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The Gallery of Possibilities

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Intersectionality and Black feminist thought invite cartographic thinking. Black feminist thinkers evoke cartographic metaphors and imaginaries like intersectionality and the matrix of domination to better illuminate and challenge systems of power and oppression. Such cartographic frameworks contribute toward an evolving feminist mapping toolkit and a growing expanse of feminist interventions in mapping. Yet, there remains a need to engage with the commitments of Black feminist thought in everyday mapping practices. I introduce the *gallery of possibilities* as a tangible methodological mapping intervention that materializes Black feminist thought and cartographic metaphors by retooling existing cartographic techniques, specifically small multiples, grounding and contextualizing them in questions within Black feminist thought. By engaging with intersecting systems of power and their operation, and the multiplicity of ways power emerges, the gallery of possibilities destabilizes the stasis encoded in traditional mapping solutions. I outline five core elements of the gallery of possibilities and illustrate the method with a case study—a workshop series on feminist map icons. In sum, the gallery of possibilities, along with Black feminist thought, expands the range and availability of feminist mapping methods and tools. Together, the gallery of possibilities and Black feminist thought transform everyday contemporary mapping practice.

Key Words: Black feminist thought, feminist GIS, feminist mapping, intersectionality, map symbolization.

Intersectionality and Black feminist thought invite cartographic thinking. Feminist scholars have long challenged rejective claims that mapping is inherently incompatible with critical, feminist frameworks by recognizing the situatedness of map-makers and the view from above (Haraway 1988), subverting top-down perspectives (Kwan 2002a), embracing qualitative data and methods (Knigge and Cope 2006), and acknowledging the inherent tensions within representational practice (Schuurman and Pratt 2002). Beyond the material application of feminist frames in mapping, Black feminist engagements with intersectionality and the matrix of domination expand cartographic thinking by embracing imaginative mapping metaphors as feminist praxis. In other words, Black feminist thinkers (along with transnational feminists like Chandra Mohanty) evoke cartographic metaphors and imaginaries to better illuminate and transform geographies of difference (e.g., Mohanty 2003 in “Cartographies of Struggle: Third World Women and the Politics of Feminism”; McKittrick 2006 in *Demonic Grounds: Black Women and the Cartographies of Struggle*; Bailey and Shabazz 2014 on “New Black Cartographies of Resistance and Survival”). In a legal studies piece, for example, Crenshaw (1989) articulated (and coined) *intersectionality* as intersecting roads, a spatial metaphor that places race and gender on two distinct paths meeting at a crossroads. This imaginative, mental map is an important and evocative visual metaphor illustrating the compounding forces of oppression. Building spatial complexity, Collins (2009) envisioned the *matrix of domination* or, for me, a multidimensional and multiscale map that

recognizes the various domains (e.g., interpersonal, hegemonic, disciplinary, and structural) whereby systems of power like racism, sexism, classism, and ableism, among others, differentially intersect, generating and reinforcing positions of privilege and oppression. These metaphorical and imaginative cartographies offer tools and frameworks for a feminist mapping toolkit that not only examines but challenges and transforms intersecting systems of oppression through mapping practices. The *gallery of possibilities*, shared here, is a tangible methodological mapping method that materializes Black feminist thought and cartographic metaphors by retooling existing cartographic techniques, grounding and contextualizing them in questions of intersectionality and power within Black feminist thought.

In what follows, I introduce feminist interventions in mapping, illustrating their application across geospatial data, map design, and mapping processes (i.e., three sites for intervention). Throughout, I employ the terms *cartography* and *mapping* in their most expansive forms to include examples and ideas that fall in- and outside the bounds of academia (see Edney 2019 and Bosse 2020 for reconceptualizations of cartography). I only refer to related or analogous terminology like geographic information systems (GIS) when engaging with others’ words. Next, I frame and outline the gallery of possibilities as a feminist methodological intervention in mapping that retools traditional mapping techniques, specifically small multiples, to engage the multiplicities of intersectionality and systems of power while also destabilizing the singularity and stasis encoded in “objective” mapping solutions. I illustrate this

method with a case study—a workshop series on feminist map symbolization—and conclude by recognizing that there remains a need to engage and materialize the commitments of Black feminist thought within existing mapping techniques and everyday mapping practices, more broadly.

