

Radical Cartography: between science and Politics, the art of making visible what the world hides from us.

By Philippe Rekacewicz (2021)

Abstract

The cartographer produces a vision of the world as he or she sees, understands, and interprets it. In this respect, the map is fundamentally a political object and it allows us to concretely expose those (geo)political, social, and economic mechanisms that are generally invisible to us. The map has nothing to do with reality – or the so-called “truth” – although it is inspired by it and takes the information that it represents from reality. The map includes a lot of the imaginary of the mapmaker who put her or his own interpretations within it. Therefore, the map becomes a permanent dialogue between reality and imaginary: The map then brings out the image of a world we did not suspect, one that we had not seen before, suddenly making the invisible visible. This dynamic is also an open door to manipulation and the use of the cartographic image as a propaganda tool, both from the “power” point of view as well as that of the “activist”, mainly make maps an intellectual construction, rather than a faithful figuration of a reality.

The right and the power to map

Who really has the right to create and to produce maps? The question can really seem strange, given that the geographical map is an object almost naturally inserted in our lives, in the objects that nourish our everyday life. The answer is not so straightforward, because historically, mapping was a very exclusive discipline. It was reserved for the restricted circle of states, of powerful monarchs who had a monopoly on both the production and use of maps. This was for a very simple reason: because whoever had the map, in other words the immediate vision of an immense territory, had under the eyes to the full extension of his territories and colonies, and was assured of having complete control over those, and thus over the communities that inhabited these areas.

“The map has disappeared! The map? Yes, master, the one which the king commissioned from you [...] Not leaving time for Alberto Cantino to catch up with him [...] Master Reimen [...] comprehended instantly the scale of the catastrophe. Two

Technology's recent evolution has challenged this exact aspect of the cartographic domain, as it is now possible to create maps, completely independent of the authorities and with minimal financial investments. While cartographic production was the privilege of a small handful of over-powerful actors for centuries, today anyone can “make their own maps”. This radically changes the social configuration with regard to the distribution of power, or at least of the tools that give power.

This issue is addressed in a small, but very powerful book *les petites cartes du web* (Matthieu Noucher, Éditions rue d'Ulm, Paris, 2017), which explains that this “digital revolution” allows anybody to map anything (however badly or inexactly) and that makes the difference, socially and politically, because the map can easily be used as a tool to implement a “counter-power” to try to fight those with “too much power”. This is exactly why the discipline of radical cartography is sometimes called “counter-cartography”, given that it aims to oppose conventional visual representation—often produced by those same individuals in positions of power—and which generally give a very unambiguous view of the world, one favorable to those who run politics and the economy.

Reclaiming the power of the map to reclaim more spatial justice

In 2003, Alice Creischer and Andreas Siekmann invited a bunch of strange people for one full weekend to the Hebel theater in Berlin, in order to discuss and exchange ideas on “radical cartography”, or to put it differently, “on other way to make maps” to depict the world, to transform it into a relevant image, to figure out the way we see it, and how we understand it. This approach was opening a whole new field for cartographic experimentation.

The collective *Bureau d'études* from France, among others, have presented their tremendously complex and meaningful artwork, showing the world in a very systemic respect, eaten by capitalism in general and by military-political-industrial complexes in particular. The *Grupo de arte callejero* from Argentina have identified and mapped the private residences of all persons responsible for the former dictatorial government, making it public, and have organized “touristic” tours of Buenos Aires passing by each of their houses, recalling the crimes under their dictatorship that went unpunished at every stop (they even managed to get some of them convicted and eventually imprisoned). A group from New York, The “institute for applied autonomy”, put together one of the most original and stunning “radical cartographic projects”

in the 2000s, thanks to hundreds of students and participants who spread out throughout the streets of Manhattan to track down and locate the slightest video surveillance camera, in order to map them and find itineraries from South to North that could possibly avoid them, allowing any citizen to walk in the city without being seen by unknown eyes (figure 2).

This shows the value and diversity of what can be done with maps: they are an effective tool for reporting on crimes and injustices, but also an art through which to show how we interpret, feel, or perceive the world as we think it is (an attempt to represent reality) and, eventually, a fantastic tool to show how we would like to world to be (an attempt to represent utopian worlds).

