



Counter-mapping Surabaya: Designing ‘cities within the city’

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ABSTRACT

This paper connects the concept of ‘cities within the city’ to the practice of counter-mapping. We explore how people in Surabaya (Indonesia) come together to design, plan and imagine their city differently through counter-mapping. We focus on two design activist projects called *Pertigaan Map* (*pertigaan* means three-way intersection) and Suroboyo Ngalor Ngidul (Surabaya to the North and South). In this visual essay, we compile, present and analyze two colonial maps and a series of contemporary counter-maps of Surabaya. The counter-maps, made iteratively and collectively over ten years, offer both critiques of the design of Surabaya and its colonial legacy and propositions for different ways of living, navigating and valuing the city.

1. Introduction

Characterized by its watery geography, history of resistance to colonization, and constant circulation of people and goods, Surabaya is Indonesia’s second-largest city and home to one of Asia’s busiest and largest seaports, *Tanjung Perak*. Despite its significance and complexity, printed maps of Surabaya are hard to find, and those in general circulation are usually designed for people travelling in cars. They outline arterial roads, delineate districts and precincts, and label shopping centres. Such maps make it abundantly clear how individualism and consumerism shape the dominant identity of Surabaya. However, they do little to visualize the vibrant creative subcultures or the activist agendas in present-day Surabaya.

These subcultures and agendas include practices that seek to contest and transform how Surabaya is planned, created, ordered, and used, as well as how its histories are told. These diverse practices can be linked to the concept of ‘cities within the city’ (Iveson, 2013), drawing attention to social inequalities and injustices and to alternative lifestyles and community economies. It can also help researchers and residents recognise diverse urban practices.’ subversion and appropriation are illustrated by a range of contemporary urban practices that are emerging across a variety of urban contexts.

Amplification can then follow recognition. Designing with these practices in mind can provide evidence to strengthen political agendas such as increasing social housing or improving public transport. In deciphering how such activism fits together in cities, Iveson seeks explicit connections, asking, ‘... what kind of space is created within the space of the existing city?’ (946). We extend that question by asking,

‘what kind of maps are created within the map of the existing city?’ The answer is more than just a ‘Trompe-l’œil’. When a city is mapped in alternate ways, counter-cities are brought into existence through visual depictions.

As in many large cities, clues to the ‘cities within the city’ (Iveson, 2013) of Surabaya can be subtle, remaining opaque to many residents and visitors. Noticing them takes time, care and collective knowledge. For example, collectively operated transport systems and markets that distribute locally grown food support the urban poor. However, these are obscured by roads designed for cars and the singular identity of Surabaya as a regional trade centre. While the view from a car may present a dusty and lifeless city, walking can reveal vital layers, details and flows of urban life. Middle-class suburban houses are repurposed as community libraries (Bacon et al., 2019); unofficial paths avoid traffic by winding through quiet *kampung* (neighbourhoods); and handpainted vernacular signs point to mosques, midwives, and coffee shops. In other words, there are already many cities within Surabaya if one knows where to look. Our work as activist design researchers is to identify and make connections between these clues and then to design maps that visualize the cities within the city of Surabaya. Making these maps explores the responsive capacity of visual communication to build alliances between people in the city, to recuperate stories that are absented in conventional maps, to create interferences with the dominant representations of the city, and design extensions of urban imaginaries through the creation of new forms (Rosner, 2018).

Increased visibility also involves political risks. While maps can help make the cities within the city legible to people whose lives they can improve, they can also make practices and places visible can make them

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newly accessible to authorities with an interest in containment and control. As Glissant outlined in his seminal work *Poetics of Relation* (Glissant, 1997) (written in 1990, translated in 1997), people do have a right to opacity. “The opaque is not the obscure, though it is possible for it to be so and be accepted as such. It is that which cannot be reduced, which is the most perennial guarantee of participation and confluence” (191).

This is a tension for many creative practitioners working with the politics of representation (designers, performers, filmmakers, authors) who are buoyed by new global audiences and also take seriously the responsibility to respect (and protect) the people, places and practices that are represented by their work, or in more participatory modes, directly contribute. How to make responsible choices about visibility is a lively debate in contemporary art as curators and artists work to both centre and protect culture and knowledge within institutional spaces.

The political risks of visibility also play out in debates about surveillance (consider facial recognition technology) and the environment (consider birdwatchers who increase the volume of human traffic in the habitats of endangered species). In cities, which are both technologically mediated and ecologically recombined, the politics of visibility are no less complex. Since we made counter-maps in Surabaya with these questions in mind, the results are highly collaborative and endlessly iterative.

This paper combines the idea of cities within the city with creative research practice of counter-mapping in Surabaya to develop and theorize the concept of counter-city. We combine literature from cultural geography, critical urban studies and design studies. We argue that activist maps (including their research, design and dissemination) can guide people to cities within the city by making underrepresented places and practices more visible. Secondly, we argue that such creative work produces counter-cities by gathering people around a shared political agenda. Thirdly, and perhaps most importantly, we argue that the participatory processes involved in making counter-maps value the diverse experiences of people living and working in Surabaya and their contributions to its counter-cities. As well as contributing to a theorization of the counter-city, we also offer ways to value the contribution of activists, scholars, designers, artists, advocates, residents and visitors to the iterative and relational placemaking of Surabaya.

Images of maps appear throughout this paper as visual evidence of cities and counter-cities. Determining how (and if) dominant paradigms are countered by counter-maps requires careful analysis. Since we all make and read maps differently (depending on cultural and linguistic conventions and cognitive diversity), this analysis is best done collaboratively, with creativity and openness. While maps are often designed to simplify a city for ease of navigation, the counter-maps described in this essay illustrate the complexity of Surabaya. They are layered and unfinished, participatory and plural, confident in their ambiguity. As Vanni and Crosby contend, drawing on Haraway: ‘Maps are able to (metaphorically) move observers away from their hovering position, place them back in the thick of things (Vanni and Crosby, 2020). Counter-mapping is one way to be in the thick of counter-cities, to represent and create cities within the city.

