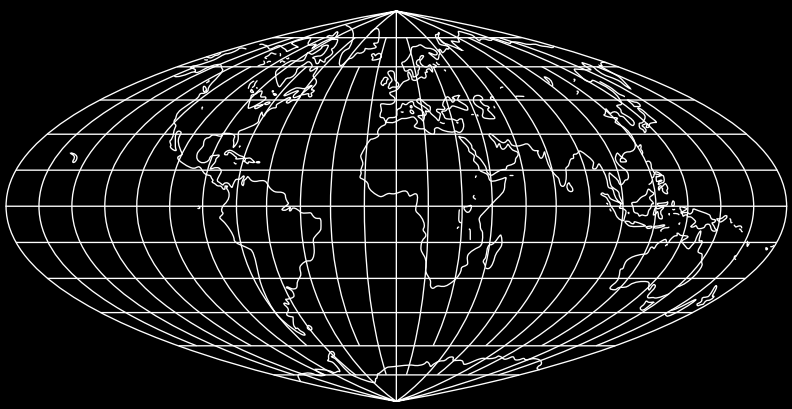
REFLECTIONS ON THE CARTOGRAPHIC LANGUAGES



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When collectively mapping possible worlds

“Expanding both heart and mind, engaged pedagogy makes us better learners because it asks us to embrace and explore the practice of knowing together” (hooks 2010: 22)

kollektiv orangotango is a circle of critical geographers and friends who have been in coevolution since the 2000s. As popular educators, we strive for a collective horizontal production of knowledge; as militant scholars, we link practical interventions and theoretical reflection (Halder 2018). Our commitment to mutual aid and to solidarity ties us to a network of befriended activists and researchers who, in extensive collaborations and through joint learning processes, have become part of kollektiv orangotango. We place our work at the service of emancipatory processes in youth clubs and community gardens, in schools and autonomous social centers, on park benches and in lecture halls, in favelas and in rural communities. Despite our engagements in artistic interventions in public space, urban agriculture, and others, we are unemployed geographers with a predilection for maps. In fact, critical cartography is a crucial part of our work. Throughout the last decade we have

co-conducted collective mappings and critical cartography processes in Latin America and Europe. Concomitantly, we have published a series of educational and DIY mapping materials, including multilingual manuals[1], video tutorials[2], and an international collection of counter-cartographies (kollektiv orangotango+ 2018). While we sometimes co-create critical maps as results, we are mostly interested in mapping as a process, and that is what is at stake in this chapter. Collective mapping for us is a common process of territorial reflection, awareness-building and self-organization. It is a process in which one's own relationship to space is reflected upon, in which different intersubjective perspectives as well as different types of knowledge (e.g., every day, traditional, embodied, and academic knowledge) can flow together and open up scope for action. To achieve this, we feel that it is crucial to integrate a notion of "sentipensar" – sensing/thinking – (Escobar 2020: 67) into what, with reference to bell hooks may be termed "engaged cartography", that is, a cartography based on dialog that engages in both "heart and mind" (hooks 2010: 22). This happens by casting a spatial perspective on the dialectical relationship between us humans and our environment; this relationship can be changed by humans, which in turn changes humans. Thus, we understand collective mapping as the process of geographic alphabetization in everyday life and action spaces through dialog, "mediated by the world" (Freire 2000: 80). – We continuously learn from co-mappers as we adapt the means and presumptions of our mapping practices to the concrete social contexts in which we coincide.

MAPPING OTHER WORLDS

After years of mapping with diverse groups in various contexts, we are determined to experiment and to develop our practice towards new forms and ways of mapping. We note that most critical maps, including some co-authored by ourselves, reproduce the forms and formalities of traditional western cartography to a significant extent. This concerns adherence to a Cartesian coordinate system, to conventions of scale, projections, as well as to the use of administrative and state borders in

01 Available online at: (kollektiv orangotango n.d.).
02 Available online at: (kollektiv orangotango n.d.).

map bases and as a means to structure one's own cartographic analysis and representation, to name just the most obvious ones. The few cases in which lessons from critical cartography have made their way to a somewhat wider public are, more often than not, sustained by strong alternative images or icons, as has most illustratively been shown in Joaquín Torres García's famous drawing "América Invertida". Yet, the set of "other" cartographic knowledge or imagery remains rather limited. For instance, the Mapuches' privileging of the east – where the sun rises – as the main cardinal point (Mansilla Quiñones/Pehuén/Letelier 2019) lacks prominence even in critical-cartography discourses.