Feminist Mapping

Although a comprehensive recount is out of scope for this methodological intervention, the brief history of feminist mapping outlined here is inherently incomplete given my epistemological leanings and my shifting position and privilege within the matrix of domination.¹ I draw inspiration from Elwood and Leszczynski (2018), who continually expand preconceptions of feminist digital geographies, which includes mapping, by centering theoretical “horizons” (both past and emerging) and those strategically marginalized or erased in mapping spaces. Within this context, feminist mapping is by no means new (Kwan 2002a; Schuurman and Pratt 2002; Knigge and Cope 2006; Brown and Knopp 2008; Jung and Elwood 2010; Elwood and Leszczynski 2018; Yang et al. 2021). Feminist GIS as a concept in Western academic arenas is often attributed to a 2002 special issue of *Gender, Place and Culture* where the authors refuted the supposed incompatibility of GIS and feminist geographies through exemplary work (see Kwan 2002b for an overview). Together, the authors engaged with underlying tensions and challenges of mapping as they relate to activism and power (McLafferty 2002), everyday geographies and urban environments (Pavlovskaya 2002), and situatedness of maps and their mapmakers (Schuurman and Pratt 2002; Kwan 2002a). This special issue provided a launch pad for future work that expanded their lines of inquiry in new methodological (e.g., Knigge and Cope 2006 on ground visualization; Elwood 2006 on participatory GIS; Jung and Elwood 2010 on expanding GIS software) and theoretically rich directions (e.g., Gilbert and Masucci 2006; Pavlovskaya 2006; Brown and Knopp 2008) that engage with epistemological tensions, power relations, and alternative ways of knowing.

Acknowledging the power granted by visibility as well as the critiques of such a gaze,² mapping offers opportunities for making the intricacies of Black feminist thought and cartographic metaphors like intersectionality tangible. Recent work in data feminism and design justice along with race critical code studies and digital humanities has sparked renewed energy and motivation for feminist mapping by centering Black feminist thought (Benjamin 2019; Costanza-Chock 2020; D’Ignazio and Klein 2020; Kelly 2020; COVID Black n.d.). Feminist thinkers and makers in these spaces challenge the perceived objectivity of maps by revealing deeply situated

practices indoctrinated within interlocking systems of power, systems that differentially privilege and oppress (Combahee River Collective 1977; Crenshaw 1989; Collins 2009; Nash 2018). *Data Feminism*, a book and feminist framework proposed by D’Ignazio and Klein (2020), centers on power and intersectional practices across data science and visualization. Rodó-de-Zárate (2014), for example, reenvision *relief maps*³ to “collect, analyze, and display intersectional data.” Moving beyond cross-tabulations of specific demographic variables, Rodó-de-Zárate (2014) inputs power structures, personal experiences, and place, data points frequently erased within mapping. Gallon (2020a, 2020b) further offers Black feminist data analytics as an intersectional approach to data decision-making, revealing and challenging the relations between racism and critical analysis of COVID-19 data. Like Rodó-de-Zárate (2014), Gallon (2020b) stresses the importance of looking beyond intersectionality as data cross-tabulations or simply overlapping identities and, instead, investigated the broader systems that generate domination in data practices. Such an approach recognizes that all data are relational and requires an ethics of caring for data, a “precarious prospect that equally holds the possibility of liberation and oppression” (Gallon 2020a).