We write this as three researchers with combined expertise in visual communication, design studies and the social sciences. We each have specific relationships with the project, with Surabaya, and with each other. Two of us, as Surabaya residents, cultural producers and activists, are inside the project as authors and designers of the counter-maps discussed here. One of us, as an Australia-based researcher of design in Indonesia, is outside the project as an ally and advocate.

Our methodology combines place-based (Vanni and Crosby, 2023), practice-led, and ethnographic methods in a feminist design research collaboration. Leaning on the work of other feminist design scholars (Costanza-Chock, 2020; Crosby & Vanni Accarigi, 2023; Rosner, 2018; D’ignazio & Klein, 2020), we research and design through a feminist lens with cultural and linguistic specificity to address generalising tendencies of design theory and history. We work together in varying mixes of

Indonesian and English, in person and online, and we commit to publishing this work in both languages.

The design and analysis within this paper also draws on a body of design practice and literature over the last twenty years that defined and refined scholarship of design activism. The premise of design activism is that design (its processes, practices, systems and artifacts) are intrinsically political because design has the power to shape values, beliefs and material worlds (Abdulla et al., 2019; Julier, 2013; Rosner, 2018; Thorpe, 2008). Specifically, our project contributes a case study that makes social injustices and inequalities in Surabaya visible and that amplifies urban activism. The visibility of the “pluriverse” of cultures and futures (Escobar, 2018) in cities of the Global South is an important aspect of the decolonization of design (Abdulla et al., 2019; Schultz, 2018). Furthermore, our case study shows how counter-mapping is an urban design action that can decolonize representations and reproductions of the city. In other words, we argue that maps are designed objects that are always political (although this may not be well understood), that mapping is a political action, and that counter-maps make politics explicit, by documenting and generating contrasting versions of the city.

In this paper, we work within a structure that moves from theory to practice. In the following section, we make the theoretical links between counter-mapping to the concept of cities within the city and dig into the colonial archives of Surabaya using two Dutch-made maps (Fig. 1 and Fig. 2) as prompts to understand the impact of colonial infrastructure on the contemporary city of Surabaya (Peters, 2013). As Cresswell (2012) suggests, we read this colonial archive ‘along the grain’ (167) to understand the historical power structures that shaped Surabaya, as well as ‘against the grain’ by looking for what is missing from these images. Next (Section 3. Making Counter-maps and counter-cities), we provide a methods section which details the background to the design, production and dissemination of our counter-maps. This section presents three interconnected counter-mapping projects and modes of visual research: Pertigaan Map Version 1 (Fig. 3 and Fig. 4), the visual research (Fig. 5 and Fig. 6) that led to the iteration of Pertigaan Map Version 2 (Fig. 8), and a related online archive of Surabaya’s cities within the city (Fig. 7). ‘Pertigaan’ refers to a three-way intersection in Indonesian and ‘kanal’ means canal. Kali Mas is the name of the river that flows through the middle of Surabaya and means ‘Golden River’. Finally, we summarise the impacts and effects of these examples of counter-mapping in Surabaya.

As we explain, the need to counter the counter-maps emerged through reflection on this chronology, and a process of collective revision took place. While printing and distributing can serve as endpoints of a design project, counter-maps are by their definition iterative and incomplete. The image captions in this section offer details as a form of visual analysis that honours the continuous design of maps through their interpretation. Through these analyses, the maps reveal a method of visual storying that values collaboration, care, interdependencies, and experimentation (Alam & Houston, 2020). Lastly, we show a project closely related to Pertigaan Maps, Suroboyo Ngalor Ngidul (Surabaya North to South), which serves as a knowledge-share platform for Surabaya. The two projects share resources, ideas, and friendships but are distinct in their outcomes. The ongoing and overlapping connections of Suroboyo Ngalor Ngidul enable projects such as Pertigaan Map to be layered over time to create a living archive of the cities within Surabaya. Finally, we summarise the contributions of our counter-maps to the cities within the city of Surabaya and, more generally, to theorizing the counter-city.

2. Cities within the city, Counter-mapping, and the Counter-city: Making links between three concepts

This section outlines three critical concepts: ‘cities within the city’, counter-mapping and counter-cities. We prioritize literature about Indonesian cities written by Indonesian scholars to contextualize the



Fig. 1. Wester vaarwater van Soerabaja COLLBN Port 57 N 144.

maps we present in the next section. Our work actively mobilises these terms across cultural, linguistic and spatial boundaries. As such, our use of these terms may sometimes overlap, seem imprecise, or move too quickly from their original use. We acknowledge the need for the rigorous theorisation of urban activism. Indeed, Iveson first introduced the idea of ‘cities within the city’ as a way of grappling with how to group and compare oppositional practices that seem disparate:

Those seeking to come to grips with practices have begun to group them together for consideration under banners such as ‘insurgent’, ‘do-it-yourself’ (DIY), ‘guerrilla’, ‘everyday’, ‘participatory’ and/or ‘grassroots’ urbanism. (2013: 941).

But our project deals with a specific aspect of this challenge (visualization of these practices) in a specific place (Surabaya), and resists the temptation to make universalizing conclusions. Counter-mapping is in itself an activist practice, but it is also a way of visually discerning how activist practices are in fact connected in a city which obscures them through its complexity, design, and sheer size. We hope to show that visualization of Surabaya, in the form of counter-mapping, can help determine ‘whether a larger picture is emerging across these practices and projects, and asking about the nature of this bigger picture if it does exist (942).’ In doing so, we make several moves to show how the creative, collaborative and iterative production of counter-maps intersects with cities within the city of Surabaya.

