gave the possibility to the audience to trace back the materials exposed to the online database. Substantially, it has been a successful workshop about the representation of an evolving urban landscape, closing the first year of activity of the project.

Since that time, other explorations have been done; for instance, a cycle of assessments about the present condition of places formerly squatted (called before and after the cure), associating narrations and evidences about how they have been lived and transformed in the past with information and images of what they have become now:⁵ an operation that has also increased the pages of a parallel classification of the ugliest and bizarre architectures of Florence. ⁶ Later, a drift made along the path of the new line of tramways under construction – one of the biggest and more contested infrastructural projects in Florence.

 $^{^4}$ The video of the three derives installed in this occasion is downloadable at <code>http://www.ngvision.org/mediabase/716</code>

 $^{^5\} http://www.cartografiaresistente.org/twiki/bin/view/Main/PrimaeDopolaCura$

 $^{^6~\}text{http://www.cartografiaresistente.org/twiki/bin/view/Main/DelirioArchitettonico}$

ence today – gave the opportunity to deepen the attention on power relationships deployed in the metropolitan area. An effort has been done in providing information about political and economical actors managing the spatial production in this city. It is the moment when strongly emerged the issue of a map of *metro-political relations*, revealing connections, interests, partnerships, and pyramid structures ruling the metropolitan territory. Progressively, the group developed a trans-scalar attitude, widening its perspective, reconnecting punctual observations to the macro transformations affecting the city and the relative politics.

4 From a community without tools to tools without a community

On the other hand, after the first year, collective participation and enthusiasm started to decline, and more and more the project found difficulties in surviving on shared interests and distributed action. The activity concentrated progressively on the website, becoming more similar to a *blog* than a widely shared common project. Few people are still paying attention to the maintenance of the website, affected by instability, frequently damaged by spam and hacking actions, somehow experiencing forms of vandalism typical of every common space lacking a consistent community taking care of it. Successively, also the implementation of the website had a significant inflexion, and finally it ended up in surviving today more as a documental testimony of a past activist experience than as an active and updated archive.

Taking a stock of the experience to date, *Cartografia Resistente* has been able to experiment an innovative methodology and opened up several interesting mapping operations. The software system adopted remained rudimentary and instable, nevertheless it has been sufficient to support in the first phase the construction of an open, dynamic, collaborative database, able to trigger a substantial knowledge exchange process and support elaborated representations. What the project has not been able to achieve is the continuity of engagement necessary to reach some conclusions, a minimum level of completeness of the atlas and a sufficient technical autonomy to preserve the continuity

http://www.cartografiaresistente.org/twiki/bin/view/Main/TramVai01

 $^{^{8}\} http://www.cartografiaresistente.org/twiki/bin/view/Main/RelazioniMetropolitiche$

of the experience. Somehow, a big part of the spontaneous propulsive energy of the group has been lost in the process, as it often happens in voluntary experiences. The main problem CR had to face after the initial "enthusiasm phase" was to get a constant involvement of people motivated and able to keep the information updated and to complete the assessment of the city's territory. If, in the beginning, the project had strong participation, launching numerous mapping projects, opening up many pages on the website and many layers of the map, in the course of time precariousness and practical life priorities distracted the biggest part of the participants from the activity, reducing the core of the group mostly to the ones professionally involved in urban geography and planning. Making it simple, it started as a community without tools and ended with tools without a community.

Nonetheless, an external interest about Cartografia Resistente grew up, being a project recognised for its quality, quoted, invited to public events and exhibitions. Interestingly enough, that happened mostly in the frame of art events and in the hype on psycho geography, as in the case of the exhibition *Resistant Maps*, held in Genua, that partly borrowed the name of our project to present a wide range of art and activism experiences. However, the project found few resonance within the fields of community organizing, among social workers and in other urban related disciplines.

5 Final issues

It is difficult to come to some kind of conclusions from a story without conclusion. Rather, it is worth reiterating some issues that have been cyclically raised during the experience of Cartografia Resistente, proposing partial answers and fragments of reflections for further discussion.

First of all, a basic and only apparently *naive* question is: *why start a distributed mapping project*?