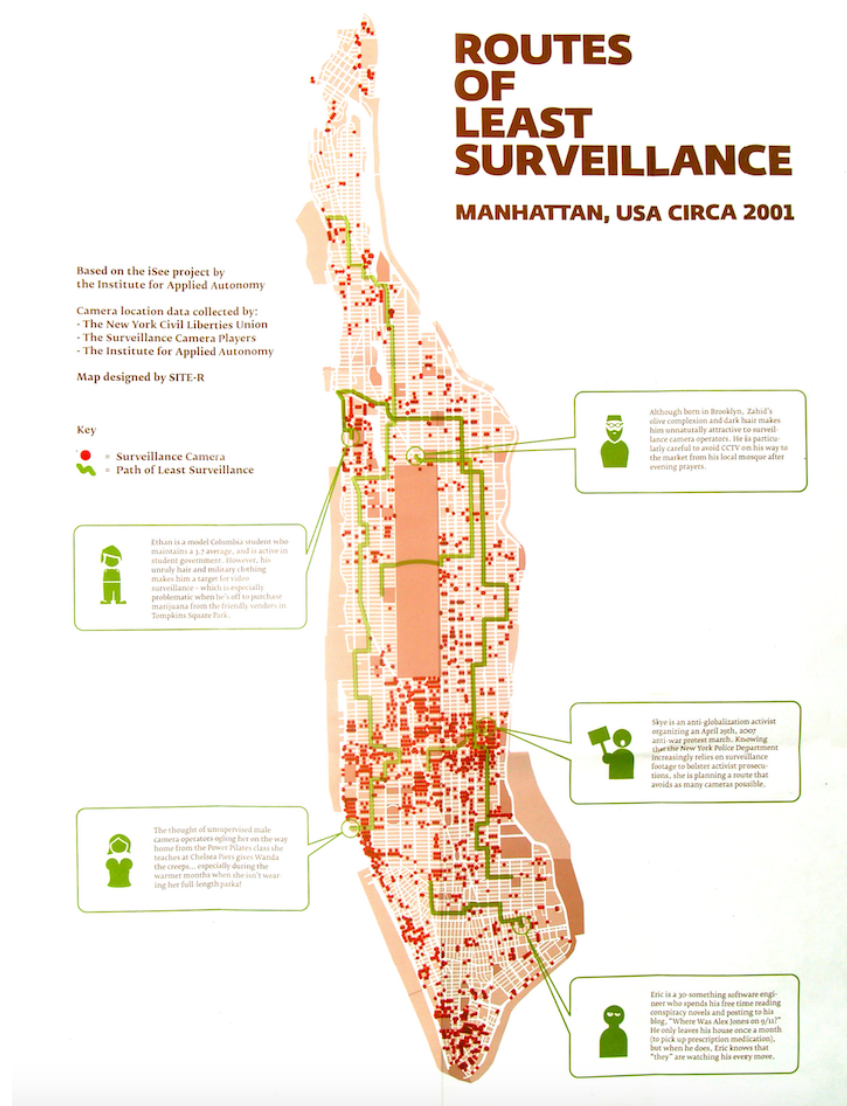


Figure 2 - *Institute for applied autonomy*, published in *An Atlas of Radical Cartography*, Journal of Aesthetics and Protest Press, 2007.

This requires us to rely on a number of postulates: we should accept the idea that the geographical representation of the world is more of an intellectual construction than it is a faithful depiction of reality: The map is always an interpretation of how the mapmaker sees, understands, and interprets the way in which the world functions. If a cartographer produces a vision of the world as he or she sees, understands, or interprets it, then the map can allow us to concretely expose (geo)political, social, and economic mechanisms, which are generally invisible to us, even though the form remains considered as a political object.

The map has little to do with reality – or the so-called “truth” – although it is inspired thereby and takes its information from reality. It includes a lot of the mapmaker’s imaginary who puts in it her or his own interpretations. Therefore, the map becomes a permanent dialogue between reality and imaginary: by taking into consideration that what is being represented on a map has its roots in reality, it is also deeply romanticized, much like a fictional movie. Our maps “create” a world more than they “depict” it.

Therefore, the result of this process brings us images of a world that might not have expected to see, a world we have not necessarily seen before. This may help us to understand it better, but we may become aware that it might also be an open door to manipulation and the use of the cartographic image as a propaganda tool, both from the “power” as well as the “counter-power” sides.