2.1. Cities within the city in Indonesia

Urban geographers have coined a suite of terms related to cities within the city—Do-It-Yourself Urbanism, tactical urbanism, open-source urbanism. In his influential piece on cities within the city, Iveson draws these together and asks: To what extent are these practices helping to ‘give birth to a new kind of city, as is sometimes claimed by their practitioners and supporters, and what might this city be like? (Iveson, 2013) 942’. Our research of creative forms of activism in Surabaya has shown less focus on delivering a new city and more on amplifying counter-cities already at play. Within this focus is the desire to recuperate practices perceived as lost over time to colonization and its contemporary extensions, urban growth and renewal. These practices include growing plants for food and traditional medicine, creating independent libraries free of censorship, collectively maintaining urban resources such as shady trees, and recording routes that help pedestrians stay safe in a car-dominated environment. Some of these practices are specific to an Indonesian context, and others have global relevance that links this case study to the concept of cities within the city in other places.

One note to make up front in the theorization of cities within the city in Indonesia is the particular Indonesian take on Do It Yourself (DIY) subcultures as ‘Do as Do It With Others’ (DIWO) (Wakkary, 2021: 220, Larasati et al., 2022). DIWO acknowledges the deep cultural roots of collective resistance in Indonesia and makes space for important place-



Fig. 2. Map of Surabaya 1925. Leiden University Library, Colonial Collection (KITLV) <https://digitalcollections.universiteitleiden.nl/view/item/814317>.



Fig. 3. 'Pertigaan Map' Series of three folded printed maps. Printed in 2016 at Ramayana Printing, Surabaya. At the time, a set of maps cost Rp50.000. They were sold as boutique design objects at the C20 library in Surabaya and rurusshop in Jakarta. Image courtesy of Celcea Tifani <https://celcea.com/Pertigaan-Map>.

based scholarship of counter-cultures such as punk (Prasetyo, 2017; Baulch, 2007; Luvaas, 2013; Xiao & Donaghey, 2022) and other forms of cultural activism (Crosby, 2013; Crosby, 2019; Lim, 2015; Paramaditha, 2018).

For instance, Martin-Iverson (2021) writes about the intersection of Bandung's creative city identity with the politics of the city's punk underground. Here, the idea of DIY Urbanism that is central to cities within the city helps to show how punk can contest 'those modes of urban development that treat the city as a machine for capital accumulation (120). Larasati et al. (2022) also refer to the city within cities in their

analysis of collective spaces in Yogyakarta. Their research on LifePatch, a community-based organization working at the intersections of art, science and technology, shows how aesthetic politics are produced through informal participatory art-science experiments. Such politics can counter the narrative of urban development through technological solutions by adding nuance to existing human-technology relations (197) and collecting new data such as water and air pollution levels that can be used in innovative ways. Karunanathan (2021) also looks to cities within the city of Yogyakarta, using a feminist intersectional analysis to show how people collectively organize around water rights. In a final example, this time from Jakarta, Adiinto et al. (2021) studies how apartment dwellers create more liveable cities by reclaiming contested space for communal purposes. They use corridors of their buildings for collective practices perceived to be lost in a city that dwarfs human-to-human interactions by its sheer size and complexity.

These case studies point to the production of urban space and the recuperation of participatory practices as forms of resistance in Indonesia. As visual design researchers, we focus on how these spaces and practices are made visible through counter-mapping. In other words, we are interested in how to represent the cities within the city in ways that are useful to those who create them. First, we offer a brief outline of what we mean by maps and mapping, to clarify what is being countered through counter-mapping.