Our engagement as popular educators who promote critical cartography, our experience in collective mapping, as well as discussions with fellow critical cartographers from diverse backgrounds, urge us to go beyond standard attributes of critical cartography. This implies the necessity to develop cartographic means that not only criticize some elements of traditional cartography, but also those that open our gaze towards new cartographies based on different conceptions of space, territory, and the relations that they contain. For cartography to do its humble part in "constructing the pluriverse" (Reiter 2018), it first needs to embrace "multiple forms of knowledge, including the affective, embodied, oral, cognitive and cultural" (Motta 2015: 178) and find adequate means to give voice to this plurality of knowledges. It involves using maps and mapping processes as one among many tools to develop a different imagination of the world and our relations with and within it. As Ângela Massumi Katuta puts it in a recent talk on mapping as a tool for emancipation, in order to satisfy the demand to represent other forms of being[3] in the world, we need to carry out a rupture in cartographic visual language

03 In Portuguese, Katuta speaks of both "ser e estar no mundo".

(AGB Porto Alegre 2020)[4]. Indeed, Katuta argues that we need to broaden the concept of what a "map" is in order to include "other" epistemologies or cosmovisions and, therefore, make cartography a tool for the creation of new worlds. Careful inquiry into non-Western, indigenous, or non-modern mapping practices supply rich insights regarding other cartographic languages. While research on specific indigenous mapping practices has gained some attention in recent decades, an intensified participation of indigenous subjects and knowledges into mapping processes would be vital to decolonize cartography (Rose-Redwood et al. 2020: 151) and to integrate an enhanced choice of mapping tools and graphic elements to countermappers' repertoires.[5]

04 It is not by coincidence that we cite a range of current multimedia publications, instead of limiting ourselves to references to prestigious scientific journals and books. This is because, on the one hand, this text is the fruit of a very special historic context, the 2020 Corona pandemic, in which online discussions in particular, both live or archived on popular video platforms, gain a renewed relevance, and offer a great deal of relevant data, way before being published in written formats. On the other hand, we are rather fed up with proprietary knowledge production. In the 21st century, the validity of Proudhoun's famous phrase needs to be emphasized more than ever, and this time with special vehemence for the property of knowledge. Proprietary knowledge is thieved knowledge! Thus, we prioritize references to all kinds of open access formats. Moreover, we prioritize multimedia formats to continuous text, as we hope these formats invite people into the discussion who are traditionally excluded from academic debates, but whose contribution is all the more valuable and essential for "constructing the pluriverse" (Reiter 2018).

05 The decolonization of cartography comes with challenges. Painstaking attentiveness towards the danger of coopting indigenous mapping practices is essential here. After all, instead of serving the strengthening of the sovereignty of indigenous communities in their territories, these maps might serve the particular interest of the state and/or capital (Bryan/Wood 2015) or the mistreatment of indigenous cosmovisions by forcing their spatial perception into the Cartesian coordinate system to be considered valid knowledge in court cases on the issue of indigenous land rights.

We take this occasion to reflect on some of the means of designing maps and elaborate on how we hope to develop them further towards decolonial mapping practices. This is no blueprint. We share our experience in order to open up dialog, to learn from each other, delearn toxic residues of colonial and corporate cartography and, instead, create maps in which – to borrow the famous Zapatista slogan – many worlds fit.

We start this by scrutinizing two of the most basic graphic elements that most maps contain: surfaces and lines. Let us, to this end, follow the dominant modern images of maps as plain paper maps. Before the mapping starts, there is the unmapped void, epitomized by blank white space. Instead, we started to use different colored blank sheets as cartographic bases, given that we realized that this implies other imaginaries of the map's void. Instead of depicting the simplified, exclusively relevant data on an "emptiness" – white – background, we meditated and discussed with co-mappers about how they felt about those aspects that are not going to be visualized in this specific map and decided on which color best depicts this pluriversal "fullness, beauty and vitality" (Escobar 2020: 133). The change in perspective that we hope to accomplish suggests that mapping is not about knowing everything about the mapped territory and topic, and thus having to erase the white spots on the map (Glissant 2013: 51). Instead, we realized that in a lot of cases, collective cartography implies a smashing together of heterogeneous, often divergent experiences in shared territories. This exhorted us to question our cartographer's reflex to seek an unequivocally valid representation. We propose applying opacity (see Glissant 1997, 190) as a decolonial option to visualize complexity in order to visualize the appreciation for difference and caring coexistence. This also implies map-makers' and map-users' right to get lost in the map, to misunderstand, and to derive other meanings therefrom. In this sense, the map is no longer the state's or the landlord's tool for "legibility

and simplification" (Scott 1998: 9), but instead offers traces that become relevant for readers, not by indicating an unequivocal way to follow, but by leaving hints to complex realities and possible ways, possible spaces, and possible actions. In workshops, we propose coloring areas with pastel crayons, thereby permitting the overlaying and mixing of different shades, in order to demonstrate the overlapping coexistence of many worlds.