Mapmaking is a fusion of disciplines as scientists, politicians, and artists all create and use maps in the field of their own environment. This shows the very complexity of what a map really is: it uses data that has to be handled “scientifically”, it uses forms, colors, and movements; in other words, “artistic means” that all found within a modus operandi that must respect a certain “ethic”.

As a cartographer, geographer, information designer, I feel living at an ambiguous interface between exact science and art, flirting with economics, politics, and social issues.

For decades, the cartographic image was more “in the service” of the prestige of the text, highlighting it rather than being an informative or a knowledge element in itself. It was considered to be a pure illustration of the narrative, without real signification other than for

illustrative purpose, something to help readers locate themselves in the geography (where objects and human beings are really found). For the last few years, thought, there has been a shift and society has dramatically changed toward the glorification of the image, minimizing de facto the value of the text, something increasingly considered to be less accessible and more visually fuzzy. The image, the drawing, is more immediately visible and is supposed to offer access to information more quickly.

There has always been an obvious need to identify things, countries, nations, etc. This was the goal of almost all of the geographers, cartographers, and other map producers down through the modern and contemporary historical periods. This is what led to the production of tons of what I would refer to as “descriptive” maps, most of which did not say much more than what we already see or know.

This was precisely the reason why the anarchist geographer Élisée Reclus (1830-1905) hated maps so much and was actively advocating their “eradication” from the school system! (Ferreti 2009) He argued that they were poor and sterile, that they gave to the pupils a totally wrong image and understanding of the world around them, and that maps void showing the tightly interrelated and systemic nature of the planet as it “performs”. Reclus’ approaches really opened up cartography to an infinity of new possibilities, initiating an original and meaningful ‘systemic cartography’ (where everything is linked to everything and shows the world as an interrelated system), which relegated the ‘descriptive cartography’ of orthodox geographers to the rank and file of a simple graphic or visual database. This turning point, initiated by Reclus, had been timidly started a little earlier the same century by personalities who were neither geographers nor cartographers.

Radical cartography’s seeds had been sown for two centuries

Some forerunners already started to conceptualize and apply this so-called “systemic” approach, such as the economist William Playfair (1759-1823), the civil engineer Charles Joseph Minard (1781-1870) who introduced the idea of proportionality, and less well known thinkers, such as the publisher, printer, and engaged citizen Henri Dron (1825-c.1915) who produced their “carte des points noirs” in 1912, anticipating future geopolitical links between nations.

It is in this spirit that the philosopher and economist Otto Neurath (1882-1945) produced all visual representations and maps over the course of his life, but he added something more to this approach: He put a lot of thought into transforming socio-economic and political knowledge into images that could potentially be understandable by all, including non-educated and illiterate parts of the population. The aim was that crucial information and knowledge would be no longer restricted to the upper, educated classes.

These precursors sowed the seeds of alternative forms of geography and cartography which later (re)appeared in the 1960s among geographers who went back to the well to retrieve some of these contributions and in order to engage new “radical” practices, initiating the movement of what we now call “radical” or “critical” geography. These ventures appeared in the framework of the civil rights movement and was developed as a tool to make social and spatial injustice visible. The geographer William Bunge (1928-2013) was, in this respect, a main actor, experimenting and implementing “a radical way” to map how authorities and communities were producing, operating, and disputing their daily living spaces. His ideological and methodological contribution served as a really rich, multidimensionnal inspiration for geographers and cartographers who had been looking for alternative mapping modes since the very beginning of the 21st century.

In 1967, he was blacklisted by the government because he was a communist sympathizer and, as a result, could no longer teach within the University system. One year later, together with Gwendolyn Warren, he founded the Detroit Geographical Expedition and Institute within the Society for Human Exploration and conducted research on the black Fitzgerald neighborhood in Detroit, Michigan. From this investigation, he produced a book that became a reference text from then on. (Fitzgerald: Geography of a Revolution).

