How to Become an Occasional Cartographer
Insights into Various Mapping Guides as a Starting Point for Your Practice

Not-an-Atlas emerges as an attempt to provide insights into the staggering heterogeneity of contexts in which collectives and individuals apply mapping as a manifold tool to underpin their matters. We try to offer a collection that inspires experienced as well as emerging cartographers. The following material for practical involvement invites readers to become occasional cartographers themselves. It presents three excerpts from existing mapping guides that introduce basic practical know-how for mapping processes.

Firstly, in their guide John Krygier and Denis Wood lead through the major steps in mapping processes. They highlight the identification of the public to be addressed and the objectives of the mapping, the use of relevant data and the documentation and critical analysis of the latter. Secondly, the Iconoclasistas propose collective mapping as a strategic tool for organizing group processes and challenging hegemonic positions. Readers are encouraged to develop their own mapping practice by using visual resources to stimulate interventions and by considering eleven theses for occasional cartographers. Thirdly, Anna Hirschmann, Raphael Kiczka and Florian Ledermann address problems that may arise within solidary mapping projects, such as instrumentalized data and heteronomous representations. They present an approach for coping with sensitive issues by drawing more attention to the needs of the mapped actors.

Hence, when becoming an occasional cartographer, we suggest to have these mapping guides at hand, to adapt the proposed techniques to your local contexts and to create new tools for your struggles. Finally, by sharing your material and insights you can inspire other counter-cartographers!

(Third Edition already available!)

English Edition 2016
iconoclasistas.net/mapeo-colectivo

Ein Leitfaden für solidarisches Kartieren
German Version 2014
platzda.blogspot.eu
Making Maps is Hard

Whether looking at or making maps, there is a lot to see, think about and do. Throughout this book, myriad subjects are considered in general and in relation to The Flight of Voyager map. A systematic critique of an existing map or the successful making of your own map is accomplished by considering the following issues. When making maps, think about everything before starting; Then, when your map is complete, reconsider them all again.
The Whole Map
Write out exactly what the map is supposed to accomplish:
Does the map meet its goals?
Are you sure a map is necessary?
Is the map suitable for the intended audience?
Will the audience be confused, bored, interested or informed?
Look at the map in its final medium: Does it work? Has the potential of a black-and-white or color design been reached?
Is the map, its authors, its data and any other relevant information documented and accessible to the map reader?
Look at the map and assess what you see: is it:
• confusing or clear
• interesting or boring
• lopsided or balanced
• amorphous or structured
• light or dark
• neat or sloppy
• fragmented or coherent
• constrained or lavish
• crude or elegant
• random or ordered
• modern or traditional
• hard or soft
• crowded or empty
• bold or timid
• tentative or finished
• free or bounded
• subtle or blatant
• flexible or rigid
• high-contrast or low-contrast
• authoritative or unauthoritative
• complex or simple
• appropriate or inappropriate
Given the goals of the map, are any of these impressions inappropriate?

The Map’s Data
Do the data serve the goals of the map?
Is the relationship between the data and the phenomena they are based on clear?
Does the map symbolization reflect the character of the phenomena or the character of the data?
Does the origin of the data – primary, secondary, tertiary – have any implications?
Are the data too generalized or too complex, given the goals of the map?
Is the map maker’s interpretation of the data sound?
Are qualitative and quantitative characteristics of the data effectively symbolized?
Have the data been properly derived?
Has the temporal character of the data been properly understood and symbolized?
Is the scale of the map (and inset) adequate, given the goals of the map?
What about the accuracy of the data? Are the facts complete? Are things where they should be? Does detail vary? When were the data collected? Are they from a trustworthy source?
Have you consulted metadata (data about data)?
Does the map maker document copyright issues related to the data?
Is the map copyright or copyleft licensed?
What's Your Map For?

What was Twain's map of Paris for? To make us laugh. But first it was to make Twain laugh. It was a dark time for Twain. "He swung between deep melancholy and half-insane tempests and cyclones of humor." In one of the latter moments, "he got a board and with a jackknife carved a 'crude and absurd' map of Paris under siege." The map was a parody of those found in the newspapers of the time and was wildly popular. Who's your map for? How will you show it? How will you document, evaluate and review it? Your answers will profoundly shape your map.
But Do You Really Need a Map?

The first thing you need to decide is whether you need a map. You may not. There are secrets that don’t want to be mapped. There are circumstances where maps are inappropriate. And sometimes there are more effective ways of making your point: a graph, a drawing, a photo.

The Secret

Sometimes it’s better not to map stuff you could easily map. Military sites, sacred indigenous locations and archaeological sites are often left off of maps.

The Silly

“How surprised are you that Chicago has been eliminated from the potential host cities for the 2016 Olympics?”

The Not Mappable

Typically land claims by native peoples are accompanied by maps. This is so obviously the place for a map that it seems perverse to question it, but increasingly Indigenous peoples have been arguing that maps can’t capture their relationship to the land.

In 1987 the Gitxsan and the Wet’suwet’en in British Columbia entered the Gitxsan adaawk (a collection of sacred oral traditions about their ancestors, histories and territories) and the Wet’suwet’en kungax (a spiritual song or dance or performance tying them to the land) as evidence in their suit seeking title to their ancestral lands. In 1997 the Canadian Supreme Court found that forms of evidence like these had to be accepted in Canadian courts.

The U.S. Geological Survey topographic map of Raven Rock Mountain in Pennsylvania (above) doesn’t show the extensive infrastructure of “Site R” – the bunker where U.S. Vice President Dick Cheney hunkered down after 9/11. Architect John Young tracked down the missing data and mapped it as part of his cryptome.org Eyeballing project (below).
Who's Your Map For?