Beyond questions of intersectionality and systems of power in data, maps also creatively explore new ways of visualizing intersecting systems of power (i.e., the matrix of domination). Mapping projects like Million Dollar Hoods (n.d.) examine and resist such systems of power by challenging conventional visualizations of criminalization that work to dehumanize and by centering individuals most affected by the carceral state. Transforming Justice (Bley et al. 2022) is another collaborative project that included a mapping workshop to challenge and visually reimagine common narratives of policing and segregation in Milwaukee, Wisconsin (i.e., narratives that produce and reinforce racialized landscapes through criminalization and surveillance). Mapmakers in the workshops replaced prevalent heat maps⁴ showing supposed hot spots of crime with maps that subvert systems of power (Bley et al. 2022). In one example, the mapmakers manually stack personal stories of policing and segregation on top of a transparent redlining map and another map with disparaging descriptors of redlined areas. By bringing past and present together, the mapmakers expose multiple domains within the matrix of domination. In other words, the combined map layers place the interpersonal experiences of oppression in direct conversation with structural policies like redlining that generated racialized landscapes and were reinforced by disciplinary and hegemonic or social domains. The Transforming Justice mapping project emphasizes the importance of systems of power within mapping processes and collaboration. The Design

Justice Network (Costanza-Chock 2020) follows suit, recognizing the power of “who’s doing the mapping” and the material impacts of data and mapping on everyday livelihoods. Costanza-Chock (2020) further calls for feminist mapping processes that are grounded by those most affected by spatial phenomenon to challenge systems of power that determine who maps and what narratives are mapped.

Like intersecting systems of power, maps are not static objects and require contextualization. Kitchin and Dodge (2007) and Pearce (2014), among others, examine maps as emergent processes where maps, their makers, and their readers are coconstitutive knowledge producers that are always in a state of becoming. Black feminists and their engagements with intersectionality and the matrix of oppression similarly engage processual approaches and require accountability and not simply transparency (see D’Ignazio and Klein [2020] for a discussion). In their work, Kelly and Bosse (2022) introduce a feminist toolkit for building reflexivity into mapping, a process that calls mapmakers from all arenas to make time and space for considerations of intersecting power structures and their differential complexities within such power structures. Such an approach demands work to dismantle dominant power structures. Reflexive orientations that directly engage power relations build on recent calls for expanded metadata practices (Schuurman and Leszczynski 2006; Ricker 2018; CIVIC 2020; Gebru et al. 2020) that recognize the importance of context (D’Ignazio and Klein 2020) and the partialities of knowledge production (Harding 1986; Haraway 1988; Collins 2009). When viewed as processes embedded within power relations, feminist mapping requires reflexive accountability and contextualization, often pairing maps with text or other modes of communication or expression that work toward more equitable futures (Kelly and Bosse 2022).

As introduced, Black feminist thinkers evoke cartographic metaphors and imaginaries like intersectionality and the matrix of domination to better illuminate systems of power and oppression and transform geographies of difference. These cartographic imaginaries or frameworks inform a growing expanse of feminist interventions in mapping. Despite the examples outlined here (and many others), maps and everyday mapping techniques often remain rooted in unexamined perspectives of power and privilege. As such, there remains a need to expand our feminist mapping toolkit and engage and materialize the commitments of Black feminist thought within everyday mapping practices.

Curating a Gallery of Possibilities

The gallery of possibilities is a mapping method that materializes Black feminist thought by retooling

small multiples, a traditional thematic mapping technique commonly used to compare spatial phenomena. More specifically, a small multiple map presents “a series of small data visualization instances varying in a key attribute” like time or other spatial variables (Nelson 2020; Figure 1). Unlike more visually complex mapping techniques that stack or combine multiple spatial or temporal variables into one frame, small multiple maps present individual variables or moments in time across multiple frames. This allows viewers to engage with a series of mini maps at their own pace. Despite some disadvantages (see Fish 2018 for a discussion), the small multiples mapping technique inadvertently embraces feminist considerations of pluralism that bring multiple perspectives together (D’Ignazio and Klein 2018, 2020). Like small multiples, the gallery of possibilities presents multipart or multiple visualizations for comparison, but, more importantly, to recognize the process and partiality of any singular data set, attribute, or visualization. Bringing multiple perspectives and multiple maps together allows the reader to better understand the nuance and complexities within intersecting systems of power and the context from which each map arises.