He settled his office and mapping workshop in the poorest block of Fitzgerald (an agglomeration of Detroit), in a resident's house. He then worked collectively with members of the community to produce maps dedicated for use as “evidence” and “prosecution documents” that could be presented in courts to prove “social injustice”. His aim was to encourage Ferguson's citizens to regain collective power and to fight alienation processes, confiscation, grabbing of public lands, and ultimately, to claim a certain level of sovereignty on the area, or at the very least the right to participate in the decision-making processes. This project, in particular, established the basis for alternative, experimental, or sensitive/emotional

cartography as it is practiced today. Bunge manage to implement a mapping system through which the hidden part of social and political processes (the invisible) was depicted in an obvious and a very tangible way (the visible). It was a very committed and resolute way to map struggles for social and spatial justice, and to denounce questionable economic and political practices. This is why Bunge created – out of data gathered collectively among the residents – some maps, such as “The number of children run over by white commuter’s car driving” throughout Fitzgerald, from their wealthy residential neighbourhoods to downtown where they were working, or “number of babies bitten by rats” (figure 3): although this map was only published in 1988, it represents the results of one of the many research projects carried out by Bunge and his team in Fitzgerald in the 1960s, where he carried out all these projects that intended to “spatialize” – and thus to make visible – all aspects of of this neighbourhood’s social and economic life in all its unfairness and indecency.

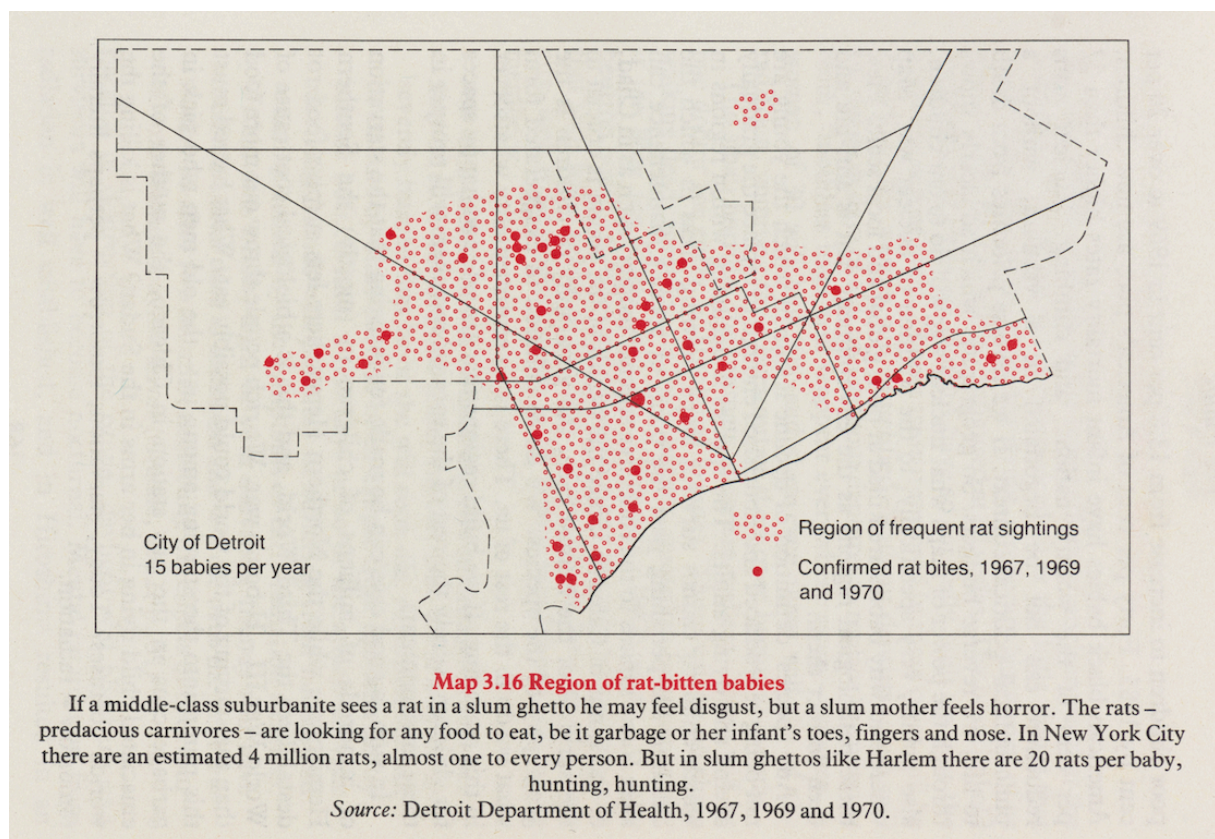


Figure 3 – “In some parts of Detroit, babies are frequently bitten by rats”, by William Bunge. Map published in “Nuclear War Atlas”, Oxford, Basil Blackwell, 1988. Map put online by Cornell University (online collection “persuasive maps”) - <https://digital.library.cornell.edu/catalog/ss:19343517> - Ithaca, New York. Source: Detroit Department of Health 1967, 1969, 1970.

