

## 27

# INDIGENOUS CARTOGRAPHIES

*Davi Pereira Junior and Bjørn Sletto*

### Introduction

Indigenous and Afrodiasporic<sup>1</sup> cartographies challenge nation-state control over cartographic production and displace the traditional meaning of map production. Unlike state-sponsored mapmaking, Indigenous cartography is not concerned with defining territorial limits, excluding groups that do not possess territorial rights, or protecting private property under capitalist land market regimes. Instead, by exercising the power to map, Indigenous peoples demonstrate that cartography can be used to protect their rights to existence, territory and identity. To the extent that Indigenous peoples are able to produce their own cartography based on their own, autonomous spatial and social criteria, they challenge the erasure of subordinated, territorial epistemologies inherent to state-led cartographic production.

Because Indigenous cartographies emerge from specific territorial, social and cultural realities and are shaped by Indigenous epistemologies and ontologies, they reflect the diverse, lived experiences of Indigenous peoples, embody situated forms of storytelling and reveal the symbolic connections that Indigenous peoples maintain with their territories. This sets Indigenous mapping fundamentally apart from state-led, western ways of thinking about space and mapmaking (see Willmott, this volume). Indigenous cartographic processes are informed by collective political mobilisation and territorial struggles, thus serving as a response to neoliberal policies, the expansion of capital, and the commodification and extraction of Indigenous land and natural resources. Since Indigenous cartographies emerge from autonomous mapping processes, allowing Indigenous people to exercise their agency and act as protagonists in the mapping process, Indigenous mapmaking serves as a political instrument of self-defence against various forms of genocide, silencing, exploitation and extraction.

### Politics of Indigenous cartographies

Since Indigenous cartography emerges from situated processes of mapmaking that take place in spaces beyond state control, it serves as a powerful political instrument (Farias Júnior, 2010; Brown and Raymond, 2013) to reinforce traditional knowledges and identities while

mobilising Indigenous people in struggles for territory, political authority and distribution and protection of rights (de Almeida, 2013; Bryan, 2011; Sletto et al., 2020). By using appropriate, community-based methods (Louis et al., 2012; Pearce and Louis, 2008), Indigenous mapping processes seek to maintain the group's autonomy while allowing communities to control the process of knowledge production during map production. The mapping process can thus be understood as a form of political intervention, allowing marginalised groups to give visibility to their struggles through the symbolic appropriation of physical spaces (Farias Júnior, 2010). For Indigenous people, maps are never individual expressions. Instead, mapping processes reflect and produce political actions (Crampton, 2001: 16) and must therefore be understood as plural and collective manifestations (Farias Júnior, 2010).

Because Indigenous maps are instruments of political mobilisation, Indigenous mapmakers eschew generic classifications and homogenisation of people, cultures and landscapes. This is because geographical borders and spatial nomenclature imposed by the nation-state are insufficient for understanding the profound processes of Indigenous territorial construction. Instead, Indigenous maps embrace specific political contexts and local realities, presenting situational claims according to the needs and conflicts experienced by the group. Indigenous cartographies are thus never frozen or static (Kitchin et al., 2013). Indigenous cartographies assume that the symbolic dimensions of space, including ancestral memories and sacred places, can always be reinterpreted and serve to defend claims to territories. While Indigenous maps capture specific moments, their meanings are always reinvented depending on who interprets the maps and how they are used in storytelling (Caquard and Cartwright, 2014). As Crampton (2001) asserts, cartographic knowledge production is always situated within a given, political and social context and thus normalised by particular relations of power (Radcliffe, 2012).

When Indigenous people thus map social relations within their territories, they develop a deeper understanding of the boundaries that distinguish and demarcate their territorialities as well as the collective identities that correspond with this territoriality. Indigenous territories are conceived through awareness of the self and collective identity, and Indigenous cartographies bring forth specific, local lexica used by Indigenous peoples to (un)name the social spaces where they live. By naming their own territorial domains through cartography, Indigenous people symbolically express their territorial epistemologies and the ways in which these give meaning to their social practices and symbolic relations with the landscape.