Pastel crayons are also a preferable coloring tool for our purposes because they are especially apt for blurring a colored surface's borders. Apart from the use of distorted, biased projections and north-up cartographic bases, the unreflected reproduction of national and administrative borders in cartographic bases is one of the most frequent blunders committed even in the realm of "critical mapping". This "territorial trap", as John Agnew framed it in 1994, is certainly most evident and politically efficacious in the case of national states, dominantly conceived in political science and public discourse as container spaces (Agnew 1994). Substantial accomplishments have been made by the struggles of popular groups or indigenous communities for their right to define their own territories, regardless of state or property borders. Yet, we argue that taking the danger of the territorial trap seriously means questioning the sharp dividing line as a cartographic visual element as a whole. It bears a colonial logic of simplifying division and segregation. It is, in short, the logic of the state's mapping, so accurately described by Scott in his seminal work "Seeing like a State" (Scott 1998). However valuable the demarcation of certain territories may be for emancipatory struggles (see Zibechi 2011; Bartholl 2018), we suggest that the sharp line be avoided whenever possible when visually representing these territories, in order to do justice to the rhizomic – multiple, dynamic, heterogeneous – interconnectedness of territories (see Oslender 2019: 12). Thus, the blurred, overlapping borders between crayon-colored territo-

ries of our maps might represent what Escobar (2018: 83) referred to as "zones of contact and partial common ground". This converges with what we can learn from Mapuche territorial ontology for which the idea of boundaries or borders does not exist. The Mapuche concept of Xawümen is used to identify the points and lines of territorial demarcation between Lofs, which correspond to the smallest units that divide Mapuche territory. Xawümen builds on the idea of coming together, unifying, and linking parts (Mansilla Quiñones/Pehuen 2019: 42). Understanding Xawümen, as a territorial concept of coming together and unifying, opens up a new perspective on co-existing and eventually offers possibilities for building a positive otherness, allowing people to put themselves in one another's shoes, to promote respectful dialog, and to create a meeting of worlds. Engaged-cartography, given its commitment to the creation of relations between diverse (territorial) experiences, identities, and imaginations, needs to engage in the development of new graphic expressions to represent border zones of encounter. In this sense, as opposed to the dividing, enclosing line, we strongly encourage the extensive use of lines – multiple, colorful, straight, wavy, crooked, interconnected, and interwoven – as representations of connections, relations, and dynamics. Get yourself inspired by Tim Ingold's (2008) anthropological archaeology of the line.

Yet, transcending the notion of paper as the taken for granted raw material for mapping, the demand to find adequate expressions to embrace multiple forms of knowledge into mapping processes also led us to reflect on the materiality of the maps we produce collectively and, consequently, of the sensual perceptions and the stimulus that they imply. How might we get past the dominant role played by the visual and engage other sensations that might be more apt for transmitting certain forms of knowledge into mapping? We derive some possible answers to this question from the material practicalities that arose in our practice when

mapping in bustling places, in public space, or with large youth groups. Instead of using fragile paper as a raw material for mapping, we started to work with more durable materials like cardboard or textiles. This led us to reflect on how the material character of a map, by addressing other than visual senses and connotations, may be better adapted to transmit certain layers of meaning that conventional paper maps hardly address. So, one of the first questions to pose, when collectively discussing how to map a topic of common interest, might be: "What does this topic make us feel like? If this feeling had a material body, what would it be made of – wood, concrete, paper, woven fabric…?" Integrating a range of materials in the creation of maps – and the mapping process (see Olmedo 2018) – expands the range of sensory perceptions it addresses, and thus permits a dialog with other aspects of spatial experience. ○ FIG.1

John Krygier emphasized the potential of integrating audio into digital cartography as early as 1994, and many others have elaborated on digital audiovisual maps ever since (Krygier 1994; see Edler et al. 2019). Why not integrate sound in analog collective mapping? In terms of the audiovisual, are we capable of producing simply-audio maps? Indeed, we work with soundmaps that allow groups to explore and to enjoy soundscapes, eventually without the visual, in order to further extend the variety of sensory perceptions in our cartographic repertoire. Since smartphones work as both recording and playback devices, a soundmap can be constructed without much additional equipment. Collective mappers may record sounds, produced with their bodies or encountered in on-site visits, or find suitable audio in internet sound archives or even on popular music platforms, depending on the maps' topic and purpose. Having the relevant sounds on the devices means that these can be distributed on the map's basis – e.g., the floor of the room in which the mapping takes place. The coordi-

nates may be geographically referenced, but can also relate to thematic or emotional fields. Now co-mappers can discover the map by wandering on it. If the group is in a safe place, this can be done with closed eyes.