Being radical or critical – or even experimental – does not necessarily mean that we must create new forms, new compositions and new design”. That aspect is without a doubt an essential component of the radical approach. However, we can also be radical through our “cartographic intention” and political stance. These two dimensions make radical cartography a rich combination of sensitivity, art, sciences, geography, politics, and social activism.

This is a very [free] exercise of “space/spatial deconstruction” in which cartographers allow themselves to pervert cartographic classical convention.

This is how these “experimenters” brought to light the extraordinary “power of maps”. They have proposed new ways of mapping that include new methodologies, new approaches that lead to making visible all that had previously been invisible as movements and trends, in order to show the narrow geopolitical links between countries and continents. The ultimate aim was to eventually provide an understanding of highly complex economic and political systems in a simplified, but not simplistic way. Therefore, the cartographic image has been increasingly emancipated from the text and has become an “information media”. In other words, maps have become an “element of knowledge” in itself, so much so that only they alone can convey a message to an audience.

To make visible all what was hidden or unknown

A map, which is a minute representation of vast territories, is a truncated picture of reality; we could almost say that it is a lie by omission. Representation by symbols always requires sacrificing information. Not everything that happens over an area of hundreds of thousands of square miles can be contained on a small sheet of paper. The cartographer selects the items she or he wishes to represent on theoretical grounds. His or her job is to synthesize, simplify, and omit. Ultimately, his or her final product is a filtered document. Aspects that may be important – but are more usually considered secondary or superfluous – are removed. The map is simplified to make it legible. In so doing, the author imbues it with his or her own vision of the world and his or her own priorities. Even though we might be mapping an apartment, for example, we will still carefully choose elements to be shown, and also dedicate a great deal of time to finding the appropriate symbolic to represent those. This is precisely where we open doors to manipulation and propaganda in visual representation.

Individual or collective “alternative mapping projects” have bloomed all over the world, covering thematics such as finance, surveillance, security, consumption, marketing, social, and spatial justice. In the 2010s, the movement became even more powerful through the use of new technologies (cartography 2.0 softwares and applications) and social networks (especially in the collection of collect primary data and statistics, but also to disseminate and promote ideas and findings).

New maps were published and made accessible to as many people as possible via the Internet, and these showed new aspects of the global landscape, making visible that which was not previously visible, highlighting strategies and process that the authorities had kept very discreet until that time. We were used to dealing with a geography of the visible that provided us with factual information, perhaps interesting information, but always incomplete informaton even if this was something that we did not necessarily know. Who among us has not studied the geography of oil in school books, with these very traditional maps of the areas of exploitation (Gulf Region) and the main maritime transport routes to the regions of consumption in Japan, Europe and North America? This was in itself “information”, but what we did not know, because it was neither written down nor mapped, was that loads of petroleum products could be bought and sold several times during the journey that had been mapped, from tax havens or, at best, from countries with very favourable tax regimes including Switzerland or Luxembourg. The financial flows that accompanied the physical flows of this raw material are at least as important to know in order to fully understand the geography of energy, but this information was somehow kept from us. It is precisely this knowledge that radical geographers and cartographers have rehabilitated and decided to bring to the public's attention.

In 2006, the artist and activist Trevor Paglen published a map of the CIA's secret flights between 2001 and 2006 (figure 4), depicting the US secret program of the international transfer of prisoners to foreign countries where they were either interrogated or possibly tortured.

Paglen had set up a truly original method for collecting information that has made it possible to draw up a network map of these air flights, based on the compilation of public databases reflecting aircraft movements on the one hand, and on the observations of many individuals in airports in North America, Europe, and Central Asia on the other. It was briefly posted on a

transformation into a visualization, can be dramatically different according to the point of view that we choose to emphasize stress.

How should we do, for example, if we would like to produce a map of Jerusalem? What are the choices available to us?