Knowing the intended audience for your map will help you design it. Your audience may or may not be familiar with the area being mapped, an expert on the mapped topic or a novice, an eight-year-old or a college student. In each case, consider how your map can function better for the people who will actually use it.

Experts

Experts know a lot about the subject of the map. Experts are highly motivated and very interested in the facts the map presents. They expect more substance and expect to engage a complex map.

- Less peripheral information on map explaining content and symbols
- More information, more variables of information, more detail
- Follow conventions of experts: consider using a spectral (rainbow) color scheme for ordered data if the user is accustomed to using such colors to show ordered data (such schemes are usually not good for other users)

Novices

Novices know less about the map subject and may not be familiar with the way maps are symbolized. They need a map that is more explanatory. Novices may be less motivated than expert users, but they want the map to help them learn something.

- More peripheral information on map explaining content and symbols
- Less information, fewer variables of information, less detail
- Follow map design conventions, which enhance comprehension of the map

Mike...

Social worker Mike Rakouskas's map of Wake County, North Carolina. The numbers refer to pages in the county street atlas he uses, and the shaded numbers are client sites. He uses this map to rationalize his trip planning and as an index to the atlas. It was made with a word processor. Peculiar! Clever! And perfect for Mike.
How Are You Going to Show It?

Consider the final medium of your map before making it. Most maps are made on computer monitors, but the monitor is not the final medium. Rather, it might be a cell phone screen, a piece of paper, a poster, a slide projected on a screen during a presentation, a yard sign, handbill or protest sign. What looks great on your computer will probably not look so great when printed or projected or shown on a tiny phone screen.

A yard sign complete with map in opposition to a road that would really mess up a lot of stuff in Raleigh, North Carolina.
Black and White, on Paper

Most maps are created on computer monitors, with less resolution and area than is possible on a piece of paper. When paper is your final medium, design for the paper and not for the monitor. Always check design decisions by printing the map (or having your printer create a proof if your map is to be professionally printed). While all computers offer color, final printing with color is not always an option. Don't despair! Much can be done with black and white.

Map size should match final paper size, with appropriate margins.

10-point type works well on a printed map, but you may have to zoom in to see it on the computer monitor.

Point and line symbols can be smaller and finer on a printed map than on the computer.

More subtle patterns can be used than on a computer monitor map.

More data and more complex data can be included on a printed map.

Substitute a range of grays and black and white for color. Remember that printers cannot always display as many grays as you can create on a monitor; subtle variations in grays may not print clearly.

Black will be more intense than white; use white to designate no information or the background, dark to designate more important information.

Monochrome copiers sometimes reproduce gray tones poorly.

Very light gray tones may not print.
Color, on Paper

Color on a computer monitor is created in a different manner than color on desktop printers or on professionally printed maps. Select colors on the computer, then print and evaluate (or ask for a proof). Always design for the final medium: Adjust the colors on the monitor so they look best for the final output. The same colors will vary from printer to printer. Reproducing color is often more expensive than black and white. Finally, keep in mind that users may reproduce your color map in black and white. Will it still work?

Map size should match final paper size, with appropriate margins.

10-point type works well on a printed map but you may have to zoom to see it on the computer monitor.

Point and line symbols can be smaller and finer on a printed map.

More subtle patterns can be used than on a computer monitor map.

More data and more complex data can be included on a printed map.

Use color value (e.g., light red vs. dark red) to show differences in amount or importance. Use color hue (blue vs. red) to show differences in kind. Desktop printers cannot display as many colors as you can create on a monitor; subtle variations in colors may not print.

Dark colors are more intense than light; use light colors to designate less important information and background, and dark to designate more important information.

Never print a color map in black and white; redesign it for black and white.
Computer Monitors

Designing maps for final display on a computer must take screen resolution and space limits into account. Desk or laptop computer monitor resolution is typically 72 dots per inch (dpi), compared to 1200 or more for many printers. Computer monitors also have limited area, typically 7 by 9 inches, or less if the map is displayed in a web browser window. Design a map so that all type and symbols are visible without magnification. Also avoid maps that require the viewer to scroll around to see the entire map. Use more than one map if you need more detail, or consider web tools that allow you to zoom and pan over a map.

The entire map should fit on the screen without scrolling (if pan/zoom is not possible).
Increase type size: 14 point type is the smallest you should use on a monitor.
Make point and line symbols 15% larger than those on a paper map.
Use more distinct patterns: avoid pattern variations that are too fine or detailed.
You may have to limit the amount and complexity of data on your map compared to a print map.
Use color but remember that some monitors cannot display billions of colors; subtle color variations may not be visible on every monitor.
White is more intense than black. Take care when using white to designate the lack of information or as background color, it may stand out too much.
Save static maps for the internet at 72-150 dpi. Size the map to fit in a browser window.
Design your map so it works on different monitors (RGB, LCD, portables).
Interactive maps require attention to additional issues, such as pan, zoom, interactivity, etc.

Portable Monitors

Maps on smart phones, PDAs, GPS units, and other portable devices pose the same design challenges as on desktop monitors, with the further limitation of screen size. Typical portable monitor sizes are shown on this spread. Many portable monitors are touch-sensitive, allowing users to pan and zoom, thus overcoming some of the limitations of the small monitor size.