Beyond its pluralistic form (i.e., retooled small multiples), there are five core elements within the gallery of possibilities: variables, mapmakers, mediums, intersecting systems of power, and contextualized process. These elements, however, are not prescriptive. They can take shape in numerous ways (Figure 2), and I encourage others to retool this frame.

- *Variables*: Like small multiples mapping, the gallery of possibilities examines one or more variables. These variables can be spatial (or even aspatial, like map icons), temporal, qualitative, or quantitative. Variables serve as the object or phenomenon that is being mapped or visualized through a feminist lens and presented in gallery form.
- *Mapmakers*: The gallery of possibilities can be curated by one or more mapmakers. When curated by one mapmaker, the gallery of possibilities might focus on process through iteration or distillation. For example, a mapmaker might iteratively approach a single data set or map by creating multiple maps from differing angles or perspectives. Alternatively, a mapmaker could distill a map into its substantive parts to break down or deconstruct the mapping process. When curated by more than one mapmaker, the gallery of possibilities brings together multiple voices and perspectives. When collectivized, mapmakers might focus on a particular data set and illustrate the multiple angles of analysis and potential mappings. Mapmakers

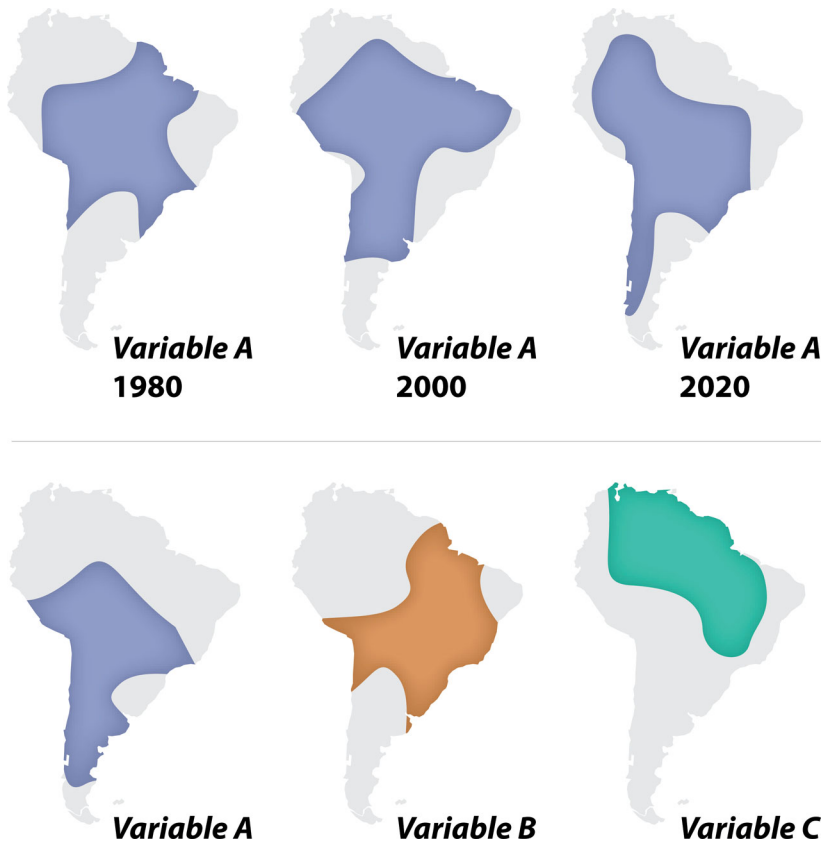


Figure 1 Two imaginary examples of small multiples, a traditional thematic mapping technique commonly used to compare spatial phenomenon including the same variable over time (see top example in purple) or multiple variables over space (see bottom example in purple, orange, and green).

can also focus on one particular theme assembling multiple data sets, approaches, and mapped stories into the gallery of possibilities.

