

# CARTOGRAPHY AS A COMMON GOOD

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## Cartography as a common good

(English version)

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Cartography and power are closely related: Who controls the map controls the territory, and this is true at several levels. The person who consults it, insofar as he knows how to interpret it, gains the ability to identify his position in space. The person who creates it – who is situated one step above – proposes (or imposes) his vision of the territory, as he perceives it or as he projects it. The person who possesses it, finally, decides how to distribute it and consequently decides to grant or deny others the power he has concerning the territory. In fact, a map is hardly a harmless tool: figurative as well as projective, simulation of space as much as a space for simulation – it is found at the very source of military strategies, mercantile capitalism, territorial divisions, and in the particular case of towns, by and large it has determined what is to be drawn and measured, and consequently, at the end of the day, what is to be built or at least planned. Cartography, formerly reserved strictly to a minority, is now opening up to a broad range of users. With our greater mobility, as neo-nomads in a global world, we use them and find them everywhere in public transport, tour guides, streets, shopping malls and, still more particularly, on our computer screens or our GPS. With Google Earth, Google Maps, Mappy and the other geoportals, the whole world is offered on our computer screens in just a few clicks, free from any constraints with regard to scale and paper.

Pleased as one must be with this “democratization” of access to cartography, there are still some weak points. The first concerns the codes that have been imposed over the centuries in mapmaking that offer a unilateral vision of space. Indeed, today’s complex and shifting territories seem to need representations that go far beyond a simple zenithal perception and conventions that tend to show space exclusively in terms of surface areas. Here is an example that is pertinent today: more than half the world’s population lives in towns and many studies predict that this trend will intensify in decades to come. Consequently, there are serious reasons to think that the 21st century will be more urban than any other. But a “traditional” map essentially emphasizes square metres, showing a majority of huge, relatively unpopulated areas on a worldwide scale (oceans, countryside), and therefore it totally misses the urban phenomenon whose importance is not directly proportional to its size. “Traditional” cartography can also be questioned when it comes to representing contemporary urban living: city limits have become hazy – there are no longer well-defined borders and cities are no longer understood in opposition to nature. They no

longer seem to be closed, limited entities – they move, expand, change from day to day, mocking the immobility of a map. In addition, the preeminence of a visual, two-dimensional representation of the city tends to make us forget that it is first and foremost a ‘lived-in’ space, and our perception goes beyond that which is visible – a city can also be traveled, heard, felt, imagined. Despite its formidable power of abstraction, the limits of a map as we know it lie in the fact that often it only takes account of geometric, material, incorporated, objectivated or abstract visions of the city, thus ignoring its cultural, sensitive and imaginative dimensions and clouding the scale of the places we live in, the way they interweave and overlap, denying or giving only a normative picture of social reality. Moreover, beyond this questionable hegemony, this characteristic of representation on maps becomes even more problematical when “the people who use them think they are true, although or because they are geometrical”. Indeed, the concept of urban living in general and public space in particular has been (and still is) determined for the most part by official maps, statistics and administrative limits, without taking into account other visions of the city, particularly those of everyone who lives there on a daily basis.

To help improve for this state of affairs, drafting and distributing maps should not be the privilege of some, but the right of everyone. However, tools that enable the community to create and distribute its own maps are still marginal. Of course, many cartographic services present on the Web go beyond simple consultation, and enable users to add to the content of maps and share them with other users. But this broader possibility is still only partial: most of these cartographic softwares are proprietary, their geospatial data are protected, and most of the resulting maps are subject to very strict conditions for use and distribution.