Static maps on portable devices can follow desktop monitor design guidelines, taking into account the limited display size into account.
Interactive maps should use appropriate interface metaphors: Zooming in is "up" on a slider bar, or two fingers diverging outward. Pan is touch and slide in the appropriate direction.
Interactive maps should vary map design specifications with scale.
Generalize more as the user zooms out on the map: For example, local roads and road names disappear when zoomed out.
Generalize less as the user zooms in on the map: Local roads and their names appear when zoomed in.
Aerial photographs may be more appropriate than maps for users with limited navigation abilities.
Ground-view images may be more helpful for navigation than maps alone, but using both should increase navigation success.
Map symbols should not be too complex.
Colors should be more intense to account for varying lighting conditions.
Serif fonts may be easier to read on portable monitors than sans serif.
Projections

It is increasingly common for maps to be shown on a large screen with a computer projector. When projected, white and lighter colors will be more intense, black and darker colors subdued. Computer projectors vary in the amount of light they can project. Some projectors wash out colors. Consider previewing your projected map and adjusting the projector. Projected maps must be designed with the viewing distance in mind (find out the size of the room). A map projected to an audience in a small room can have smaller type and symbols than a map projected in an auditorium. Always check that the map is legible from the back of the room in which the map will be displayed.

Greater map size is offset by the increased viewing distance.

Increase type size so that the smallest type is legible from the back of the room.

Increase point and line symbol size to be legible from the back of the room.

More distinct patterns: Avoid pattern variations that are too fine or detailed.

You may have to limit the amount and complexity of data on your map compared to print maps.

Older or lower-output projectors may wash out colors, so intensify your colors for projection.

If your map will be projected in a dark room, use black as background, darker colors for less important information and lighter colors for more important information.

If your map will be projected in a well-lighted room, use white as background, lighter colors for less important information and darker colors for more important information.
Posters

Posters are similar to projected maps, although usually viewed in well-lighted conditions. Viewers should be able to see key components of the map (such as the title) from afar, then walk up to the map and get more detail. Design the poster so information can be seen both close and at a distance. The size of poster maps is limited by the largest printer you can use; always check color and resolution of the printer used to reproduce your poster. You may want to request a test print of the colors you plan to use to evaluate your color choices.

Design map title and mapped area so they are legible from across the room.

The majority of type, point and line symbols should be slightly larger than on a typical printed map but not as large as on a monitor or projected map. Design this part of the map so it is legible at arm’s length.

More complex information can be included on a poster map than on a computer monitor or projected map.

Follow color conventions for color-printed maps. Most posters are viewed in a well-lighted room, so use white as background, lighter colors for less important information and darker colors for more important information.

Left: A portion of the poster-sized map Guide Psychogéographique OWU, made by a group of middle-school students and John Krygier during a summer class, Mapping Weird Stuff, at Ohio Wesleyan University, June 2009.
Document, Evaluate, Review

Constantly cast a critical eye on your work. Document what you do and continually evaluate whether the map is serving its intended goal, meeting the needs of its intended audience and working well in its final medium.

NASA’s Bob Craddock set about revising a 1986 map of Mars with new imagery from the Viking Orbiter. Craddock transferred details from the 1986 map while referencing his new data, drawing lines and labeling what he thought he saw, evaluating the data as he worked. Craddock used the old interpretations when the new data supported them and modified features clarified by the new data.

When complete, the new map was sent to other experts for review and evaluation. The reviewers annotated the map wherever they disagreed with Craddock’s interpretations or saw alternatives. Craddock, in turn, revised his map with the reviewers’ comments, not necessarily agreeing with all of them but, in the end, producing a map of the geology of Mars that was better because of the expert evaluation and review.

Documentation

What were those six great shades of red I used on that map I made last month? What font did I use on the last poster map I made? How big was the title type? How long did it take me to make that map for the annual report last year? Where did we get that great data set? Was it licensed? Who printed that large format map for us last year? How much did it cost to print and fold those color maps?

Documentation of the details involved in making a map may seem tedious but can save time and effort in future map making, both for yourself and others who may need to make similar maps. Working toward a few general styles that are effective for specific types of commonly produced maps is useful. Documentation of mapped data is vital if the map is to be published.
Documenting General Issues
Document your goal for the map and
...the intended audience and what you know about them
...the final medium and details about the medium that will affect map design and reproduction
...the amount of time it takes to create the map, and any major problems and how you solved them
Keep copies of the map as well as information on where it was published or presented

Documenting Data
Document the source of the data, including contact information and copyright information
...the age, quality, and any limitations of the data
...how the data were processed into a form appropriate for mapping
...map projection and coordinate system information

Documenting Design
Document specifics of map size, scale, and sketches of layouts
...a list of information on the map, arranged in terms of importance, and associated symbols
...data classification and generalization information
...sources and details of map symbols
...details of type size, font, etc.
...color specifications for all colors used
...design problems encountered and solutions
...software problems encountered and solutions

Formative Evaluation
Ongoing formative evaluation is as simple as asking yourself whether the map is achieving its goals throughout the process of making the map. Formative evaluation implies that you will "re-form" the map so it works better or maybe even dump it! It is never too late to bail out if the map is not serving your needs. It is a good idea to ask others to evaluate your map as well: What do you think of those colors? Can you read that type from the back of the room? Does what is most important on the map actually stand out? What is the boss going to think? Simply engaging your mind as you make your map, and being open to critique and change, will lead to a better map.