Here I will recall the initial assumptions: in present days we face to dramatic shifts in the way we experience urban life, affecting social relationships as well as the way we relate with the physical environment surrounding us. The

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 $^{^9}$ Resistant Maps, artistic actions in the interconnected urban territory. Villa Croce Contemporary Art Museum, Genua 25-26 November 2006

extensively mediated landscape transforms the way we perceive city and community, somehow alienating us from the direct contact with tangible phenomena happening around us. Increasingly the ground on which something such as a community can be built, whatever this word means today, is a discursive weave of mediated acts supported by technological infrastructures. The physical boundaries determining new communities in formation have to be searched in the connective tissue provided by communication means. To reclaim the inherently public nature of this mediated space is a fundamental issue. To increase the social capacity to build and share spatial representations is therefore essential in order to reconnect people with their own lived environment. It is crucial to contrast the tendency to redefine citizenship as an almost passive experience, as spectatorship, as audience exposed to the spectacle of the city (Tripodi 2008); however, assuming that the contemporary urban experience is essentially a representational one, in terms of democratic empowerment the emerging citizenship should be consolidated by the capacity to produce its own representations of space.

One of the aspects that the experience of Cartografia Resistente revealed to its participants is that, in fact, a huge quantity of information about the current transformations of the city is theoretically available to the general public. Nevertheless, rather than constituting a useful source of knowledge and democratic participation, the overwhelming overproduction of information, with its disordered form, its frequent tendentiousness and contradictory character, its variety of bureaucratic jargons and specialized language, tends to be perceived as a puzzling, disorienting white noise. Information overload ends up in disinformation, often engendering a retreat of the citizen from a real participation to local democratic processes. In particular, for a non specialized public, it is difficult to capture in clear pictures the complexity of the apparent forms in which capital agglomerations and political actors tend to diversify, dissimulating and redirecting their practice of governance through temporary associations, sybilline brands¹⁰ and 'creative' language. It is consequently very important to develop practices aimed at reorganizing local knowledge about metropolitics (Dollé 2002), filtering, translating and reorganizing information in user friendly, comprehensible and manageable maps (Holmes 2006).

¹⁰ Source of inspiration for CR have been the work of *Bureau d'Etudes*, the *Collectivo Hackitectura* - Barcelona, *They Rule* and many other activist experiences. For a more complete list of similar projects see http://www.cartografiaresistente.org/twiki/bin/view/Main/Links.

On the other hand, the practice of field exploration is an effective means to reconnect the immediate knowledge of the territory with the relative alternative representation: a form of concerned counter-tourism, producing critical visions for the urban landscape, revealing what often is too close to be seen clearly. The practice promoted by Cartografia Resistente has been directed at re-appropriating a *haptic*, immediate, direct confrontation with the city fabric, with a particular attention to apparently dispensable and less valuable territories, as an antidote to the *ocularcentric* (Virilio 2000, Bartram 2004), mediated, and indirect knowledge of the territory leading to political indifference and anomy.

A consequently controversial issue among the participants has been the use of information technologies as a basic part of its procedure, a choice that to some appeared contradictory with its premises, seen as a sterile exercise of localization, tagging places with a surveillance attitude. In particular, a point often discussed within the project is whether Cartografia Resistente should be considered an experience of participative GIS (PPGIS) or not (Goose and Elwood 2003;). As a matter of fact, what CR have set up is a rudimentary collaborative geographical information system. Nevertheless, the group basically never thought about the project in these terms, referring to more generic practice of "urban landscape description narratives", considering georeferencing objects on standardised maps only a possible option among many to achieve such a task. What basically characterizes a GIS is the process of reifying a database as a spatial representation, assuming an institutional (and political) role and becoming a recognized part of a planning processes. That happens through the adoption of specific codifications, technological standards and institutional reconnaissance. It is a process of inclusion of a larger public into a specialized language, based on specialized professional knowledge and standardized codes - a process building political representation through technological standardization.

CR's attitude was rather that of liberating diverse languages and opening up codes for representing the urban complexity. Words, images, sounds have been considered as equally valuable languages to recompose manifold and dissonant narratives. The objective of the project has been less to reify information in the form of a database and more to feed a reflexive capacity of representation about the evolving landscape, escaping excessive codification, specialisation and technicism. As a consequence of this debate, and of the specific interest of some members on participative GIS, a branch of the project developed separately, tackling the issue of the development of collaborative digital tools

sufficiently open to maintain such premises. A little core of participants of the project, professionally involved in urban disciplines, launched a side project called CoMMA, aimed at developing an OS software platform specifically devoted to collaborative mapping and the connected social narrative practices, and to experiment its use in diverse social contexts. The technical challenge is to integrate in a user-friendly, expressly designed interface different features allowing the creation and management of socio-geographical data bases. The platform should-be expressly dedicated to non specialized users, including functions for processing and visualizing data in form of maps, graphs, sketches, video sequences and other conceivable kinds of narratives. Although the starting point of the project is the development of specific digital tools, the main interest of the promoting group is rather to experiment their use in action/research contexts as grassroots groups and community building projects. That is, focusing more on social interaction practices than technologies.