Mapping with children and youngsters in particular led us to experiment with other techniques and to create new cartographic expressions. Breaking up notions of metric scale and maps as static objects, we work with busy picture maps in which participants can move elements around to create diverse encounters and constellations. As a result, the map becomes a territory for collective ludic engagement and debate. We combine mapping with performative elements by building on Augusto Boal's 'Theatre of the Oppressed' (see Boal 1982). In a combination of ludic maps with theatre methods, we collectively build maps in a walk-through scale, so that mappers and passersby – turning themselves into spontaneous mappers – can move themselves on the map and move the map: Meet, argue, hug on the map. ○ Other, very valuable works to integrate our own bodies in our maps, and moreover to integrate the "body-territory" into territorial struggles, have been formulated by Latin American feminist cartographers in recent years. The mapping practices have been described illustratively in the manual "Mapeando el Cuerpo-Territorio" (Colectivo Miradas Críticas del Territorio desde el Feminismo 2017) or in the booklet "Los Feminismos como Práctica Espacial" (Colectivo Geografía Crítica 2018) and build on the assumption that our own body-territories are, indeed, the first territory to be reappropriated through consciousness-raising body mapping. In a nutshell, the message of these feminist mapping practices can be found on the top of the social media page of Mexican critical geography collective Geobrujas – Comunidad de Geógrafas: "Neither land nor women are territory of conquest".

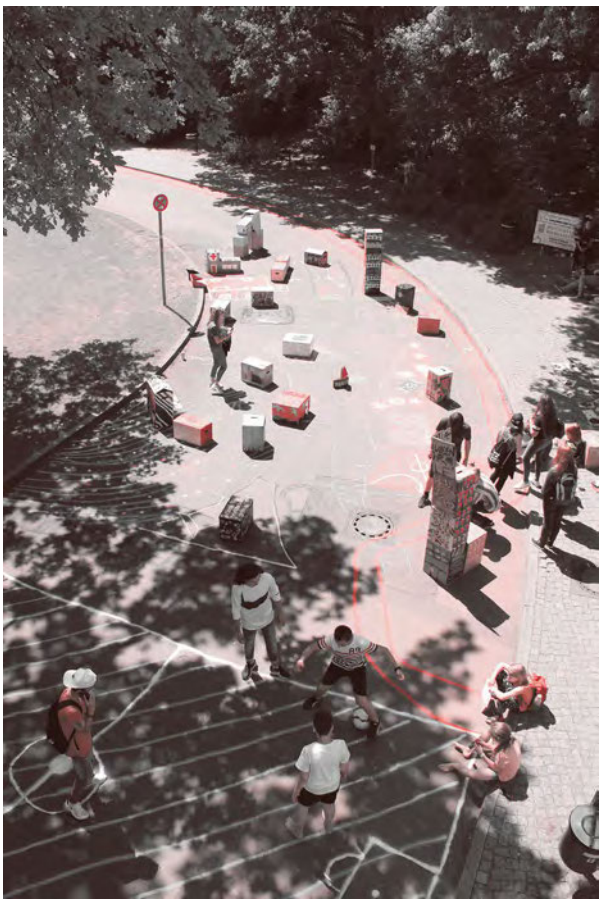
FIG.2

From our body-territories to everyday environments, mapping is a precious tool for reim-

agining ourselves and our diverse ways of being in the world. Yet, it is the world – the global – that, as an object of mapping, gains special attention if mapping ought to be one of many tools to express an emergent decolonial global ethics (Dunford 2017). Critical cartography, if committed to providing tools to a decolonial pedagogy and politics, must not abandon the scale of the planetary (De Lissovoy 2010: 290). Which graphic elements and aesthetic strategies can cartography provide when it comes to visualizing a world in which many worlds – and many ways of being in the world – fit? How can we create cartographic representations of worlds that emphasize conviviality, rather than distance; encounter, rather than separation; and complexity, rather than unequivocality? The first part of the answer comes easily: Never again shall any cartography – no matter what its epistemological or ideological basis be – dictate a "single notion of the world" (Escobar 2018: 84). Can we, at least, offer a map basis on which pluriversal existing and becoming subjects might experiment themselves? When discussing this, in the course of the Not-an-Atlas project (see below), we concurred that such a cartographic basis should express "global solidarity based on non-dominative principles of coexistence and kindredness" (De Lissovoy 2010: 279). We concluded that the aspiration of non-domination should be manifest through the elimination of up-down notions. ○ Whereas the notions of solidarity and kinship may be represented by "closing the ranks", moving the map's elements – continents in the world map's case – together in a way that suggests equal proximity between all elements, without a meaningful order. Finally, we problematized traditional world maps' inherent top-down, bird's eye perspective implying an "abstracted, mental, and totalizing" approach (Morris and Voyce 2015; see Certeau 2002: 119) – "a view of the world as seen by those who rule it – a world from above" as Escobar puts it (Escobar 2018: 82).