Ask yourself...
Is this map doing what I want it to do?
Will this map make sense to the audience I envision for it?
How does the map look when printed, projected, or viewed in the final medium, and what changes will make it better?
Are the chosen scale, coordinate system and map projection appropriate?
Do the layout of the map and the map legend look good? Could it be adjusted to help make the map look better and easier to interpret?
Does the most important information on the map stand out visually? Does less important information fall into the background?
Are data on the map too generalized or too detailed, given the intent of the map?
Does the way I classified my facts help to make sense of them?
Would a different classification change the patterns much?
Do chosen symbols make sense, and are they legible?
Is the type appropriate, legible, and is its size appropriate, given the final medium?
Is color use logical (e.g., value for ordered data, hue for qualitative data) and appropriate, and will the chosen colors work in the final medium?
Do I want a series of simpler maps, or one more complicated one?
Is a handout map needed, if presenting a map on a poster or projected?

...then re-form your map.
Impact Evaluation

Impact evaluation is a range of informal and formal methods for evaluating the finished map. It may be your boss or a publisher reviewing the map, or it may be public feedback on the efficacy. You should begin any map making with a clear sense of who may have the final say on the acceptability of your map, and factor in their wants, needs, and requirements at the beginning of the process.

Caribou Calving Areas

Arctic National Wildlife Refuge (ANWR)

Ian Thomas, a contractor for the U.S. Geological Survey, was fired, allegedly for making maps of caribou calving areas in the ecologically and politically sensitive Arctic National Wildlife Refuge. Thomas argues he was fired for publicizing facts that would undermine the push for oil exploration in the refuge. Others claim the maps were of out-of-date information beyond Thomas's area of expertise and had nothing to do with his being fired. In either case, it is obvious that making maps can piss off your boss.

An old Japanese map from the David Rumsey digital map collection was added to Google Earth in early 2009. A label on the map described a village as populated by “eta,” the untouchable caste of burakumin (translation, “filthy mass”). Because some idiots in Japan discriminate against the burakumin, it is common practice to remove such references. Rumsey initially decided not to censor the map, but after an uproar the offending nomenclature was removed.
The Flight Of Voyager map was published in 1987 in the book Voyager by Jeana Yeager, Dick Rutan and Phil Patton.

<table>
<thead>
<tr>
<th>DAY 9</th>
<th>DAY 8</th>
<th>DAY 7</th>
<th>DAY 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours Aloft</td>
<td>216 hours</td>
<td>200 hours</td>
<td>192 hours</td>
</tr>
<tr>
<td>176 hours</td>
<td>168 hours</td>
<td>160 hours</td>
<td>152 hours</td>
</tr>
<tr>
<td>136 hours</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fuel on landing: 18 gallons

David DiBiase and John Krygier designed and made a map to tell the story of Voyager and its pilots. The map was created for a map design course at the University of Wisconsin-Madison taught by David Woodward.
The map was split between the front and back book end-papers, half in the front and half in the back. Each endpaper was 9” high and 12” wide.

The map was designed to be viewed at arm's length.

The publisher of Voyager, Knopf, allowed us black and one color for the map. We chose deep red for the most important information (such as the flight path and related text). The map was redesigned in monochrome for Making Maps, 2nd Ed. The map still works!

Details of the design of the map – line weights, type size, percent gray of different areas on the map, etc. – were documented, as we were taught in David Woodward’s course and at the University of Wisconsin–Madison Cartographic Lab. Formative evaluation was ongoing throughout the process, and the editors at Knopf provided the final edit and evaluation of the map.
#1 Mappings, critical accounts, and collective creation

Since 2008 we have been offering mapping workshops to build collectively territorial viewpoints which foster and promote collaborative and transformational practices. This book systematizes methodologies, resources, and dynamics of critical pedagogy to encourage their appropriation and derivative use. We also share experiences of our own. We have chosen some of them from our workshops.
About the manual

This book is the result of the joint work and collaborative process that started more than five years ago when we were just organizing the first mapping workshops. Through these workshops we have designed a collective practice nurtured with multiple viewpoints, approaches, and variations acquired throughout the experience. This process was gradually recorded in the reports we wrote at the end of workshops. In those reports we aimed at reflecting and highlighting the key resources and moments that emerged during those workshops. In this way, along with practice, thoughts on it were developed. The process was shared: everything was published in the website and spread on social media.

Many of you might be asking yourselves, why, then, write a manual? Almost every day we receive invitations, questions, and doubts about the mapping workshops, which include requests of assistance or requests to design specific resources. Mostly we cannot answer every doubt nor participate in every event, basically because we are just two people. While we often answer these requests by redirecting them to the website, we would like to emphasize the foundations guiding every action of Iconocalistas: to avoid specializations and to free up resources, encouraging anyone interested to set up their own workshops and develop their own practices.

With this manual we share our experience to show how mapping workshops may promote various ways of understanding. Another task developed in workshops is to mark the space using different types of languages, such as symbols, graphics, and icons, stimulating the creation of collages, phrases, drawings, and slogans. There are two meanings of the word “manual” that we want to mention because we like them very much and they illustrate clearly what we are seeking: one meaning refers to that “done with the hands”, and the other one points to any “book giving the essential information on a subject.” This is our path, we hope you will enjoy it as much as we do.

The need to create new accounts

Maps are ideological representations. Drawing maps is one of the main instruments leading powers have recurrced to in history for the utilitarian appropriation of territories. This kind of operation involves not only a type of organization of the territory but also the demarcation of borders to mark occupations and plan strategies of invasions, looting, and appropriation of common goods. In this way, maps of wide circulation are the result of the viewpoint that the leading power recreates on the territory generating hegemonic representations functional to the development of capitalism, decoding the territory in a rational way, classifying natural resources, the characteristics of the population, and identifying the kind of production which is more effective in turning labor force and resources into profit.