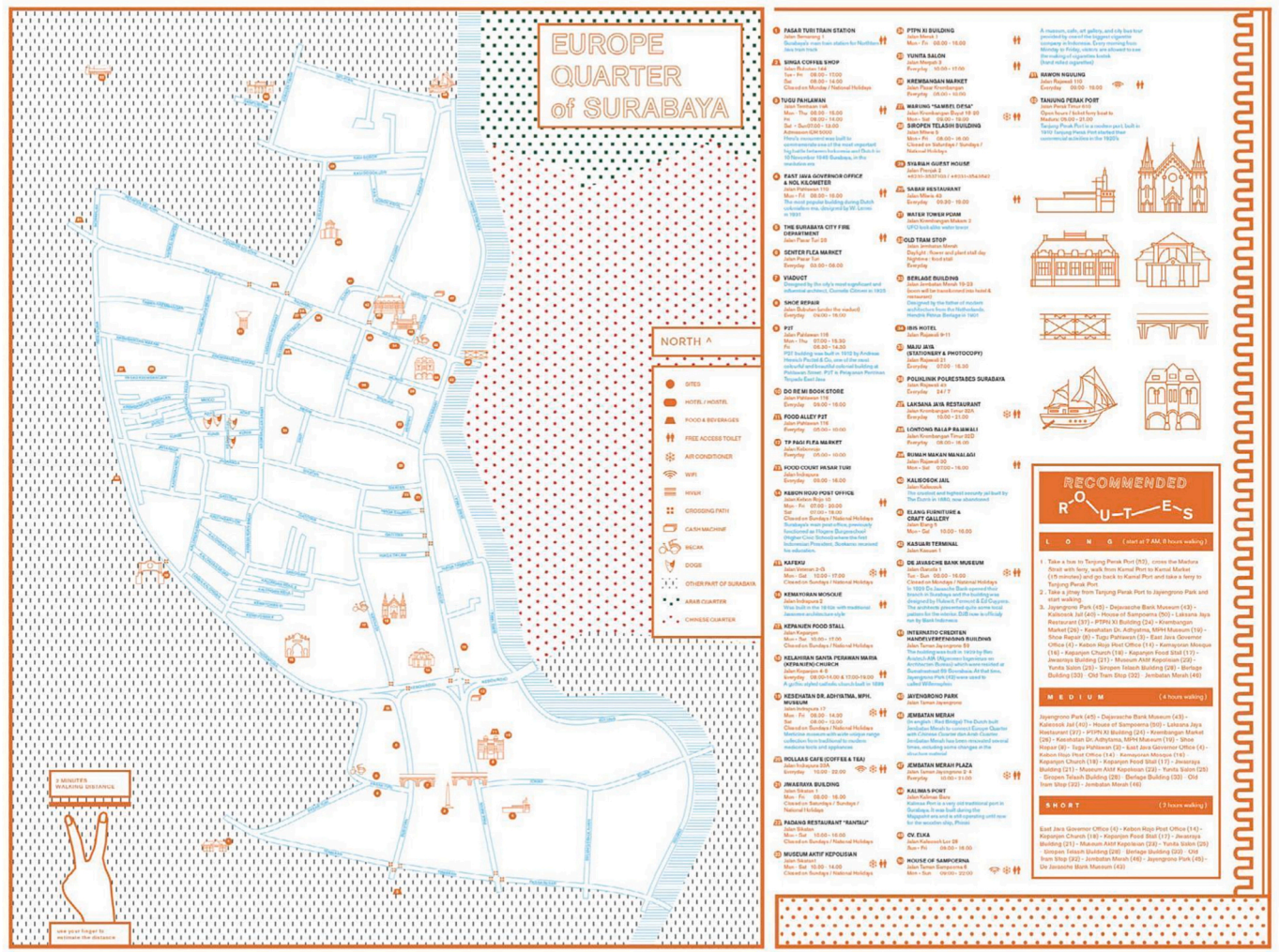


Fig. 4. Pertigaan Map (detail). 2016. 'The Europe Quarter of Surabaya', one of the three original 'Pertigaan' Maps, designed by Celcea Tifani. The map highlights colonial architectural heritage from the perspective of local residents of Surabaya.



Fig. 5. As part of the iterative mapping process, research was done for version 2 of Pertigaan Map that compares the old post-colonial city centre with the present day. On the left is a student protest against the Omnibus Law on Job Creation on 26 September 2019, along Jalan Pahlawan (Hero Street). The image on the right, January 1950, is of Indonesia's first president, Soekarno, greeting the people of Surabaya from the balcony of the East Java Governor's office on Jalan Pahlawan as part of the decolonization process celebrating Indonesian nationalism.

2.2. Maps, infrastructure and colonial legacy

Most generally, maps are about the orientation of people in space.

Maps are symbolic representations of spatial features. As such, they are by definition projections that involve choices of inclusion and modes of depiction. They are therefore subject to framing, coding, and graphic design in their conception and execution (Götz & Holmén, 2018 157).

For every map we see, choices have been made about what to include, exclude, foreground and background. Mapping is a manipulative practice, and deserves its many critiques (Harley, 1989, Crampton & Krygier, 2018). Maps and atlases have been (and continue to be) tools of colonization. For example, the European maps of Australia created and enforced the legal fiction of 'Terra Nullius' by mapping a 'blank slate' that erased Aboriginal people and Country (Foster et al., 2020). Many maps (as a form of visual communication) create, enforce and manipulate colonial border systems that violently control people, land, water and nature.

The formation of colonial cities in Indonesia is another apt example of how maps control people, space and history. However, the story of Surabaya begins well before the Dutch arrived in the 16th century. The city was created in the 10th century by the Kingdom of Janggala because of its location on the River Brantas delta. Its position was part of the formation of trade routes via the Java Sea. It was already a major trading port by the time the Dutch began mapping the region, but the Dutch maps facilitated colonial access to resources by marking the edges of the land mass, currents, and sea depths (Fig. 1). Surabaya became the first industrial city in the Dutch East Indies (Dick, 2002, 265). By the end of the 18th Century, an unusually strong industrial sector had been established to supply the machines used in the sugar industry. It was not only a commercial port and industrial base, but also a navy base, and

home to one of the largest Arab communities in the Archipelago (Colombijn, 2013, 25). Even with all its existing flows and trajectories, Surabaya was shaped by the colonial project through maps and policies. Colonial forces used maps to create the Dutch East Indies by outlining, naming and defining a trading empire.

Author/creator: Heijning, P. Nijgh, N. Hydrografisch Bureau (Batavia), Batavia: Hydrografisch Bureau, [1887] <http://hdl.handle.net/1887.1/item:2013902>. Published (digital) Leiden University Libraries.

This map shows how data about the estuary was mobilized for colonization. The numbers in the lighter section indicate the depth of the water so ships can transport goods on and off the land. Surabaya was made the biggest port city in Java, connecting to global trade routes for the 'United East India Company', or 'United East Indies Company' (also known by the abbreviation 'VOC' in Dutch).

This map shows the inseparable link between the modernization of cities and the colonial efforts to claim natural resources, including water. Surabaya was mapped and developed to maximize the efficiency of exports from the region, particularly of products from the forced plantations (tanam paksa) in Java. Products such as coffee and sugar were grown under the agricultural policy of government-controlled forced cultivation. The Dutch government planned, mapped and built Surabaya as a port city to maximize the colonial economy's growth and protect it through military means.

The map of Surabaya in Fig. 2 was produced when the city was under the 'Decentralisation Law' (from 1906). This law meant Surabaya obtained the status of 'gemeente' or municipality. While touted as a new level of independence for the city, the law, in fact, emphasized the definitive separation between Dutch and Indonesian people within the same urban area. While Europeans had adequate housing, education, health and entertainment facilities. Indonesians were cornered in narrow pockets of territory, excluded from the urban centre, and struggled with infrastructure in squatter settlements.