FIG.3

● FIG.1 ▶ Élise Olmedo's collective textile mappings with Moroccan women are a great example of how embracing other materialities and sensory perception can open cartography up to other facets of geographical knowledge.



● FIG.2 ▶ The "map is not the territory" [Korzybski 2005], but the territory may well be transformed into a map, engaging passersby into encounters and collective reflection on possible worlds.

● FIG.3 ▶ When designing the Not-an-Atlas Logo, we aimed to abandon hierarchical representations of the globe in favor of a holistic representation that emphasizes kindredness. The back-to-front version strives to dismiss the from-above view on the world, prioritizing cartographers' condition of being in the world.

To better express our commitment to the bottom-up perspective, and our intention of providing a cartographic basis on which to visualize pluriversal ways of being *in* the world, why not depict the continent's silhouettes on the world map as seen from with-*in* the world – that is, back-to-front, when referring to conventional world maps' representations?

FROM COLLECTIVE MAPPINGS TO GLOBAL ENCOUNTERS

As a matter of fact, in addition to our engagement in collective critical mapping in various local contexts, we engaged in counter-cartography on a global scale as we initiated the Not-an-Atlas project in 2015. Building on our activist experiences, and networks as well as friendships with critical cartographers in Latin America and Europe, we invited mappers to participate in the project that was initially directed to publishing the book "This Is Not an Atlas - A Global Collection of Counter-Cartographies" (kollektiv orangotango+ 2018), but that soon turned out to go well beyond the scope of the book.

Not-an-Atlas is itself an attempt to represent the many worlds of critical cartographers from all over. The collection shows how maps are created and transformed as a part of political struggle, for critical research or in art and education: from indigenous territories in the Amazon to the anti-eviction movement in San Francisco; from defending commons in Mexico to mapping refugee camps with balloons in Lebanon; from slums in Nairobi to squats in Berlin; from supporting communities in the Philippines to reporting sexual harassment in Cairo. Not-an-Atlas seeks to inspire, to contribute to emancipatory transformations on the ground by supporting counter-cartographies within and beyond its pages. Finally – and perhaps most importantly – we see this

book as a guide pointing at many possible worlds, and as an invitation to create more of them: on paper, online, and in the diverse territories in which these mappings are being engaged.

When we reflect on what *This Is Not an Atlas* has become since its publication, the images and emotions that come to our mind are predominantly related to encounters: the diverse co-organizers and participants of mapping events and processes in both Europe and Latin America; ○ severe but always appreciative debates; new contacts, many of which made us feel related to a network of like-minded soulmates with whom we share a common passion and practice (see Halder/Michel/Schweizer 2020). This makes us think and feel that Not-an-Atlas is, indeed, a way of relating and creating a common project in and through difference: a pluriversal cartography. FIG.4

Today, Not-an-Atlas is no longer a "global collection" but a meshwork of global counter-cartographies; the "global" here ought to be understood not as a single cartographic reason being globalized and universally applied, but as a condition that different actors with diverse cartographic reasons and practices share, that relates them across difference, as theorized in Edouard's understanding of globality (Glissant 1997: 94). By sharing experiences and materials, we engage in a collective learning process based on the ongoing dialogue of diverse cartographies, for the creation of cartographic "knowledge as relationality" (Vazquez 2017: 247). Glissant's metaphor of the woven fabric is particularly appropriate in visualizing these relations' convergence, given that fabric's materiality implies a warming, caring quality. Indeed, continuously sharing and co-creating among befriended activist cartographers involves more than just intellectual exchange. It is also an opportunity to practice care, solidarity, and accounta-

bility.[6] This became clearer to us in the context of the global crisis that affected all of us in 2020.