For more than three years, a group of people in Brussels has been working on the project Towards a Subjective Collective Cartography. This is an effort to see mapmaking – maps themselves, as well as the process for drafting them and the data associated with them – as a common good, in terms of access to them (universal, rather than restricted), regulation (permissive, rather than restrictive), and ownership (public rather than private). This desire to defend the right of the community to consult, create, publish and exchange maps, as well as to have access to cartographic data, is both poetic and political. Poetic because it responds to the inevitable share of subjectivity in an approach to the territory and considers that multiple cartographic visions are as many possible metaphors of the world we live in. Political because it gives users the power to think individually or collectively about the territory and perhaps to influence its future. In the past, urban action could take place without or even counter to many users of the city, or occasionally with them, in a sort of concession won over from the authorities or generously consented by them, but things should be very different today. In fact, the way people feel about and perceive a city – and a map can be used to represent this – should be the keystone of the democratic decision making process concerning the territory in general and public space in particular.

Given these observations and objectives, the Towards project focuses on creating two different tools that are nevertheless complementary: an Atlas of Brussels on one hand that includes the various maps of the city (imaginary, anecdotal, emotional, etc.) and, on the other, a cartographic software project – Tresor – that will make it possible to create maps, consult them, compare them, adjust the parameters that define them, complete them, publish them or use them as part of personal or collective projects. Over the last three years, various workshops have been organized in collaboration with artists, militants, urban planners, architects, graphic artists, computer programmers etc. to set up these tools.

Today, this Atlas of Brussels includes some 50 maps made by artists, militants, people working in associative or academic circles, citizens, etc. These maps can be consulted on-line on the Website of the project. In the long run, the idea is to enable the user of the Tresor cartographic software project to go, not from one image to another, but from one dynamic vision to another, by circulating the metadata (descriptions, comments, and names) from one map to another. The outcome should be an atlas of the city of Brussels that is like a labyrinth full of secret passages, a group of maps based on principles stemming from both geometry and imagination.

And how does Tresor work? It doesn't work, it puts to work. During the workshops, participants asked themselves what cartographic software might include. Is it an interface with buttons, that

produces manipulation of symbols? Or is it something broader, encompassing a different way of going about things, negotiating with others, and another way of thinking about what using a computer could be? So when a group of people starts thinking, writing and talking about what this software might be, the software is already at work – the software puts the group to work. Of course, there is still a long way to go to reach something that can be used as a tool, but what is gained by using a readymade tool? Would that be user-friendly or rather... user-deadly? The options in prefab softwares reproduce separations that are meaningless for users, particularly for the users who took part in the cartographic workshops. For example, these tools separate artistic and technical functions, “real” geography and drawing. Cartographic software no doubt allows a change in colours and icons here and there, but the organizational graphic principle is always the same, and this is of little interest, for example, to people who want to represent their neighbourhood in the form of a galaxy with planets and their relations in the form of a trail in the Milky Way. If they want to represent this map in an imaginary form, they have to use graphic software, meaning that they lose any connection with geography. If, on the contrary, they use a GIS, they will have to give up their imagination. Tresor is the tool that refuses this segregation. There are no acceptable reasons for this division that springs from segmentation of the market and division of tasks in the economy – and there is nothing to prevent developing this kind of tool. Nothing? Of course there is. The fact that the people who are actually involved have interiorized this division themselves: I am an artist, so I draw; I am a map maker, so I measure things. The first effect of Tresor, before a single line of code was written, was to break down mental barriers that had been internalized by participants.

In the second stage, the participants wondered about the possibilities for developing a tool that corresponds to the concept of “common good” in terms of accessibility, regulation and ownership. These questions naturally led to the conclusion that the components of Tresor should be distributed in keeping with the principles governing free licences. In fact, in the case of a free licence, the authors of a software or a visual or literary work authorize anyone to use their creations, to modify and distribute them, but with the restriction that they cite their sources and the previous authors, and they redistribute their own derivative works using that same licence, under the same conditions. These free licences are more than just a simple, pragmatic solution used here and there. They are also rather like an internal constitution for joint projects that tries to ensure that public goods stays public. The use of this type of licence is important at two levels for Tresor. First, it simplifies exchanges between various users when producing maps: everyone has the right to re-use, modify, comment everyone else’s creations and to produce other versions of these maps. Secondly, all the people who feel an affinity to this tool can correct it, improve it, test it, document it, translate it, etc.