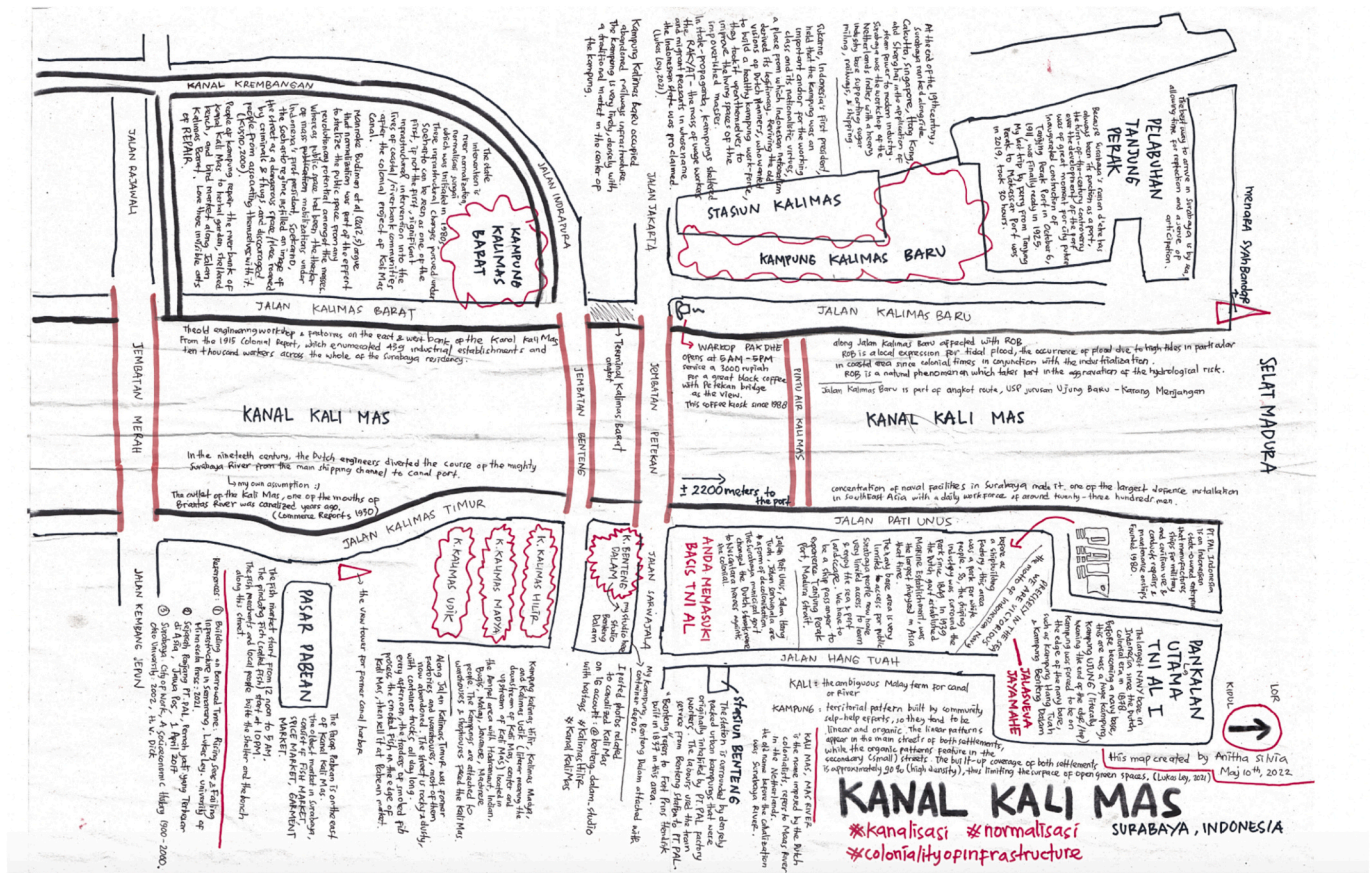


Fig. 6. Kanal Kali Mas. This hand-drawn map was made during a research residency undertaken by one of the authors at Surabaya's old town from February–June 2022. It depicts Kampung Benteng Dalam, a pedestrian-only alley downstream of Mas River, Ujung district. At Kampung Benteng Dalam — the alley is cared for by women - for cooking, taking care of babies, doing laundry, gossiping, walking around, running public health care, running kiosks, and selling food and snacks. This mapping also served as research for version 2 of Pertigaan Map which aimed to include more women's voices, more information on the urban poor, and more detail about transport and markets.

At the time, Dutch and Indonesians lived within the boundaries of the same Kota Praja Surabaya but on differently zoned land, and were subject to different taxes. In addition, Indonesians were not governed by the Praja city council, but by the 'pangreh praja', a Javanese civil service from the traditional aristocratic class that had been educated by the colonial government and was directed from afar by Dutch officials.

The legacies of these politics of colonialism are evident in these historical maps and in the spatialised inequality of the city itself. In the next section, we introduce the practice of counter-mapping and propose intersections with the concept of cities within the city.

3. Making counter-maps and counter-cities

Our work is grounded in a collective practice of counter-mapping to document, design, and plan cities within the city. Counter-mapping is one way of visualizing a city from multiple points of view and can also communicate political intent, such as social equality and environmental justice. It takes up participatory approaches that can include diverse voices in authentic and empowering ways.