A related question has been a sort of regular refrain in CR experience, many people asking why to waste time in developing and setting up specific software when you can do almost the same things using applications such as Google maps, Flickr, *et similia*, that provide for free similar features?

Here there are several possible answers and many implications that are difficult to delve into exhaustively; reconnecting to the initial assumptions, the main point is that of the role which information communication technologies are assuming in the constitution of a renewed public sphere. Accepting what is becoming a dominant embodiment of public space to rely totally on technological infrastructures owned and managed by almost monopolistic corporate concentrations is a contradictory and dangerous strategy. We are used to see only the visible face of the social web, in terms of free accessible services that they provide, but it is not commonly perceived how fast we are becoming dependent on features provided by corporate entities to interact in the public sphere, legitimating their dominance through a multiplicity of everyday practices. Today GoogleMaps, to give the dominant example, provides a great tool for the representation and the geo-reference of data, redesigning people's

 $^{^{11}}$ CoMMA (COoperative Multimedia Mapping Action) has been partially developed as collaborative research project to be proposed to EU fundings for interdisciplinary research, but it didn't find any support either in academic or public institutions. The project has been developed – again – on a voluntary basis, and at the moment it is on stand-by.

¹² The project would have found an ideal testing ground within the INURA Network where it was proposed as a possible comparative research/action project connecting different research teams and cases through the adoption of a web based collaborative system.

geography. But, on the other hand, it represents also the concentration of a common patrimony of knowledge, of an important form of commons, in the hands of a corporate player whose institutional purpose is solely profit. Which guarantees do we have that what has been formed as a collective social resource will remain a common good, and which risks are implied for the future fate of such a resource regarding its dependency on a private business, are open issues. In addition to that, the increasing hegemony of GoogleMaps as a standard layer for every form of social mapping is producing a homogenization in the modes of representing the territory, adopting massively an aerial point of view, from the above perspective of the satellite surveillance. This causes a very rational, functionalistic way to present the territory, perfectly scanned, categorized as a nebula of points and service supplies, impoverishing the concept of mapping to the operation of tagging points on a georeferenced projection. This is a limited and reductionist way to understand the complex art of mapping – and the use made here of the word art is not casual, implying subjectivity, creativity and cultural inflection of such practice.

Cartografia Resistente warned of the risk of reducing mapping activity into a technical capacity and to a mere accumulation of data. On the contrary, what has been the main objective in the experience of CR, despite its discontinuity and fragility, is the process of building a common point of view on the city based on a multiplicity of direct cognitive actions. The use of the technology itself did not obscure at all the necessity to deal with the physical, immediate and personal experience of space. Somehow, the digital technology has been intended as a powerful tool in order to re-focus the gaze on the real world and to rediscover interstitial, neglected, dismissed spaces as well as close and present transformations happening right in front of us. What is worth to reassert again is that digital tools are useful means to add to, and not to dismiss, a good pair of shoes as the best tools for exploring and understanding cities.

This would be a good point to finish, but still a last question remains at stake, regarding the incapacity that such an experience showed in finding the necessary continuity of involvement and fully achieving its initial objectives. The experience of Cartografia Resistente demonstrates that the profusion of digital and educational means available to the public for the construction of social knowledge networks and political consciousness is substantial. But the increased capacity provided by information and communication technology is not by itself a guarantee of an increased capacity of participation. On the contrary, the overexposed and saturated rhythm of contemporary urban life

makes the voluntary engagement of people in social projects increasingly difficult. Collaborative online databases and other social web applications are powerful tools to collect and share information, but they are not a guarantee *in se* of engendering a distributed cognitive practice. The task of recreating social fabric, of empowering community and fostering knowledge and criticism about the urban transformation is definitely not a question of technical means.

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