The first option would be to draw a map of the urban structure that shows the different neighborhoods, but on which the green line (the cease-fire line) has unfortunately disappeared. This may suggest that different communities live side by side, equally in harmony in a united city. The various areas of the city are labelled 'Jewish neighborhoods' or 'Arab neighborhoods', a term which invites us to think of the city as a simple conglomeration of places, only qualified by the origin of the predominant community living side by side, without any specific problems. The cartographic criteria chosen are only demographic and social.

A second option would be to approach the cartography of Jerusalem through the prism of political and geopolitical criteria. This would make it possible to show that there is a divide (the cease-fire line) which represents the international border (in the absence of a definitive settlement for the Israeli-Palestinian conflict), with an Israeli western part and a Palestinian eastern part, and overall that Israel is illegally occupying and colonizing the city's whole eastern part. What the first map simply called "Jewish quarter" becomes an "illegal Israeli settlement under UN resolution 242", which naturally gives it a very different signification. This shows that maps are created and produced with data, with a clear intention in mind, and are based on a set of chosen criteria. A few years ago, when in discussion with an Israeli settler on the top of a hill in the West Bank, I asked how he considered the relationship with the Arab villages surrounding the Israeli settlements. He just answered: *"You see established Arab villages, and what I see is only few Arab temporary installation, therefore I can't answer your question."*

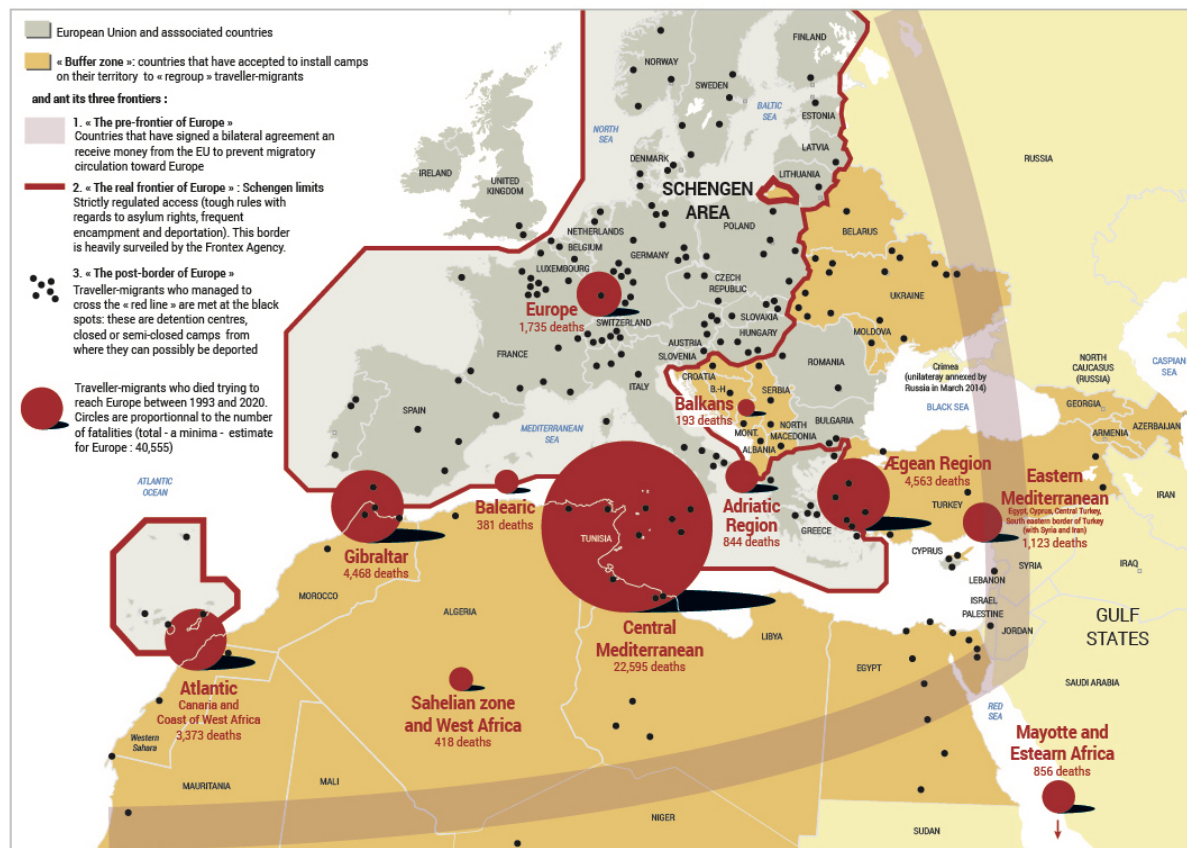


Figure 5 - “Europe's three frontiers”, Philippe Rekacewicz, 2021, Musée de l’immigration, Paris.