Critical cartography, the foundation of counter-mapping, is not new and is closely linked to postcolonial and subaltern studies. It has received significant academic attention in geography since the 1980s. Over the following decades, much work was done to expand and refine the discourse on critical cartography, and in turn, on counter-mapping. Although not always acknowledged in contemporary literature, counter-mapping has its origins in research in Indonesia, coined by American sociologist *Peluso (1995)* in her study on the politics of mapping forest resources in Kalimantan. However, as with many creative research

practices, counter-mapping was done long before it was 'named' and remains diverse in its application.

Since *Peluso's* study, counter-mapping has been a strong force in many activist movements and NGOs in Indonesia and elsewhere in Southeast Asia. *Radjawali & Pye, 2015; Radjawali, Pye, & Flitner, 2017* present a case of activists counter-mapping using drones to contest land grabbing in eastern Indonesia. *Tilley (2020)* problematizes the tenuous nature of counter-mapping and its inadequacies against the pressure on frontline communities to defend Indigenous lands against extractivist expansion.

Our colleagues in the Philippines have remixed counter-mapping methods for the specificities of their own urban contexts. On their website, 'Counter-mapping PH: Mapping With and For the People', the definition includes all 'practices that redefine cartographic power, navigate power-laden urban space and experiment with alternative visions of inhabiting the city.' In the controversial development of New Clark City north of Manila (part of a larger urban renewal project called Clark Metropolis that includes the Clark Freeport Zone and the Clark Special Economic Zone) activist researchers create maps, templates and tools to visually foreground experiences of violence and displacement due to land conversion and urban development (*Counter-mapping-Ph, 2019*).

We draw from another definition articulated by the globally distributed counter-mapping collective Orantango in their book *This is Not an Atlas (Halder and Michel, 2018)*. They write: 'We understand counter-cartography as a political practice of mapping back (13)'. In the case of Surabaya, the idea of 'mapping back' is important for working spatially and temporally to push against colonial legacies. These legacies



Fig. 7. Mapping the pedestrian-only alleys in Surabaya as a counter-narrative for the car-centric city. Photos are published, annotated, shared publicly and archived on Instagram with the hashtag #pedestrianalleysurabaya.

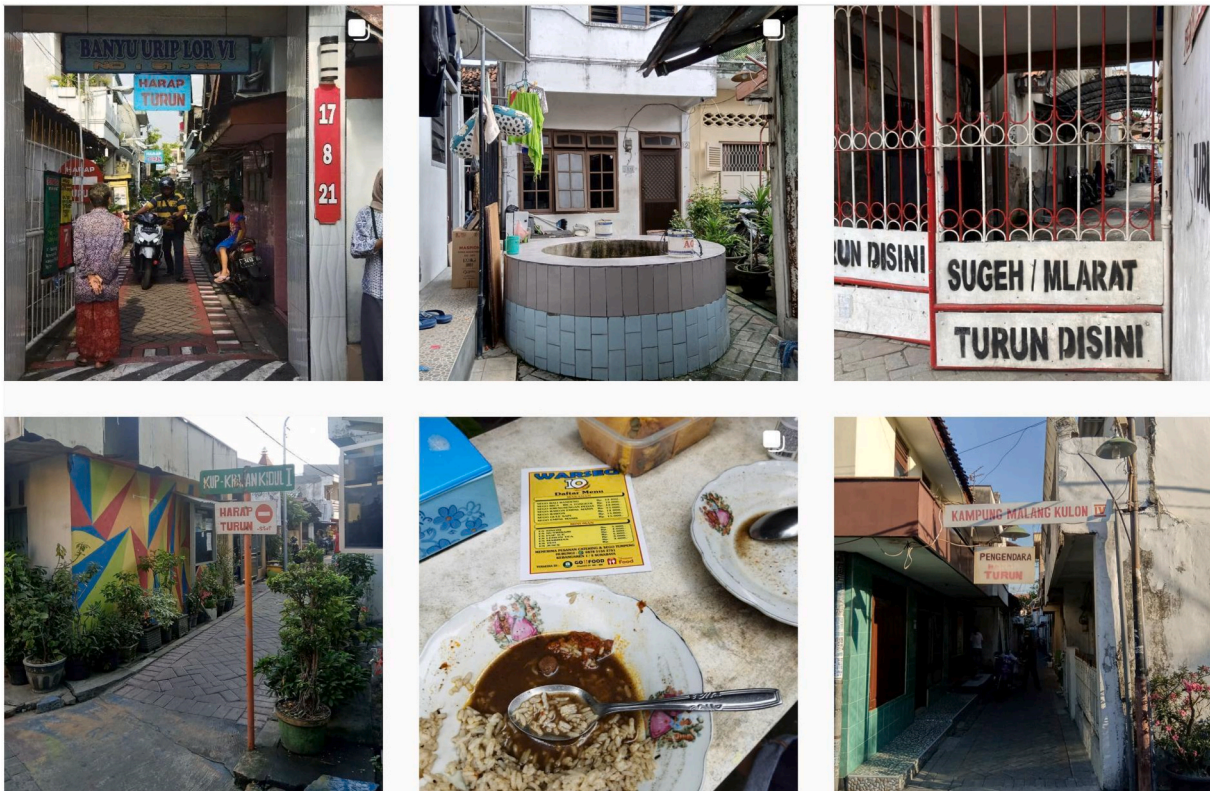


Fig. 7. (continued).

are seen today in top-down urban planning and an urban development agenda that continues to put profits and growth before people and the environment.