- *Mediums*: Galleries of possibilities can be curated both as tangible, nondigital objects (e.g., atlases, in-person galleries, notebooks) and digital objects (e.g., online atlases, Web sites, Miro Boards). Each medium offers opportunities and challenges. Digital tools and spaces allow for galleries that continually update, expand, or evolve. This supports galleries focused on ongoing, real-time processes and collaboration. Nondigital galleries can also support process-based galleries, albeit in different forms. Further, both mediums offer varying modes of engagement (i.e., tactile, multisensory, collaborative), another consideration for curating a gallery of possibilities.
- *Intersecting systems of power*: Geospatial data, map design and analysis, tools, technologies, mapmakers, and collaborations are imbued within intersecting systems of

power like racism, sexism, classism, and ableism, among others. The gallery of possibilities prioritizes, reveals, and challenges these systems within the mapping process. There are several ways to do this. For example, the gallery of possibilities takes the role of the mapmaker(s) and their positions with intersecting systems of power seriously. Additionally, the gallery of possibilities could reveal (in)visibilities within mapping that can be attributed to differentials in privilege and oppression. The gallery of possibilities can challenge differential power structures within map symbolization by rethinking and retooling traditional mapping practices. Finally, the gallery of possibilities acknowledges and works toward centering data and narratives that have been placed at the margins of mapping as well as the mapmaker(s) that are most affected by the variables being mapped.

- *Contextualized process*: The gallery of possibilities makes process visible by adding context. This processual approach rejects

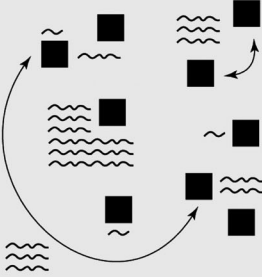
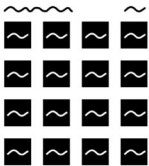
Gallery	Curation
<p data-bbox="149 359 419 417">A Gallery for Feminist Map Icons</p> 	<p data-bbox="465 185 756 210">Variable(s): Maki map icons</p> <p data-bbox="465 239 1193 293">Mapmaker(s): Mapmakers that spanned 10 feminist icon design workshops.</p> <p data-bbox="465 322 1193 515">Medium(s): Print and digital. Icons were often sketched and contextualized by hand with pen and paper and were collated at the end of in-person workshops. Online workshops, visualized here, relied on a Miro Board allowing mapmakers to digitally sketch or upload materials for icons and context. The Miro Board also allowed for collaborative engagement as mapmakers commented on each other's icons or illustrated relationships between icons by drawing arrows.</p> <p data-bbox="465 544 1193 765">Intersecting Systems of Power: Mapmakers explored intersectionality and systems of power in their feminist map icons in various ways, both individually and collectively. They re-envisioned the visual grammar of iconography inscribing intersecting power relations within their designs. Many of their designs revealed and subverted power structures that underlie the Maki icons. Collectively, mapmakers challenged the overarching role of universal icon sets and the dominant norms embedded in their designs.</p> <p data-bbox="465 794 1193 958">Contextualized Process: The alternative feminist map icons created by workshop mapmakers are contextualized with notes and comments via typed or written text providing processual evidence. Some provide their names while others relied on simple labels, additional details like the historical, personal, or processual context documenting the pros/cons of their designs, or supplementary context via comments.</p>
<p data-bbox="185 1141 387 1232">Anti-Eviction Mapping Project (AEMP)</p> 	<p data-bbox="465 996 1193 1107"><i>The Anti-Eviction Mapping Project (n.d.; Maharawal and McElroy 2018) is a "data-visualization, critical cartography, and multimedia storytelling collective documenting dispossession and resistance upon gentrifying landscapes."</i></p> <p data-bbox="465 1136 1193 1190">Variable(s): Oral histories, videos, spatial data, etc. related to evictions and evictors.</p> <p data-bbox="465 1219 1193 1273">Mapmaker(s): A volunteer collective of activists that collaborate with community partners.</p> <p data-bbox="465 1302 1193 1356">Medium(s): A digital website documenting varying elements of their work.</p> <p data-bbox="465 1385 1193 1578">Intersecting Systems of Power: Their work examines and challenges intersecting systems of power in various ways. In collaboration with Eviction Defense Collaborative, AEMP examined the "evictability" of tenants based on the intersections of race and class. Further, their work challenges existing narratives by centering the voices of those most impacted by predatory eviction and highlighting their role in urban transformation (see AEMP's "Narratives of Displacement and Resistance").</p> <p data-bbox="465 1607 1193 1717">Contextualized Process: AEMP documents and shares their process and reflections on power structures in a variety of ways including their website, academic papers, presentations, toolkits, resource handouts, etc.</p>