Another example shows how the use and the treatment of the same data and information could give opposite feelings and misunderstandings, depending on the narrative that the author decides to associate therewith.

Mapping migratory flows remains a real challenge. The maps of migrations in Europe and its adjacent regions (figure 5) was first drawn in 2003, thanks to the work of Olivier Clochard from the collective Migreurop. We update it regularly and, alas, every time we have to add more black dots and draw the red circles even bigger. On 1st January 1993, Gerry Johnson was found dead. A citizen of Liberia – a country devastated by bloody civil war at the time – Johnson had suffocated in a freight train in Feldkirch, Austria. On 3rd May 2020, Ahmed Mahmoud Omar, an Iraqi-Kurd citizen had been killed by a guard in a camp in Bosnia-Herzegovina. Between these two dates and these two places, more than 40,000 other migrants (a conservative estimate for this unknown slaughter) have lost their lives trying to reach Europe. They died while trying to leave too, like Marcus Omofuma, a Nigerian murdered in 1999 by three sadistic Austrian policemen when he was being forcibly repatriated.

From Nouakchott to Tripoli, Europe has equipped itself with three frontiers: in the middle of the desert there is the “pre-frontier” of migrant camps and police checkpoints, where people are first turned away. Then there is the actual border, which is more deadly. Those who manage to cross the red line that meet along the black spots, the detention centers of the “post-frontier”.

Looking at the figures, we might think that human migration toward Europe is so huge that it represents a real threat of invasion by people from poor countries or countries at war for rich countries, or that we find ourselves at the edge of a major “crisis of civilization”. This posture would allow us to put the blame on migrants and clear European politicians of any responsibility for having implemented the closure policy throughout the European territory.

Conversely, one could also consider that this political Europe, by closing its borders to human circulation (2.5 million migrants at the most during the past few years out of 530 million inhabitants, around 0.5%) is completely failing to give an appropriate and human response to welcoming people from highly vulnerable situations and is violating its international commitments (all conventions and agreements concerning refugee protections) by rejecting this population. We could, therefore, call it “political Europe’s failure” or “European political crises” which would allow us to blame European institutions and to clear the migrants of being guilty of “invading” a territory on which they have two fundamental rights by international law: the right to access a safe place to be protected, and the right to seek for asylum in the welcoming countries... One map, two worlds! These very different points of view feed the debates and force us to continue to find the best arguments and criteria to support the approaches that we think are most humanly appropriate.

The angle chosen to depict any situation is not generally a coincidence. We have chosen it on purpose because we have an opinion, a posture, a belief, because we want to stress some particular aspects of a problem according to the way that we interpret it. We cannot be objective; the political and geopolitical geography is the result of multiple historical choices that leads to the “production” of a particular landscape rendered on the map in a subjective way.

Prior to the map is the sketch, and prior to the sketch is the intention

The transformation of data into a graphic and symbolic semiology necessarily induces choices that make the map even more subjective, as much as one can give social and political meanings to shapes and colors! The “means of art”, which include symbols, forms, color, contrasts, dynamic, movements, shadows, textures, thinness, thickness (of lines), etc. definitely give an impression, dress the map with a particular atmosphere that influences the audience. This is why a map or a visual representation is much more than a simple image and should be considered as an almost “designed narrative”. Maps might be something that serves much more than a simple illustrative purpose. In fact, behind each of these visualizations lies an intention, (a “cartographic intention”) that could possibly be the base – the departure point – for a debate, future research, or analysis. Eventually, the key, the legend, and the careful choice of terminology and wording used is fully part of this subjective apparatus and reinforces the highly subjective nature of visual representation of data and information. We must remember again that nothing that is written in a map is a coincidence or oversight.