Official accounts and cartographies are accepted as natural and unquestionable representations despite the fact that they are the result of “interested viewpoints” held by hegemonic powers over territories. We refer not only to those viewpoints from political and social institutions or agents, but also to the discourse of mass media, and to every other intervention shaping public opinion and reinforcing naturalized beliefs and social mandates.

This scientific point of view on the territory, common goods, and on those who inhabit it is supplemented with other techniques penetrating the social body, such as video surveillance, biometric techniques of identification, and statistical formulas constructing situations and offering information to ease the execution of biopolitical
#1 Mappings, critical accounts, and collective creation

mechanisms directed towards organizing, controlling, and disciplining the inhabitants of a territory.

Nonetheless, the critical use of maps aims at creating the conditions for collective exchange to generate accounts and representations fighting against and challenging those which are established by various hegemonic positions. Designing collective cartographies stems from a deep-rooted tradition of participatory work. Involving different types of experiences and results, this tool has been strengthened by the work of social organizations, NGOs, and foundations, in urban as well as in rural areas. Added to this, technological availability and the access to georeferencing tools (such as GPS or GIS) have invigorated and widened this process in various lines of work.

The diffusion and widespread use of maps and cartographies ran parallel to the “death of grand narratives,” the hegemonic discourse organizing the interpretative paradigm of the 90s. In that decade a vast group of social movements sprung up and made themselves visible in Latin America. These were self-managed and horizontally organized; and sparked demands of peasants, native peoples, gender collectives, among others. These new or renewed social prominent positions recurred to a vast reservoir of liberating practices and discourses, and established a political, cultural and communicational activism linked to social and affective cooperation, the free circulation of knowledge and practices, and the connection through networks.

Definitions and certainties

We conceive “mapping” as a practice, an action of thought in which the map is only one of the tools promoting an approach and deep analysis of social, subjective, and geographic territories. Added to this, another series of resources have been named “multiple devices” consisting of graphic and visual means and creations. These, when mixed with ludic dynamics, become intertwined to promote areas for socialization and debate, becoming triggers and challenges in constant movement, change and appropriation. In this way, we try to build a space for discussion and creation, not closed in itself, but placed as an available starting point for anyone to recur to, a proper device that builds knowledge, fostering the organization and the generation of liberating alternatives.

This is the reason why we sustain mapping is a means, not an end. Mapping should be part of a wider process, “another strategy”, a “means for” thoughts, the socialization of knowledge and practices, a boost for collective participation, a challenge to hegemonic areas, the driving force for creation and imagination, a deep analysis of key issues, the visualization of resistances, the mark highlighting power relations, among many other aspects.

In this way, mapping does not lead to transformations by itself. Mapping is connected to an organizational process by way of collaborative work in graphic and visual platforms. And this work must be strategically spread: all the information included must be agreed by consensus with everyone taking part of the process and should bear a communicational aim, having in mind that this should not menace nor damage participants.
Projections and limits to mapping

"Maps are not the territory": they are static images that cannot capture the constant changes to which territories are exposed. Maps do not contemplate the subjectivity of territorial processes, their symbolic representations nor the imaginaries about them. The people who inhabit the territory are the ones who can really create and transform them, they shape them every day by inhabiting them, going through them, perceiving and creating them.

Mapping is a tool providing a snapshot of the moment in which it was taken, yet it does not recover completely a territorial reality, which is always problematic and complex. Drawing collective maps transmits a specific notion on a dynamic and constantly changing territory, where borders, both real and symbolic, are continually altered and exceeded by the actions of bodies and subjectivities.

Drawing a map involves a way of creating collective accounts on what is common to us all, this builds a platform rendering visible certain contacts and consensus without reducing diversity, for this is also depicted. Brewing the common, i.e., to produce the common that joins us and that we recognize, or rendering it visible spontaneously or from the unknown, but having from the beginning clear aims, constitutes a way to fight against the individualism and segregation in which we are immersed as inhabitants of this world.

How to use this manual?

This manual is not to be used in just one way. By publishing this book we do not block practice nor experience. We believe that there is still much more to learn and to explore, which will be attained through your appropriations and drifts. The only thing that remains to be done for us is to encourage you to experiment in different spaces with the available resources, to let yourselves go with the flow of contingencies, and to adapt practices to strengthen situations of social and subjective cooperation giving way to, at the same time, processes of collective management of what is common to all.

We welcome your feedback, contributions, suggestions, resources, and dynamics. You can send them to iconoclasistas@gmail.com
#2

Territory and Mapping Workshops

What are mapping workshops. Reasons to work collectively with visual and graphic resources. How to organize a session and which tools to use. How to encourage questions to be raised which foster the emergence of reflections and alternatives at all times during the activity. Below we will answer some of these questions based on our experience from these years of collective mapping.
What is collective mapping?

Collective mapping is a creation process subverting the place of enunciation to challenge dominant narratives on territories. To do so we recur to everyday knowledge and experiences of participants. On a graphic and visual means the most acute problems of the territory are rendered visible identifying responsibilities, reflecting upon the links to other topics, and marking consequences. This viewpoint goes along with the process of remembering and marking experiences and areas of organization and transformation so as to spin a web of solidarity and affection.

While the hegemonic representation might become the starting point for workshops (when using, for example, a printed cadastral map with its predesigned borders), during the process of exchange of knowledge a critical look over the territory is built as a result of the various opinions and thoughts shared. Therefore the first representation is transformed due to the fact that hidden questions or those which are not simple to represent are now included.