ONLINE MAPPING AND PANDEMIC SOLIDARITY

What we had enjoyed most about the Not-an-Atlas network, in what was a little over a year since its publication, was meeting fellow mappers in person, getting to know the realities and territories that their respective practices evolved from on the ground. In early 2020, at the onset of the COVID-19 pandemic, the network gained a renewed purpose as a platform of remote collaboration and mutual aid. Quarantined in Germany and Brazil, we wondered how to use mapping as a tool to mobilize communities and to organize solidarity in the face of sanitary, economic, and political crises. In fact, fellow cartographers from the Not-an-Atlas network, equally quarantined in their respective localities, soon approached us with very concrete requests. As a result, during the year of 2020 we engaged in a range of collaborative processes jointly with activists and militant cartographers from various local contexts, all of which deployed collective online mapping to organize mutual aid and communitary resistance in the context of the pandemic.

The resulting maps depict injustices and visualize resistance – as in the case of the global COVID-19 Global Housing Protection Legislation and Housing Justice Action Map, realized by the Anti-Eviction Mapping Project (AEMP) in collaboration with housing justice activists, cartographers, and tech activists.[7] ○ Alternatively, they organized solidarity action and facilitated access to mutual aid networks – as in

FIG.5

06 For a captivating call to practice accountability see Mingus (2019); for a reflection on how the Anti-Eviction Mapping Project's bases its activist mapping practice on the principles of mutual aid, accountability, and embeddedness, see Graziani (2020).

07 (Anti-Eviction Mapping Project n.d.).

the case of the map Solidariedade e Assistência Social (COVID-19) – RS realized by activist geographers at UFRGS university in southern Brazil.[8] The Not-an-Atlas network operated as a platform for exchanging experiences, knowledge, skills, and resources on direct action mapping, supporting militant struggles on the ground. Conversely, this effort showed us how much work still needs to be done in the realm of digital mapping in order to create non-corporate, secure, free and open-source digital infrastructures, apt for meeting the needs of activists and organizers.[9]

Rather surprisingly to us, these remote collaborations felt not so different to analog collective mapping processes. Just like in face-to-face collaborations, the common ground on which these processes were built was a highly appreciative atmosphere. Regular, often extensive meetings became spaces not only of production of a tactical tool for shared struggles, but also for sharing individual experiences – as well as for fear, anger, and hope. They turned out to be particularly empowering, as they provided a space for the creation of a common narrative of the moment of crisis and resistance we were, and are still, witnessing. In short, these collective efforts are moments of collaborative struggle, but also moments of care and joy, albeit remotely. This corresponds to the observation that Rebecca Solnit recently made with regard to solidarity initiatives emerging as a response to the pandemic all over the world, when stating that engagement in solidarity makes subjects feel more fully human (Solnit 2020: xiv). Just like Solnit, this experience makes us remember Arundhati Roy's famous

08 (kollektiv orangotango 2020a).

09 The Reclus application ("Reclus: Your Counter-Mapping Friend" 2020), written by Luis Felipe Murillo, is an effort that we undertook in order to make the map "Luta pela Moradia Durante a Pandemia" (kollektiv orangotango 2020b) function without corporate tech, and to make the crowd sourcing accessible via the Tor network. Considerable work of this type will be necessary in future years to make collective online mapping free and safe.

● FIG.4 ▶ Since the book's publication in 2018, we have strived to create encounters of militant cartographers, to exchange tools and knowledges, to create new collaborations and friendships.

● FIG.5 ▶ Mapping global housing justice struggles in the light of the COVID pandemic.

phrase in which she affirms: "Another world is not only possible, she is on her way." It is in these collective moments of caring, joyful militant mapping that we "can hear her breathing." (Roy 2006: 86).

ENGAGED ONLINE CARTOGRAPHY?

Do the online maps that accrue from these moments achieve the affinity and hope implied in these unexpected encounters? They are tactical tools for the struggles that they were created to foster. As useful as they may be in function and content, their form and aesthetics are rather conventional – residues of an old world's cartography. From this point of view, the breathing of new worlds is hardly discernible in these maps, even though we could clearly hear it in the collective mapping process from which they were created. How come the invigorating breeze of transformation did not devolve from the process to the visualization?

While we have "other" cartographic formats and aesthetics at hand for analog mapping, as we have elucidated above, unfortunately this does not yet apply to online mapping. As Morris and Voyce state:

> "GIS, GPS, and remote satellite imaging seem to have intensified the divide between top-down and bottom-up mapping, between rational, objective, and scientific representations of fixed space, on the one hand, and experiential, phenomenological, and humanistic representations of lived space, on the other" (Morris/Voyce 2015).

In addition to the aforementioned examples of creating purposeful critical online maps, as activists and popular educators we are increasingly pushed to develop online formats for process-oriented collective mapping activities.