Digging deeper into our working definition of counter-mapping and counter-cities, we theorize ‘counter’ as a contrapuntal analysis of the city, drawing from Edward Said’s concept in *Culture and Imperialism* (Said, 1993). In music, contrapuntal refers to two or more separate tunes that are played or sung at the same. Focusing on literature, Said used contrapuntal analysis to consider the perspectives of both the colonizer and the colonized within a text. Extended to the city, contrapuntal readings are both of the city and the counter-city. Rather than being directly oppositional, contrapuntal reorientates everyday practices (Crosby et al., 2014) such as making, using and sharing maps. One reason this is an essential distinction concerning counter-mapping, as we will show further on, is that once a map represents a city, it becomes an authority. A map can (and often does) make the cities within the city invisible. For a counter-map to become contrapuntal, it must continue to work in response to a constantly changing city. Resistance and opposition can be galvanized, amplified, and synthesized by counter-mapping. However, once a countermap is ‘completed’ (for example once it is printed) –its power is limited. The use of a counter-map must prompt, agitate, and inspire action. It must be open to interpretation, revision and obsolescence as people participate in mapping as an urban practice and make more counter-maps in response. In other words, maps are always authoritative in a sense, and counter-maps create an alternative form of authority which is asserted in relation to how urban space is used.

3.1. *Pertigaan Map, version 1*

The production of version 1 of the *Pertigaan Map* (Fig. 3 and Fig. 4), printed in 2016, demonstrates the contrapuntal nature of counter-maps and some of the tensions within the concept of counter-cities. The colonial legacies of the map demonstrate how contemporary urban

imaginaries can never really be an ‘alternative’ to the colonial city but can be an activist representation of the cities within the colonial city. In version 1, three distinct areas of the city are represented, three cities within the city (Anindita, n.d). These represent the history of the spatial division of the European Quarter, the Arab quarter, and the Chinese quarter (Upper City is the fourth quarter which is not depicted in the series) (Idawati, 2015 p.22). These quarters offer an example of ‘cities within the city’ which is both literal (i.e. there are four cities within the city of Surabaya) and metaphorical. In this case, we designed for plurality with the intention of unsettling colonial histories and redirecting metanarratives of development and progress.

These quarters are based on colonial law which regulated the demographics of the residents of Surabaya (especially in the northern part of the city). Borders were established based on the ethnicities of the population to control collective organizing and prevent anti-colonial uprisings. The law was part of the Dutch design and occupation of Surabaya into the twentieth century, intended to prevent immigrants from China and the Middle East from joining the Indigenous population to fight colonialism. The Indigenous population lived primarily in informal settlements (*kampung*). As in many colonial cities, this Euro-centric approach of dividing the city by ethnicity was an Imperialist othering strategy. These ethnic-spatial divisions faded after independence when a new residential pattern based on social class was established (Colombijn, 2013, 13). Although there is now no official restriction of movement in the city based on ethnicity, Surabaya is still conceptually divided into these quarters and the legacies of ethnic and class division are evident in the built environment, culture and maps of the city.

3.2. *Remixing counter-maps*

Counter-mapping and associated practices of walking, sharing, and collectively archiving can be creatively combined and remixed by design activists. In Indonesia, this mode of activism, where creative practices



Fig. 8. Pusat Kota Tua Surabaya (The old city of Surabaya). This is version 2 of Pertigaan Map, 2022 (not yet printed). While maintaining the style of the Pertigaan Map, the emphasis in this map is on the role of the kampung and its design elements in political organizing, for women, students and workers. Note the title change from 'Europe Quarter of Surabaya' to 'Pusat Kota Tua Surabaya' (The Old City Centre of Surabaya). Also, note this map's expanded parameters compared to the first version.

are often invented, altered, and recombined for political purposes, is particularly prevalent (Crosby, 2019). Designing maps at the scales and with the emphases determined by activist designers can combine urgent concerns around justice and equality with local organisations and community economies. At the scale of the city (as opposed to the province or nation), activist designers can focus on civic forms of activism such as commoning, and reclaiming public space. In Surabaya, these forms of activism often appear in informal areas of the city, such as kampung and markets, and relate to the reorientation of everyday practices such as caring for children, growing food and sharing skills.

In design terms, the graphic representation of a counter city may change with time. Tone and scale may be iteratively adjusted by designers, the map's boundaries modified, or details foregrounded and backgrounded. Routes may also be altered. Printed counter-maps become obsolete as the city changes and people's readings of the cities within the city expand.

While contemporary maps of major cities usually combine landmarks with expeditious navigation, our counter-maps are about core values that align with urban activism. Specifically, the maps ask people to pay attention to small-scale relationships and to care for overlooked aspects of city-making in order to counter (and respond to) the speed and scale of top down urban operations and infrastructure. The most obvious example is in modes of transport, an important aspect of surviving in a city as complex as Surabaya. While mainstream maps of Surabaya are designed around travel in cars, delineating roads and

freeways, our maps focus on paths for walking, cycling and on shared modes of transport, including informal public transport networks. Most people in Surabaya do not drive cars, yet cars and roads dominate visualizations of the city.

Our maps translate this aspect of lived experience of the city to a visual form. For many residents of Surabaya, living in the 'present temporalities, localities, and relationalities of our actual lives (Rose, 2013) is a predecessor to being able to see and create counter-cities as an alternative mental model of urbanism.

Our maps are also mobilized by activists in Surabaya and beyond to make connections between systems, places and people in the city visible and to enliven discussions about these connections. In utilitarian terms, counter-maps in Surabaya are designed as objects that bring people together for walking, observing, and sensing the cities in creative ways. In doing so, they create connections that can bolster political agendas through shared knowledge. The maps are also produced through connections between many communities, independent spaces (such as C2O <https://c2o-library.net/>), publications (Ayorek <https://ayorek.org/>), events, festivals, platforms and programs. As objects, the maps themselves operate within a rich culture of activism, connecting the complex networks of informal markets to small businesses like coffee shops, to public transport, to community histories, to waterways, to waste streams and to public spaces.