Following on from this reflection about the map’s subjective nature, we need to tackle and say a few words about the cartographic creation process and what prefigures cartographic representation. Two art specialists – Marie-Haude Caraës and Nicole Marchand Zanartu – have produced a fantastic book called “Images de pensée” (Caraës/ Marchand Zanartu, page ?) which one could translate into “mapping ideas”, although a literal translation would be closer to “image of (my first) thought” or “the very first concrete image or drawing I can do out of what I have in mind”. The very first sketch, the one that comes directly to mind, from the mental image, is really the core act of cartographic creation; it is the very essence of the map!

The discipline of cartography, therefore, uses drawing and the means of art and graphic design as its primary means of expression (using data scientifically produced – or not!). The sketch, the drawing, then becomes the direct expression of thought, the drawn metaphor of the soul and spirit. One might be very surprised that even in this century, which is so technological and becoming so digital, where everything or almost is replaced by screen, where a new era with very efficient software such as QGIS or ArcGIS, where we see the rapid development of “public participative” project on Internet such as OSM (or the more corporate “Google map”, where you can animate any part of the world in 3D with very spectacular effects, that a great deal of cartographic designer, geographer, artists, illustrators, architects – either radical or not – decided to go reverse and rehabilitate the very traditional form of art to express their ideas, to

convey their messages: coming back to just simply “drawing”, produce hand drafted maps and illustration, giving up for a moment the very detailed digitalized maps.

There is a variety of reason that could explain this trend.

Firstly, whatever you think, whatever you do or represent, almost all creation is derived from drawing. One always sketches the ideas before starting the production of an artwork, or before engineering an object. “At the origin of things, there is always a drawing”. This quote from the artist and photographer Philippe de Jonckheere (1964-) says it all.

Secondly, the move towards the digital cartographic production has been an impoverishment in recent decades, due to the very easy accessibility of base maps and symbols library (which has led to a certain laziness from designers, given that it is so easy to assemble pre-existing elements). This resulted in very standardized production.

Thirdly, maps have been missing some kind of humanity, and color pens, oil pastels, or aquarelle apparently help to rehabilitate the emotion within the map, putting back human beings in the center of the map, giving them the main role once more, and preventing humans from vanishing under facts, statistics, and context.

Fourthly, sketching involves making more legitimate the possible of being imprecise, the vagueness, or inaccuracy involved so that it becomes part of the message, highlighting more processes and territorial strategies rather than the very precise, exact location of elements (which, in the context of political cartography, does not really make much sense). The rehabilitation of the map’s imprecision in a world of paranoid desire for precision, in a world in which we want everything to be sorted, organized, and in place is a real “improvement” for a discipline that aims to deconstruct the social and political world to better describe and explain it.

The fifth and final reason lies in the fact that the world that we are mapping is moving fast, constantly evolving, and it is always rather difficult to capture an image fast enough so that it remains up-to-date. Eventually, the hand-drafted maps symbolize a world in perpetual motion. We are only catching part of this movement, and we express the fact that it may be a different picture tomorrow, next month, or next year. It is an act of modesty, in a way; we know little and we do not wish to set in stone a situation about which we have too little knowledge. We just give an approach, we give the terms of the debate, and ask the question. The sketch looking

“unfinished” is an open door, a message saying, “we offer you an image of today, but things will change into something different and this is why we offer just a draft at the moment”.

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Figures

Figure 1: *Cantino's Planisphere, 1502*, Estense Library of Modena (Italy)
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[https://commons.wikimedia.org/wiki/File:Cantino_planisphere_\(1502\).jpg](https://commons.wikimedia.org/wiki/File:Cantino_planisphere_(1502).jpg)

Image 2: Route of least surveillance, *Institute for applied autonomy*, published in *An Atlas of Radical Cartography*, Journal of Aesthetics and Protest Press, 2007.

Image 3: *In some parts of Detroit, babies are frequently bitten by rats*, by William Bunge. Nuclear War Atlas, Oxford, Basil Blackwell, 1988. Map put online by Cornell University – PJ Mode Collection of Persuasive Cartography -
<https://digital.library.cornell.edu/catalog/ss:19343517> - Ithaca, New York.

Image 4: Trevor Paglen, *Map of the Rendition Flights project*, 2006.
Awaiting formal authorization from the author.

Image 5: *Europe's three frontiers*, Philippe Rekacewicz, 2021, Musée de l'immigration, Paris.