If there is time during the workshops, maps can be drawn freehand. This becomes an opportunity to play with borders, senses, and shapes. In each case, we must keep in mind that maps are only one tool among many others. When drawing maps is part of an organizational and collective process, this activity promotes the diagnoses and drawing up of participatory projects expected to be developed throughout the time.
Stimulate participation for a collective and communal solution
Provide a quick picture of issues
Foster identifying similar webs to strengthen liberating practices
Collaborate in establishing a territorial diagnose
Denature the language of mass media
Activities in workshops
Organize resources and means, showing what hinders and limits the process
Render possible the link between facts of considerable importance
Favor thoughts on discipline, mandate and control mechanisms
Collaborate in the socialization of information and everyday experiences
Document and organize talks in meetings, sessions, or events
#2 What to do after the workshop?

- **Organize an Online Map**
  - Choose topics, describe and analyze them deeply. Build an open database to be continually completed.

- **Create Communication Resources**
  - From the thoughts shared during the workshop, choose certain topics and design maps including a deep analysis of what was discussed during the activity.

- **Plan Other Workshops**
  - Keep supplementing and broadening viewpoints recurring to other workshops organized with the same techniques, but with other participants and territories.

- **Organize a Street Intervention**
  - To fight for hegemonic spaces, engage in activities, or spread information related to them among neighbors and passers-by.

- **Display the Map in the Public Space**
  - Keep in mind that before displaying this production in public, participants must always agree on this, given that it may contain information affecting or damaging those involved.

- **Systematize Popular Experiences and Knowledge**
  - Gather, film or take notes on the thoughts and debates emerging when sharing results, as an asset to be worked later on.

- **Generate a Project for the Transformation of a Neighborhood**
  - The shared interests and issues emerging from the work, such as rendering visible resources and restrictions, may become a trigger to design a project for the improvement of the neighborhood.

At the end of the workshop, the horizon of possibilities is broadened.
#3

Iconography for mapping

Using icons to mark the map vitalizes and strengthens the cartographic intervention providing a frame which works as a starting point for the debates in the workshop. In this section you can learn how to use them. You will also find iconographic series created for different occasions, which can be scanned, photocopied, and used.
#3 Iconography for mapping

Use of icons, symbols, and images

Using visual resources and pictures in mappings stimulates the intervention of participants, fostering participation with the use of simple, metaphoric and symbolic images containing plenty of information.

Printing

Icons should be separated with dotted lines to make cutting them with scissors easier. They may be printed in common sheets of paper, and then stuck with glue, or on sticker paper.

Use

Icons should not be stuck over the point being marked (given that this makes the following systematization of information more difficult). Participants should draw a line and write on the margins, or write a number, and then briefly explain the topic marked adding more details (responsible individuals or institutions, causes, and consequences, etc.). Even if participants keep intervening creatively on the map, they should be encouraged to organize information to ease communication.

References

Each icon contains a specific reference which forms the thematic frame from which to intervene the map or the device. These references should be printed on a separate sheet of paper and should be displayed next to each icon. Display several copies on the working desk so that participants may consult them without any problems.
Combination

Various icons may be chosen to tell a story on a certain topic, adding therefore more information. To do so the margins of the maps may be used, including lengthier texts, the testimonies of participants that were gathered, or the organization of key information collected in the process.

Color codes

Icons may be grouped by topics using the same background color (for example, organize using one color everything referred to curtailed fundamental rights: health, education, housing, etc.). In consequence posters may be quickly read by topics, making the diagnosis of the main issues easier.

Each and every image counts

Organizers can add, apart from icons and pictograms, more complex images such as symbols, allegories, and everything that admits cross-reading. This also fosters participants to build metaphors, and acts as a trigger for topics overlooked before.
#3 Iconography for mapping

Different types of reference templates

Presenting images, symbols, and icons may be organized visually in different ways and according to the specific goals and the amount of participants. Below you can read the selection of our own templates from which to inspire yourselves and create your own.

**Indicators**

To mark areas, to demarcate borders in relation to the extent of certain issues, and to visualize flows of movements projecting potential scenarios and situations.

**Posters**

Images sign with allegoric symbols of certain struggles and organizations to mark resistance processes including key facts, participants, achievements, and accomplishments.
Templates created for particular activities where the list of topics and issues is previously defined with organizers and where the aim is to reconstruct a scenario recurring to the knowledge, practices, and ways to organize shared by participants.

Similar to the aims sought by the above mentioned template, this one also includes a series of trigger questions which analyze even more deeply the details. The template offers a frame to debate and reflect upon, strengthening the one built when adding images. These should be relevant and not more than twelve.

We use various graphic resources and visual and creative tools to promote communicational, collective, and reflexive processes. After sharing information, knowledge, issues, and practices, interventions are projected and activated exceeding this sphere to reach the territory.

Visual resources and tools should be created or brought some time before the workshop is carried out, showing on a graph the topics previously agreed on. The negative dimension (denunciation, for example) as well as the positive one (rendering visible the organization and the achievements) should be included.
#3 Iconography for mapping

Common goods and environment
Power, precarious situations and resistances

To protect and to use
Eleven theses for occasional cartographers

“A map is a diagram, i.e., an iconic sign that, even if it does not share the appearance of the object whose place is occupying, it copies in detail its internal links.” Paolo Virno
The map is a technology (besides being a trend) allowing something which is not divided by perceptions to be displayed or to appear through sight (as well as other senses), however, the map is built through them, through each one of those perceptions. In this way it resembles language: it does not preexist but as potential before the act of putting it into practice. In consequence, instead of speaking of maps, to speak of mapping is more adequate, mapping as an activity. Carrying no maps makes us weaker. The activity of mapping is an activity building senses, in its three meanings: it leaves a mark on sensitivity, it directs, and it fosters understanding.