In one case in 2007, the Brazilian government authorised the binational company Alcântara Cyclone Space<sup>2</sup> (ACS) to illegally invade the farming and fishing areas of the Quilombola communities of Alcântara in Maranhão, Brazil, in order to build a platform to launch spacecraft and rockets. Faced with this threat, community leaders decided to initiate a community-based mapping process to protect their territories, and in doing so, mobilised Quilombola residents who took to building roadblocks to stave off the invasion. The maps resulting from the community-based process were later incorporated into the broader territorial rights struggles, providing support for lawsuits filed by Quilombola leaders both through the Brazilian legal system and in international human rights courts. The Quilombolas also started to use mapping to monitor the territorial integrity of their lands. Today, when their territories are threatened, they resort to mapping as a way of mobilising communities and producing knowledge to support their territorial demands.

By teaching participants about the landscape, social relations and community rules for appropriation of territory and natural resources, Indigenous cartographies provide

pedagogical opportunities and contribute to the reproduction of Indigenous identities. Indigenous cartographies serve to record epistemologies, cultural memories, political struggles and histories of resistance, tracing the construction of Indigenous identities over time in ways that bridge different generations. By providing a means to access ancestral memory, cartography allows Indigenous people to connect their ancestral past with their present while also envisioning their own futures. Cartography makes it possible for Indigenous people to describe and georeference their material landscapes but also their symbolic landscapes, building visual narratives to transmit their epistemologies to future generations.

Mapping projects are thus always immersed in intergenerational pedagogical experiences as they bring together the knowledge of elders and youth. The mapping experience provides a means for elders to share knowledge accumulated throughout life based on collective memory, personal experiences and knowledge present in the territories and in peoples' bodies. For young people, the mapping experience also provides opportunities to engage with technologies such as Global Positioning Systems (GPS), digital photography and Geographic Information Systems (GIS) to design maps and construct symbols used in mapping. Most importantly, the Indigenous mapping process allows young people to learn about their own community from elders who have experienced the same reality as them.

When I—Davi Pereira Junior—conducted my first mapping project with Quilombola community of Alcântara where I was born, I looked for elders to guide me through our territory and take me to the boundaries established by our ancestors (Pereira Junior, 2020). In Indigenous and Afrodiasporic landscapes such as the Quilombola territories, not everyone has permission to cross sacred territories and walk freely in certain spaces, requiring elders to accompany younger community members on their first journey (Sletto et al., 2021). As we proceeded with the process of georeferencing our territorial boundaries, other young Quilombola leaders asked if they could join us on our walks. For many young Quilombolas like me, this was our first opportunity to visit the places that are of fundamental importance to our community and to learn the location of our territorial boundaries from our elders. If it weren't for this mapping project, maybe I and many other young people from Itamatatua would never have had the opportunity to visit these important sites.

Since Indigenous cartographies are intimately connected with the defence of Indigenous territories, Indigenous mapping begins by collectively discussing the goal of the mapping process, what should appear on maps, and what should not be mapped. As a pedagogical tool, the construction of Indigenous maps is integral to the social, cultural, economic, religious, ontological and epistemological reproduction of the community, but on the other hand, maps can also be used as external political tools. Since Indigenous maps may eventually be made public and used in ways that are beyond their control, communities need to decide if the mapping process is designed to primarily serve internal needs of knowledge reproduction or if it is intended to meet political objectives.

Indigenous cartography thus emerges from a participatory trend in international planning and development, whereby local communities are invited to shape the maps that impact their lives. However, not all mapping projects serve to challenge the hegemony of the state. Although Indigenous maps have indeed been used as counter-hegemonic representations to further local struggles, they may also embody contradictions. Depending on who leads the mapping process and how it is implemented, the resulting map could serve both as an instrument of domination or as a tool of resistance and empowerment of subaltern groups. Since maps grant authority to their creators (Huggan, 2011), Indigenous mapping projects

might also provide opportunities for political manipulation, create new, internal power hierarchies and fuel political fragmentation, and weaken processes of identity formation.