Figure 2 Galleries of possibilities take many forms. These examples illustrate various configurations with a series of black boxes (i.e., maps or visualizations), squiggly lines (i.e., annotations and context), and arrows (i.e., dynamic media like Miro Boards). Further, the five core elements of each gallery are detailed to illuminate and inspire alternative possibilities.

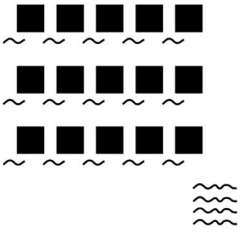
Gallery	Curation
<p style="text-align: center;">Borders: An Atlas of Syrian Border Crossings</p> 	<p><i>“Borders” (Kelly 2019) is an atlas that visualizes Syrian refugee border stories challenging the conventional depiction of borders in cartography. Each border in the atlas is symbolized based on an individual’s border experience (i.e., the intensity of the experience as well as the ease of crossing the border). Each mapped border is presented individually and is then collated into a small multiples map.</i></p> <p>Variable(s): Syrian refugee border stories</p> <p>Mapmaker(s): Meghan Kelly</p> <p>Medium(s): A print and digital atlas.</p> <p>Intersecting Systems of Power: When compiled into small multiples, each mini-map illustrates the breadth of similar and divergent border experiences spanning a range of individuals. These similarities and divergences are informed by intersecting systems of power that dictate the intensity of experience and who is allowed to cross specific borders.</p> <p>Contextualized Process: Each border throughout the atlas is identified with an experiential label, a label describing the individual’s border experiences. The label provides context to support the interpretation of the map symbols. Additionally, the mapmaker provides supplementary reflexive context at the beginning of the atlas and on each map page in the lower right corner.</p>

Figure 2 Continued.

the stasis encoded in singular map outcomes, and instead, prioritizes multiplicity, complexity, nuance, iteration, repetition, messiness, and works in progress. The gallery of possibilities is more than a transparent process that “shows” your work (D’Ignazio and Klein 2020). Instead, the gallery of possibilities shows contentious power relations within often messy or nonlinear workflows. It shows limits, possibilities, and more equitable alternatives, as well as trial, error, and iteration. The gallery of possibilities engages viewers by understanding their encounters as extensions of the mapping process.

In sum, the gallery of possibilities as a method itself is not static. Just as my thinking has changed over time,⁵ the utility and frame of the gallery of possibilities is an ongoing negotiation. It is one part of any ever-evolving feminist mapmaking toolkit that is meant to nudge everyday mapping practices and related conversations forward. The gallery of feminist map icons in the following section details one configuration of the method, and Figure 2 offers alternative possibilities.