In Argentina, the map "Aquí viven genocidas" [Here live perpetrators of the genocide] became a milestone of a signaling system built as a social demand and stemming from injustice. In this case maps were tools and a slogan for the struggle at the same time. Other maps just mark the evil (gigantic companies’ networks and expropriation networks as decisive agents of global capitalism). These represent two completely different mapping patterns. Other maps have also counterinsurgent uses: such as those built by NGOs along with indigenous communities in Brazil to demarcate their territories and the wealth they possessed, which were later on used by companies to expend and patent their resources and knowledge.

Recalling conflict and war is a resource to design projects on mapping neighborhoods, on industry and on the global market as well, and in this way technologies are developed: Google Maps, GPS, military technology applied to maps for users, companies using an activist language to sell digital platforms for digital mappings. And politicians offer neighbors to collaborate on the creation of maps "against insecurity" or "against drug trafficking." How could new social issues be mapped (without a priori images of how a territory should look)? How would mapping be like if a deep analysis is included, without pre-established icons or clear references to issues? The map is more difficult to design when facing a vague issue, without armies, or rather, with a radically non-traditional battlefield.
5

So we sustain that a new social dispute has erupted in the region stemming from the hegemonic presence of the financial capital in various territories (both rural and urban). Agribusiness, mega-extractive, drug trade, all of these impose growing levels of violence as a method to subordinate the common to capitalist valuation. The use of armed gang by businessmen, the complicity of the various police institutions, and the participation of judges and district attorneys as well as that of sectors of the political branch in this business web, these are all an everyday occurrence. Which kind of mapping is necessary to account for these new kinds of violence? How to understand the forms territorial dispute undertakes which run at new speeds?

9

A certain tension forces the icon because the icon is a very concrete and synthetic figure defining correctly what has been mapped or the conflict/subject to be mapped. Yet the icon cannot be just information or a figure that is always available. How to avoid clichés, accusations, and the fact of rendering visible a situation but without losing the force of synopsis? Predetermined icons exist, yet the icon is a pretext, an open trigger, and this is depicted in the remaining maps; not always the references of the icons or the information are read, the creative dimension and what was not previously thought is highlighted.

6

We need to create ways to render visible these new conflicts by way of an account that does not reduce itself to a police chronicle of the facts. Mapping is strengthened and invigorated when it is part of a network of experiences from different territories, when actions stem from collaboration and from collective thoughts aiming at resisting and taking care of each other.

10

Which is the capability of the action of mapping as public institution? This is something that awaits to be exploited and experimented. Especially when speaking of mapping subjects still not visible. When facing a new shape adopted by social disputes (exceeding the scheme social movements vs State), mapping means intertwining a collective intelligence capable of linking signs that, otherwise, would not appear as related between each other. Mapping involves coordinating a collective intelligence and wills devoted to understand the territory as novelty.
Maps are accounts of new borders. Those remade and redrawn after disputes to conquer space and resources and to produce the meanings corresponding to those new divisions and allocations. These are fluid borders, permanently tightened. These borders do not necessarily respond to institutional layouts or cadastral logics. Instead these borders are made with perceptions, they are spun with invisible yet powerful threads, which turn a neighborhood into an extremely complex area, housing labyrinths and dozens of interior borders, demarcated areas and superimposed spaces.

Mapping as synonym of cartography may become a strategy for the production of critical statements. Is this also linked to the new shapes conflict adopts? The question about the meaning of mapping is also the questions about the reasons for producing knowledge nowadays given that we understand mapping as a practice that produces knowledge. Which is the boundary between describing, rendering visible, and taking care of resistances? There is no doubt that the aim is not to put in danger clandestine situations, while the risk of “providing information to the enemy” always exists. The question is how to map the collective potential of work and, at the same time, take care and analyze deeply our own regime of situations rendered visible.

The dilemma between interpreting and transforming should be no longer an antithesis. Here and now, by way of the practice of mapping, a process of interpretation/knowledge of the world is developed in concrete territories. This is carried out by combining everyday and popular knowledge (not specialized or expert knowledge) to create strategic tools aimed at transforming our realities. In this way, mapping-interpreting-transforming becomes a simultaneous task that is constantly in motion.
Since 2008 we have been setting up collaborative mapping workshops in Argentina, Europe, and Latin America, along with social, student, cultural, and artistic organizations. Throughout the years we have promoted the creation of collective viewpoints and landscapes on particular situations to display reflections over common territories. We believe the design and production of all this set of tools, through its reappropriation and use, evidences the creative and political potential of graphic and artistic devices. This is why we have decided to publish this manual: it has been conceived as a toolbox of open resources to promote territorial creative activism in the frame of a liberating process embodied by new practices, discourses, and subjectivities.
A Guideline for Solidary Mapping

Anna Hirschmann, Raphael Kiczka, Florian Ledermann, participants of the Solidary Mapping Workshop (Vienna, 2013)
Introduction

Cartography, mapping, making maps. All of these often lead to fascination in solidary and emancipative contexts of all sorts. A map can be used as a tool in order to show the spreading of ideas. It can be used in order to visualize threats, conflicts or potentials. The relation between mappers on the one hand and mapped initiatives on the other hand is often not easy. Not everyone wants to be put on a map, and not always does everyone share the same perspective on the depicted reality.