### **Representational strategies in Indigenous cartographies**

Indigenous cartographies feature symbolic elements that give meaning to communities' ways of life, allowing Indigenous maps to express epistemologies, anthologies and identities in ways that escape the logic of conventional Cartesian cartography (Sletto, 2015). The counter-hegemonic potentials of Indigenous cartographic representations can in part be explained by the ways in which they challenge dominant, western understandings of borders, bodies and territory. From an Indigenous perspective, bodies and land should not be thought of in binary terms (Zaragocin and Caretta, 2020) but rather as intimately connected and contingent. Indigenous cosmology and ontology hold that being and existing is shared and experienced by all as a community, and Indigenous maps thus emerge from a collective form of existence. In doing so, Indigenous cartographies challenge the conventional and orthodox conceptualisations of maps that are intrinsic to western cartography and instead further decolonise understandings of the intimate connections between the sacred, the body and territory. Since Indigenous people understand landscapes as spaces that embody both spirituality and humanity rather than as simply 'natural' and non-human terrains, Indigenous cartographic representations evoke feelings of love, fear, courage, struggle, memory and the sacred. When Indigenous maps are experienced collectively by Indigenous communities, they reproduce a sense of common identity and belonging that sustains community life.

Mapmaking by Indigenous people thus reflects epistemological self-awareness and serves to define social relationships, sustain social rules and strengthen social values (Harley, 1988; Chambers, 2006; Sparke, 1998). In Indigenous cartographies, the awareness of Indigenous ways of existing in the world is expressed through an etymology of classification based on their deep understanding of territoriality, identity and people's relationships with their ancestors and their landscapes. That is to say, the true purpose of Indigenous mapmaking is not to produce realistic representations of space but rather to give symbolic meaning to things, objects and places in ways that make sense in communities' social world. This leads to a mapmaking process that follows its own rules in contradiction to orthodox and hegemonic ways of producing maps, the better to foster fluid and creative cartographic processes that serve political needs in anti-colonial struggles (Kitchin et al., 2013).

Since the symbolic relationships of indigenous peoples with topography and places are fundamental to understanding their social world, Indigenous maps need to be as dynamic as the realities of Indigenous peoples, expressing criteria such as identity, gender, race and ethnicity while reflecting spatial elements that give meaning to their existence. Because Indigenous cartographic representations are not constrained by the dominant logics of colonial authority, Indigenous maps are fraught with material and symbolic complexity, making them sometimes difficult to understand for those who do not share the same social world.

In order to reflect the deep meanings of topography and places in the lives of Indigenous people, the representational regime of Indigenous maps departs from the traditional conventions of established mapping systems through different approaches to lines and polygons, colour choices and forms and styles of map symbology. For example, because Indigenous conceptions of borders differ from those of the modern nation-state, Indigenous

cartographies call for thinking of ‘borders’ without the fixity of lines and polygons, and even imagining representing borders without lines or polygons. The understanding of borders in Indigenous epistemologies is based on relationships with places, landscapes and ancestral memory (Larsen and Johnson, 2012; Novoa, 2022), which means that borders are inherently and constantly shifting and permeable (see Pase, this volume). This leads to experimentation with irregular lines and other symbology that reflect the fundamental dynamism of borders, thus revealing a symbolic economy inspired by the natural, material and spiritual elements of the territory.

To represent the complex lifeworld of Indigenous peoples, Indigenous cartographers seek to portray rivers, oceans, swamps and lakes in ways that reflect how these natural resources are lived and perceived by the communities. In doing so, Indigenous cartographers eschew Cartesian conventions that seek to preassign standardised representational forms to complex socio-material spatialities. Representations of forests, toponymy, topography, natural features and landscapes thus go beyond the concreteness of western cartography to instead deploy symbology that reflects complex meanings and socio-natural relations. In the case of the Amazon, for example, the colour of the water depends on the natural chemical processes associated with the dissolution of vegetation and the presence of algae, which leads Indigenous people to use colours and symbols that reflect their intimate, situated and symbolic relationship with water.