A Gallery of Feminist Map Icons

Map icons are tiny map symbols used to locate spatial features like people, places, things, and events (see Bell 2020 for an overview). Map icons are typically collated into icon sets or libraries. The National Park Service (2018), for example, uses a custom icon set across their map products to maintain aesthetic and brand consistency. Mapping platforms like Google Maps, Apple Maps, and, of particular importance here, Mapbox use house icon sets like Maki (Figure 3) that can be easily incorporated into interactive maps. These icons are meant to be universally applied across mapping contexts. In previous work, I have called the supposed universality of icons and icon sets into question, arguing for feminist intervention in their design (Kelly 2021). I have since facilitated a series of feminist icon design workshops to answer this call (Kelly 2020). In each workshop, I introduced a feminist mapping framework adopted from D’Ignazio and Klein (2018, 2020) that centers on intersecting systems of power. I then asked workshop designers to iteratively sketch alternate icons, drawing inspiration from the feminist framework. I also asked workshop designers to annotate their sketches, contextualizing themselves and their



Figure 3 The Maki icon set is an open source icon set available for mapmakers. The icons were reproduced here following “CC0 1.0 Universal” status.

processes. I have collated over 1,000 feminist icons across ten workshops. Most recently, I facilitated a virtual workshop with an expansive, international audience as part of the feminist visualization workshop series (Coddington and Williams 2021). Here, I outline the five core elements from Figure 2 presented earlier that shape a gallery of feminist map icons (Figure 4). Figure 4 showcases the entire gallery in one snapshot and Figure 5 zooms into the gallery, providing a more detailed perspective.

- *Variables*: Maki is a map icon set created by Mapbox, a technology company that provides an online platform for custom Web maps, applications, and navigation tools (see Kelly 2021 for a full biography of the icon set). Mapbox released Maki in 2013 to provide “out-of-the-box” map icons that can be used in interactive Web maps. In its current rendition, Maki consists of 204 open source map icons served as 15-pixel \times 15-pixel vector files (i.e., files made up of points, lines, and polygons) allowing for digital customization. The icons are meant to be downloaded and installed directly into interactive Web maps fitting all mapping contexts. In prior work, I have outlined the need for more expansive icon sets that are grounded in feminist principles like intersecting systems of power and context (Kelly 2021). The gallery of feminist icons presented here uses Maki icons as key variables or objects to redesign.
- *Mapmakers*: The number of mapmakers attending my feminist icon design workshops ranged from 5 to 150. The virtual workshop outlined here included over 100 mapmakers from around the world. Mapmakers in this workshop generated a gallery of possibilities both individually and collectively. Individually, mapmakers iteratively redesigned individual map icons (e.g., the toilet icon), producing multiple versions fitting differing contexts. Other mapmakers redesigned more-than-one map icon (e.g., the toilet icon, the oil icon, and the soccer icon) producing a wider array of icons. When considered collectively, the gallery of possibilities reflects the multitude of voices and varying perspectives of mapmakers as they create alternative map icon designs that reflect their personal experiences.
- *Mediums*: In the virtual workshop, designers used a Miro Board (n.d.) as a digital collaborative maker space. Miro allowed mapmakers to gather synchronously for the event from multiple time zones as well as to work independently after the event. Mapmakers digitally sketched alternative map icons and added notes and reflections directly into the maker space using Miro’s drawing and text tools. They also worked offline using pen and paper, uploading their hand-drawn materials to the Miro Board. Mapmakers engaged with one another in real time as their online cursors zoomed