3.3. Participatory research for iterative counter-mapping

The printed counter-map we made in 2016 (Fig. 3 and Fig. 4) is a prompt for sharing knowledge about the colonization and decolonization of Surabaya, especially while walking. Surabayan residents often cannot access basic data about their city or its history. The counter-maps are designed to, firstly, help people see the cities within the city through the lens of colonization and, secondly, to build a politics to connect contemporary activist practices with anti-colonial movements.

Participatory research for the counter-mapping in Surabaya is ongoing, undertaken by walking, cycling, and *ngangkot* (travelling by means of *angkot*, a type of informal public transportation existing in Surabaya to this day) in the 31 districts of Surabaya. Over the five years since it was first printed, *Pertigaan Map* as a package has been shared widely and sparked many new initiatives, such as a Surabaya study group that meets every few weeks at a studio, coffee shops, or markets or while walking around *kampung*s. They share references related to Indonesian architectural history and urban issues such as public transportation, heritage, and design. They also work with Reading Sideway Press, a local independent publisher, to run a monthly book club focusing on women scholars of urban issues. Most importantly, they galvanize the political purposes driving the counter-mapping and keep the design of counter-maps and other projects accountable to the community.

Another way of contributing to the counter-mapping of Surabaya is by sharing and synthesising other forms of visual research. One example is the drawings made during a research residency at Surabaya's old town became data sets for the design of the second version of *Pertigaan Map* (Fig. 6). Another is the observations of contemporary political mobilisation in the city recorded as they happen, and then compared to archival images of the use of urban space (Fig. 5).

One of the most significant initiatives since the first version of *Pertigaan Map* was made is Suroboyo Ngalor Ngidul (Suroboyo Ngalor Ngidul, n.d), an online photo archive and participatory map providing a resource for people in Surabaya as well as research for further iterations of *Pertigaan Maps*. As reported in *The Jakarta Post*, Suroboyo Ngalor Ngidul, was formed by a small group at the beginning of the pandemic to increase people's sense of ownership of the city as it was being increasingly controlled by government authorities. 'Inspired by the Javanese term *ngalor ngidul* (to wander aimlessly), they set out to discover the hidden side of Surabaya – walking down strange alleyways, immersing themselves in pop-up barely legal markets and getting to know the regulars at decades-old coffeehouses and family restaurants.' (Ibrahim, 2022).

Like *Pertigaan Map*, Suroboyo Ngalor Ngidul is designed to facilitate walking and careful urban engagement (Lyons et al., 2018; Springgay & Truman, 2019; Springgay and Truman, 2022; Vanni & Crosby, 2020). Furthermore, this is a cheeky and defiant engagement. The project is framed by its creators as *reskelayapan*, a phrase in the Surabayan dialect that literally means "loitering."

The platform makes a record of what people have seen and shared while loitering, what is often perceived as a useless and unlawful activity. In other words, it is another way of making the counter-cities of Surabaya visible and moves the intentions of *Pertigaan Maps* from a printed to an online format. While each of the counter-maps presented here are made by different groupings of design activists, they all extend the politics of cities within the city discussed in this paper into new visual forms. This form enables different outcomes to a printed map, such as online connections between disparate groups and activists. The living archive is shared on social media as well as the project website, bringing attention to the vernacular design of the *kampung* (neighbourhoods), *gang* (alleyways), and ways that people *jalan-jalan* (wander) and *non-grong* (hang out) to be present in the city. The focus is on how the majority of people live in Surabaya, and on how complex stories of the city's migrants and diaspora populations are often obscured by uneven urban development appearing as high rise buildings and gated

communities .

The compilation of images into a single stream, arranged into a grid on Instagram (Fig. 7), provides a provocation to top-down planning of the city. The images themselves make visual connections between different publics in Surabaya and global audiences and collaborators through the social media platform, but the grid references a Eurocentric perspective on urban design that often fails to take in the unique characteristics and cultures of Indonesian cities.

4. Conclusion

While maps are instrumental in city-making and integral to the violence of colonialism, late neoliberal capitalism and territorialization, counter-mapping can make alternative urban ontologies possible. In other words, counter-maps can show different ways to see the city and to be in the city. If made with care, such maps can connect people to counter-cities by making cities within the city more visible.

By drawing attention to details of activist practices, counter-mapping attunes us to cities within the cities. In the interconnected cases of *Pertigaan Map* and Suroboyo Ngalor Ngidul, the maps themselves and the mapping methods produce visual depictions of the city that are contrapuntal to road-dominated, colonial and capitalist narratives. The counter-maps analyzed in this paper, made collectively over ten years and still going, offer both critiques of Surabaya and propositions for counter-cities within it. How they impact the lives of people in Surabaya over time, through what mechanisms and under what conditions remains to be studied.

To summarise, we offer a list of what these examples of counter-mapping do in Surabaya:

- Counter-maps visualize counter-cities. While counter-cities are always present, arguably in every city, they are not always visible or legible.
- Counter-maps offer slow, sensory ways of engaging in a city which can be oppressively car-centric, consumer-focused, and experientially intense.
- Counter-maps can open space for seeing and discussing the tensions between the top-down design of the city (which makes it difficult to walk in) and the bottom-up vernacular design of the city through neighbourhood features such as typography, wayfinding, and spatial design.
- Lastly, counter-mapping as a form of research offers ways to connect different cultural activists, knowledge holders, and experts, as in the case of writing this article together.

Furthermore, we present here a different version of Surabaya to the dominant narrative of the city. Together, our counter-mapping examples offer a fine grain study which is essential for avoiding the reproduction of an overgeneralized image of the postcolonial "Asian City" (Ren & Luger, 2015) or the temptation to write tropes for the counter-city of the Global South. The counter-cities of Surabaya are made present and visible through counter-maps such as ours, inviting people to experience and create the cities they need within Surabaya.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence

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Data availability

Data will be made available on request.

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