This guideline should be understood as motivation to deal sensibly with possible problems that may arise within mapping projects, as well as with the relationships these problems may create in the context of their surroundings. The guideline can be understood as a basis for the specification of sensitive or difficult topics or the precise visualization of these topics as a result of such a process.

The suggestions in this guideline cannot and should not be understood as "rules". Initiatives decide autonomously about their mapping practice. Nevertheless, the guideline can help to better visualize and show the root of a problem, so that decisions can be made consciously and these decisions can also be reconstructed and understood by outsiders.

The approaches and questions in the guideline were created in the context of a workshop which was collectively organized at the congress that focused on solidary economy in Vienna in 2013 by the people from "Platz da!?" (platzda.blogsport.eu) and "Vivir Bien" (an online mapping project of solidary economy initiatives, active from 2009 to 2015).

The motivation for the workshop originated from experiences that were made in mapping projects, in which conflicts and pressures were revealed: While most of the mapped initiatives found the generated publicity helpful for their agenda and supported it, there were also those who found themselves being instrumentalized and limited in their self-definition and self-representation. They did not want to be linked with initiatives that did not share their political views and interests. The concrete disputes with these initiatives referred to general questions, which made it preferable to deliberately connect those who mapped and those who were being mapped in order to find a suitable way of dealing with these issues. The texts on the three topics that evolved are based on a mind map which was developed in the workshop.

Topics

I. "Respect Other People's Sovereignty of Self-Expression!"
Maps represent a selective view on the world. Content and circumstances are brought into relation. They delineate, and the single facts do not speak for themselves anymore. Maps are always based on analyses and views which can never conform with a general truth. At the same time, maps somehow seem reliable, objective and suggest they could show "everything that is important". The critique of the ideological or reality-constructing character of a hegemonic map also holds true for any alternative mapping!

It is exactly this character, that can turn an alternative map into a powerful, subversive and thought-provoking irritation. But all people involved in the mapping should be in agreement with this. Whoever maps groups or projects should ask these beforehand how they feel about being represented in the contexts these maps create.

Solidary mappings can furthermore generate a collective value of knowledge and dispute, if the first idea of mapping with all the represented individuals is opened for collective reflection and further developed. If the mapped "subjects" are at the same time involved in the production, this may lead to the mapping being more of a self-portrayal than an unwanted portrayal by somebody else. And this most likely leads to a better diffusion of the product and will probably make everyone involved happier. At the same time it is often sensible to consciously exclude certain actors. Grievances can rarely be mapped if the individuals responsible for these grievances are able to take part in the mapping process themselves. The objective of the map determines who should be mapping. As a tool for resistance, maps attack (hegemonic) interests, stories and perspectives. This does not require asking anyone for permission.

Needs of others
• They want to know that they are "being mapped".
• They want to know about the aim, the users and the statements of your map.
• They want to be able to decide which information about them is published where.
• They may want to remain anonymous.

Suggestions
• Let others know early in advance that you would like them to be represented on your map.
• Document the objective, potential users as well as the statement you want to make with your map.
• Let others participate in the way how and in which relation their project is presented on your map.
• Offer a direct option to correct data and give feedback.
II. "Show a Colorful World!"

The historical evolution of maps is tightly connected to the development of national states and their instruments of governing and power. Maps have formed the representative basis for claiming borders, hierarchies and order, and they still do. If a general city street map shows highways as large and bold without depicting any bike lanes, we can clearly see the meaning and value of bicycles in comparison to cars within urban traffic. Generally, official and commercial maps tend to represent hegemonic power relations of the state and the market.

Opposing this is the reclaiming of a possible other world through emancipatory projects, and this is also how mapping projects can attempt a critical approach towards the visual basis of their maps. Maybe it would be helpful for the mapped topics not to cite the ruling power structures.

Euclidian geometrical space does not necessarily represent the best structure of an alternative perspective on the world. Associative mind maps, relational maps and networks, scribble maps or fictitious spaces all represent alternatives to the established, mathematically and technically structured views on the world.

Needs of others
• Neither do they want to see their projects from a "governmental view" nor do they want to have to look at these kinds of maps over and over again.
• They want to autonomously interpret your maps without being instructed how to do so – they want to be able to find their way with your map but also to discover new things.

Suggestions
• Design your map!
• Create your map in different scales and representations.
• Use alternatives to known map techniques and spatial conceptualizations, and use your imagination in order to find the format that is most useful for you. Sometimes the most useful map is the one that looks the least like it...

III. "Create Commons!"

In the world of capitalism every single output, even media and information products, are by default subject to market and property logics. This means that, technically and legally speaking, your map or information collection can be viewed but not shared, modified or remixed by other people as long as you have not explicitly stated otherwise. This is contrasted by attempts such as those of the Commons movement or the Free and Open Source Software scene, whose goals it is to share and use resources as freely as possible.

Common tools for turning your map into a common resource are the licenses of Creative Commons. With the Creative Commons licenses you can easily define the precise ways in which other people can or cannot use your data or your map. In order to do so, it is enough to state that the work is protected by the chosen license and to link it to the license text. Other approaches, such as Public Domain or the "Do What The Fuck You Want To Public License" try to disconnect the work as much as legally possible from the copyright law.

Needs of others
• They want to use public data in other contexts.
• They may want to carry on and establish new projects based on your work.
• They want to update existing and contribute new data.

Suggestions
• Choose an open license for your map.
• Use other commons.
• Offer a direct option to give feedback as well as to correct data.
GO, OCCASIONAL CARTOGRAPHER, GO!