In the third stage, participants realized that there was already a whole series of isolated free software programs (for example softwares that can connect GIS databases, vector graphics software, etc.) that could offer many possibilities for mapmaking when put together in a network. The result is that Tresor is not a software program as such, but a whole series of paths between existing free software programs, and a link for programs that do not communicate with each other. By means of a series of scripts, user strategies, plug-ins and add-ons, these existing software programs are incorporated into Tresor as the need arises. Each mapmaking project corresponds to a documented experiment, a published code and tested tools that fill the toolbox little by little. In this project, the first lines of code that were written created a connection between Inkscape , an open source program for vector graphics and Mapserver , a web-based map server, or Spip , a software for publishing articles on the web to create a timeline. More ambitious projects followed, such as Genderartnet , a map of female artists who are working in Europe or using Europe as a subject, and Busboitescartesmap (BBCM), a sound map exploring the city of Brussels.

This last project gives an idea of the way the tool and the practices can be used together to explore and represent the territory in a different way. This project proceeds by means of sessions. A series of places are chosen for each session. These places correspond to mail boxes in the city centre. They offer a large diversity of environments: they are near schools, near major roads, in alleys, parks, etc. A group of participants goes to the city centre with a sound recorder and a GPS and visit the places that have been chosen. The clocks on the GPS and the recorder are synchronized.

When the participants get back, a software program in the Tresor toolbox extracts the audio segments corresponding to the location of the mail boxes by comparing the time codes on the two appliances. These audio tracks are then plotted on an interactive map so that people can listen to the cacophony of all the sounds recorded or choose only the sounds recorded in a specific place, and listen to one sample after another, or to the overall atmosphere of a location at different times of day. As the participants are encouraged to vary the context of the place they record (they can drum on the mail boxes, or use them like an echo chamber; they can play with the sounds in the vicinity, or describe the environment or simply talk to each other), the sounds produced disclose new characteristics of urban space and invite everyone to continue his/her exploration of the town.

These first experiments using Tresor, done within Towards or in another context, show that this type of tools that adjusts to the users' needs rather than formatting them, can be truly useful to produce new and multifaceted representations of the territory. The next step will be to distribute it to a broader audience so that, insofar as possible and necessary, it helps generate real transformation.

But this process will no doubt be complex because each step forward comes with its own obstacles and questions. One of the constraints that continues to weigh on the development of Tresor is of course economic. Because of its hybrid nature, this is a UFO for many sources of finance. In addition, the methodology for developing specifications does not correspond to the usual procedures for software development. By and large, a certain number of people define the specifications that are then frozen and can be implemented by experts. In the case of a project like Tresor, it is hard to imagine freezing specifications of a project whose purpose is to define a subjective approach to mapmaking. Consequently, the organizational development is decentralized and slow. Another problem is of a legal nature and it derives from the fact that the data that make up geographic maps (geolocation coordinates, points and shapes, etc.) are most of the time in Europe subject to the ownership of states or corporations. A way to circumvent this problem is to collect oneself the necessary data, with a GPS for instance. The project OpenStreetMap, that Tresor uses regularly as a source of data and to which it also contributes, offers an infrastructure to share the GPS traces collected. But even there, the legal question still causes problem. Indeed geographical data do not fall under the scope of free licences that protect "original" creations, like a literary work, but not collective "objective" information like coordinates. After a few years of existence, participants in OSM realized that the licence under which they distributed the data included in maps was not valid in court. During a several month process, the OSM foundation that facilitates the operations of the project organized a consultation with participants and voluntary legal specialists who promote the cause. The objective was to redefine a contractual logic to be sure that anyone can use the OSM data with no problem, but that he is also required to add any modifications he has made to the OSM database, if he has made corrections or additions. It was interesting to observe the way participants convinced each other, in on-line and off-line discussions, of the importance of protecting the open source, how they showed each other the importance of preventing distortion of their common effort, while remaining open, and how they accepted to contractualize their participation a bit more in order to safeguard the meaning of their participation. This type of discussion again shows that anything that is considered public is constantly undergoing re-negotiation.