In ancestral Indigenous cosmovision, territory is constituted by topographies and places that are sacred and often secret, and therefore can only be accessed—and represented—by people authorised by their deities and spiritual leaders and who are familiar with the language and epistemology of their ancestors. Such sacred places are central to performance of rituals and therefore fundamental for their existence (Sletto et al., 2021). To access sacred places, rules of movement and access determined by the ancestral spirit, ‘owner’ of the territory, must be followed, suggesting that the circulation of bodies within indigenous territories is controlled or mediated by symbolic as well as political realities (Larsen and Johnson, 2012; Radcliffe, 2012). A good example are the sources of rivers and ancient water wells, which are generally sacred places that belong to enchanted or sacred entities. Unwanted visitors to these sacred sites are subject to punishment ranging from fever or illness to death, and the visit may change the enchantment in the place and the entity may disappear. Only spiritual leaders have the power and knowledge of the rituals required to free a person from these punishments.

To Indigenous people, these spiritual relations give meaning to their existence and help make sense of their relationship with territory. Indigenous cartographers are thus tasked with spatialising the complex interplay of joy, knowledge and religiosity that characterise communities’ social and symbolic relationships with territory, which leads to experimentation with innovative strategies to represent intangible yet profoundly meaningful socio-spatial relations. To Indigenous people, the forest is not simply a natural resource that can be monetised or a place where animals live, for example. Instead, the forest is understood as fundamental to the epistemological reproduction and cosmological existence of the group. Similarly, a hill may not be simply a topographic formation but rather a sacred dwelling for ancestors or an enchanted being. It is these symbolic relationships that Indigenous and Afrodiasporic people establish with nature that are at stake in the process of representation, and it is also these symbolic relationships that prompt their desire to protect their territory and thus safeguard their existence. The concern of Indigenous cartographers, then, is to properly represent spatial elements as they exist in the symbolic world of indigenous

peoples and the meaning they play in their lives, rather than replicating the rules of conventional cartography.

### Conclusion

Indigenous cartographies provide new ways of understanding maps and mapping processes. Indigenous cartographies have contributed to a deeper understanding of the political dimensions of mapmaking, revealing the ways in which maps and mapping processes may serve as empowering tools for politically underrepresented groups. Practitioners in the field of Indigenous cartographies are now seeking to develop methodologies that can better respond to the political demands of traditional groups, as they fight for collective rights and protection of territories in order to guarantee our right to physical, cultural, identity and religious reproduction. At the same time, Indigenous cartographies have also fostered creative innovations by incorporating ethnic factors, identity, cosmology and alternative ontologies and epistemologies into cartographic representations. Through Indigenous map-making, complex social relationships and notions of collectivity have been brought to light, thus fostering a decolonisation of cartographic thought and epistemology.

Indigenous maps are not produced for purely instrumental reasons intended to meet specific demands vis-à-vis the nation-state. Instead, for Indigenous peoples, maps are an important tool to transmit their knowledge and cosmology to the next generation. Indigenous cartographies thus break with the paradigm of orthodox cartography, where maps are understood primarily as instruments to make war or to support the work of an administrative bureaucracy as it seeks to impose the logic of state governance. By challenging the paradigmatic role of state maps, Indigenous cartographies open the possibility for maps to represent borders in new ways instead of reproducing the traditional symmetrical geometric lines of the nation-state. Indigenous maps reveal emotional geographies such as fear, love, longing, loneliness and sadness, thus speaking to readers in a different register than traditional state maps. Indigenous maps open the door to imagination, fostering a connection between readers and mapmakers in ways that challenge the orthodox conceptualisation of technical cartography.

### Notes

- 1 In the following, we use the terms Indigenous cartographies and Indigenous maps to also refer to map-making in Afrodiasporic communities.
- 2 Alcântara Cyclone Space was a binational public company funded with Brazilian and Ukrainian capital established on 31 August 2006 with the objective of commercialising and launching satellites using the Ukrainian Cyclone-4 space rocket from the Alcântara Launch Center. Due to limited investments, the company closed in 2018 without achieving the aims expected by the governments of Brazil and Ukraine.