In recent months, rather unwittingly, we have

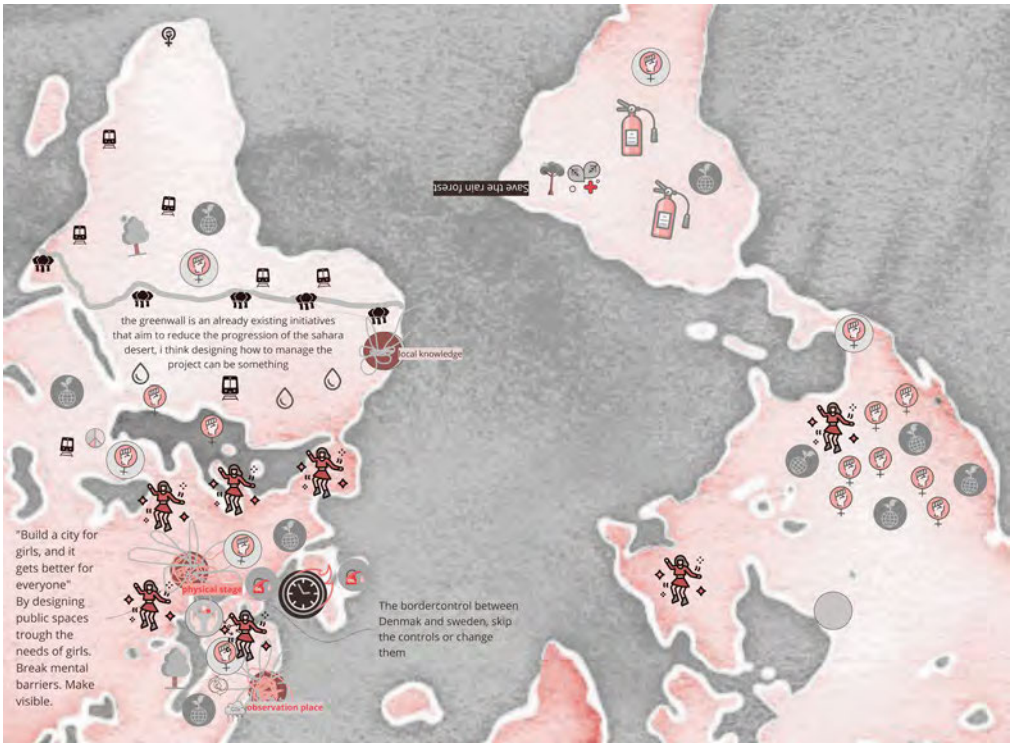
developed formats for collective mapping that timidly try to integrate our ambitions to enrich the toolbox of collectively designing maps into online formats, even though we are largely unfamiliar with advanced digital mapping tools. What were especially heartening in this regard were the cartographic processes that we organized in collaboration with befriended activists, artists, and cartographers – the Mexican feminist geographers Geobrujas[10], the São Paulo-based artist-activist Grupo Contrafilé[11], as well as the artist and militant researcher Cristina Ribas[12] – and from which arose a regular online meeting of exchange and cartographic self-education.

As for analog mapping, we realized that the strict adherence to Cartesian space was not helpful for many of the mapping set-ups with which we work. Consequently, instead of working with georeferenciating mapping tools, such as OSM, we started to work with online whiteboard tools. Here, exported map tiles may serve as map basis, just as single-colored backgrounds or image files. ○ A combination of FIG.6 **freehand drawing and collage elements offer great possibilities when it comes to designing collective mappings on paper. The easy access to online imagery and the simple handling of vector graphics allow for new experiences, not to mention the possibilities of embedding audio and video content into maps. Yet, in spite of these advantages, the design possibilities of tools that can be used in groups without coding expertise are limited. This is the case especially for the few free and open-source solutions that, in this field, lag far behind their corporate-tech equivalents.**

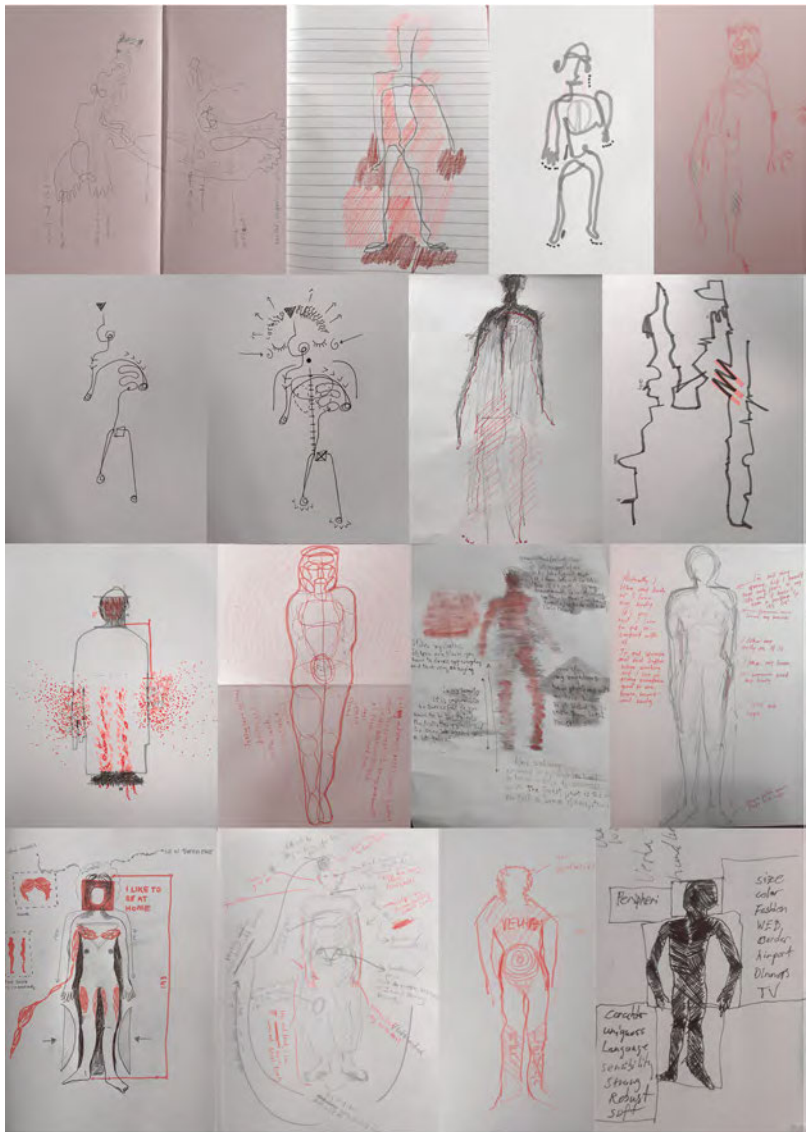
10 ("GeoBrujas - Comunidad de Geógrafas" n.d.), see also their contribution to the ESTEPA mapping guide (Hernández-Cantarell et al. 2019).

11 ("Grupo Contrafilé" n.d.).

12 ("Cristina Ribas" n.d.), we strongly recommend reading Cristina's reflection on complexity and cartography (Ribas 2014).



● FIG.6 ▶ Collective online mapping offers, indeed, a wide range of design possibilities. As in mapping on paper, icons, text, and freehand drawing can be combined to discuss, in this example, where co-mappers want to promote social, political, and environmental change [edited by kollektiv orangotango].



● FIG.7 ▶ Combining digital and analog, collective and individual formats may facilitate the integration of multiple knowledges into online collective mapping, as experienced when sharing these body mappings in a workshop held online.

As discussed with respect to analog mapping, we try to integrate performative elements into online maps, both by using the whiteboard map as a playing field on which participants can move elements simultaneously, thereby creating a ludic dynamic that is favorable to unexpected outcomes and through the combination of mapping and video-conference tools that offer limited, but nonetheless valuable, possibilities of performative expression. While it is difficult to create safe spaces within these online maps, in our experience, it is wise to combine collective online with individual offline moments, and to encourage co-mappers to share subjective and personal experiences on the map, whilst offering sufficient freedom to not do so. For instance, we facilitated body mapping exercises that co-mappers would do for themselves on paper while listening to our facilitating voice. ○ Afterwards, they shared their individual maps on the whiteboard, where connections, common experiences, and possible support strategies were collectively mapped.

FIG.7

These experiences make us feel that online mapping processes can serve as tools for engaged cartography, integrating mind, heart, and multiple senses, for building affinity groups, and for representing solidarity on the map. Thus, it will be our continued objective to combine insights from analog and digital mapping processes in order to invent new cartographic languages that are apt for collectively mapping possible worlds.

Having said this, we conclude by remarking that mapping is never an end in itself, just a means to this end. As the Iconoclasistas emphasize, its full potential unfolds only as a strategic part of a larger movement, namely when knowledge is exchanged, networks are created, or when resistance becomes visible (iconoclasistas 2013). If the “map is not the territory” (Korzybski 2005, 750), then the mapping itself cannot be the transformation.

→VIDEO LINK

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