### References

- Brown G and Raymond CM (2013) Methods for identifying land use conflict potential using participatory mapping. *Landscape and Urban Planning* 122: 198–208.
- Bryan J (2011) Walking the line: Participatory mapping, Indigenous rights, and neoliberalism. *Geoforum* 42(1): 40–50.
- Caquard S and Cartwright W (2014) Narrative cartography: From mapping stories to the narrative of maps and mapping. *The Cartographic Journal* 51(2): 101–106.



AuQ7

- Chambers R (2006) Participatory mapping and geographic information systems: Whose map? Who is empowered and who disempowered? Who gains and who loses. *The Electronic Journal of Information Systems in Developing Countries* 25(1): 1–11.
- Crampton JW (2001) Maps as social constructions: Power, communication, and visualization. *Progress in Human Geography* 25(2): 235–252.
- de Almeida AWB (2013) New social cartography: Specifics of territorialities and the politicization of consciousness of ethnic borders. In: *People and Traditional Communities: New Cartography*. Manaus: UEA Editions, pp. 157–173.
- Farias Júnior EdeA (2010) Social cartography and traditional knowledge associated with the claim of specific territorialities. In: Almeida A, Dourado BS, Menezes ESde, Farias Júnior EdeA, Nakazono E and Barauna GMQ (orgs) *Discussion Papers New Social Cartography*. Manaus: Casa8, pp. 90–105.
- Harley JB (1988) Maps, knowledge, and power. In: Cosgrove D and Daniels S (eds) *The Iconography of Landscape: Essays on Symbolic Representation, Design and Use of Past Environments*. Cambridge: Cambridge University Press, pp. 277–312.
- Huggan G (2011) First principles of a literary cartography, from territorial disputes: Maps and mapping strategies in contemporary Canadian and Australian fiction. In: Dodge M, Kitchin R and Perkins C (orgs) *The Map Reader: Theories of Mapping Practice and Cartographic Representation*. Oxford: John Wiley & Sons, pp. 412–421.
- Kitchin R, Gleeson J and Dodge M (2013) Unfolding mapping practices: A new epistemology for cartography. *Transactions of the Institute of British Geographers* 38(3): 480–496.
- Larsen S and Johnson JT (2012) In between worlds: Place, experience, and research in Indigenous geography. *Journal of Cultural Geography* 9(1): 1–13.
- Louis RP, Johnson JT and Pramono AH (2012) Introduction: Indigenous cartographies and counter-mapping. *Cartographica* 47(2): 77–79.
- Novoa M (2022) Insurgent heritage: Mobilizing memory, place-based care and cultural citizenships. *International Journal of Urban and Regional Research* 46(6): 1016–1034.
- Pearce MW and Louis RP (2008) Mapping Indigenous depth of place. *American Indian Culture and Research Journal* 32(3): 107–126.
- Pereira Junior D (2020) Political appropriation of social cartography in defense of Quilombola territories in Alcântara, Maranhão, Brasil. In Sletto B, Bryan J, Wagner A and Hale C (eds) *Radical Cartographies: Participatory Mapmaking in Latin America*. Austin: University of Texas Press, pp. 183–202.
- Radcliffe SA (2012) Relating to the land: Multiple geographical imaginations and lived-in landscapes. *Transactions of the Institute of British Geographers* 37(3): 359–364.
- Sletto B (2015) Inclusions, erasures, and emergences in an indigenous landscape: Participatory cartographies and the makings of affective place in the Sierra de Perija, Venezuela. *Environment and Planning D: Society and Space* 33(5): 925–944.
- Sletto B, De la Torre GB, Lamina Luguana AM and Pereira Júnior D (2021) Walking, knowing, and the limits of the map: Performing participatory cartographies in Indigenous landscapes. *Cultural Geographies* 28(4): 611–627.
- Sletto B, Wagner A, Bryan J and Hale C (eds) (2020) *Radical Cartographies: Participatory Mapmaking from Latin America*. Austin: University of Texas Press.
- Sparke M (1998) A map that roared and an original atlas: Canada, cartography, and the narration of nation. *Annals of the Association of American Geographers* 88(3): 463–495.
- Zaragocin S and Carreta MA (2020) Cuerpo territorio: A decolonial feminist geography method for the study of embodiment. *Annals of American Association of Geography* 111(5): 1513–1518.