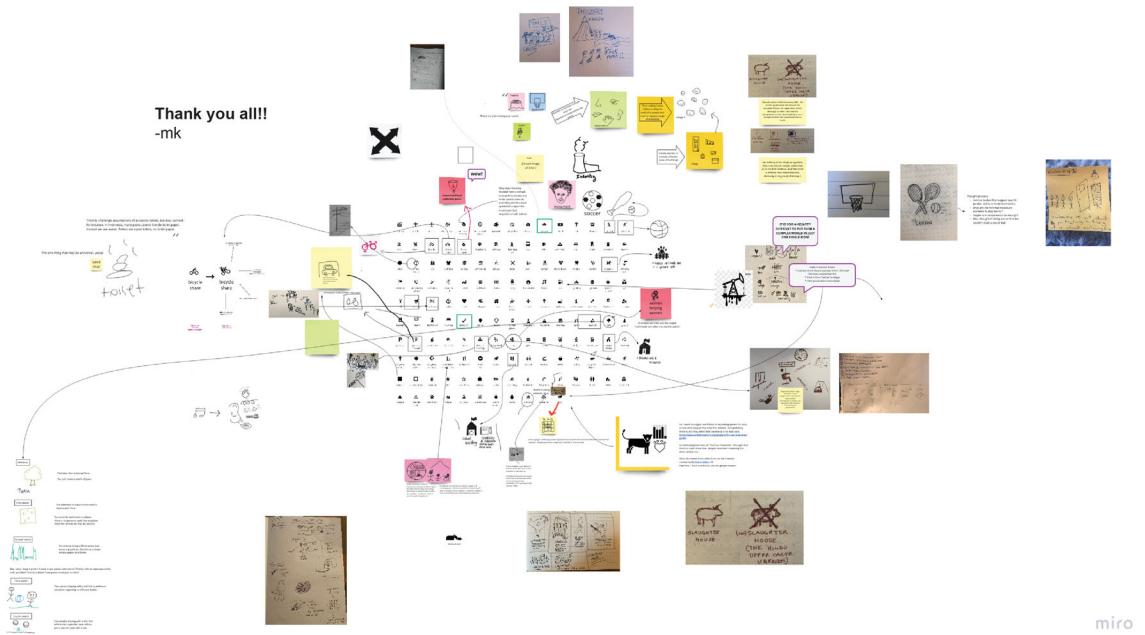


Figure 4 A Miro Board or virtual maker space was used during a feminist icon design workshop to collectively reenvision the Maki icon set. Taken as a whole, the Miro Board serves as a gallery of possibilities by bringing many variables (i.e., icons) into one frame or display. Each icon is also contextualized with notes, reflections, and comments via text providing processual evidence.

around the maker space, viewing, commenting, and making connections across icon designs. This engagement also occurred asynchronously after the event. In sum, the Miro Board is the gallery space. The digital maker space allowed for multiple modes of engagement using both digital and nondigital design tools, and multiple modes of collaboration, both live and asynchronous. The Miro Board brought mapmakers together to produce alternative map icons that can be viewed in one frame or snapshot, revealing individual nuance, commonality, and difference.

- *Intersecting systems of power:* Workshop designers explored intersectionality and systems of power in their feminist map icons in various ways. Workshop mapmakers reenvisioned the visual grammar of iconography, inscribing power relations within their designs. One designer, for example, challenged the power of the carceral state by reenvisioning an icon for “embassy” (Figure 5A). The alternative icon depicts four stick figures waiting outside of a door and above each of their heads is a checkmark or X. A menacing, much larger figure with American paraphernalia as clothing is standing on the other side of the door. The checkmark and Xs represent the differential treatment of individuals based on systems

of power and oppression. Other icons like the oil rig, fallen monument, and tennis rackets, respectively, reveal and subvert power structures that underlie their original referenced icon, oil, monument, and tennis (Figures 5B, 5C, and 5E). In addition to rethinking and redesigning individual map icons, workshop mapmakers collectively challenged the overarching role of universal icon sets. Universal icon sets like Maki in Figure 3 showcase and prescribe one particular view of the world, a default imaginary shaped by those in power (see Kelly 2021 for details). The gallery of possibilities offers new and expansive imaginaries, and a renewed reconceptualization of icon sets, one that challenges default norms generated through dominant mapping practices that are embedded within intersecting systems of oppression (Figure 5D).

Importantly, engagements with intersecting systems of power can be lacking or even dangerous. Not all mapmakers, for example, engaged directly with power in their design process or, if they did, it might not be clear how power influenced their designs. In the former scenario, this could result from mapmakers holding relative positions of power that normalize existing systems of power and oppression. In the latter scenario, mapmakers might not have

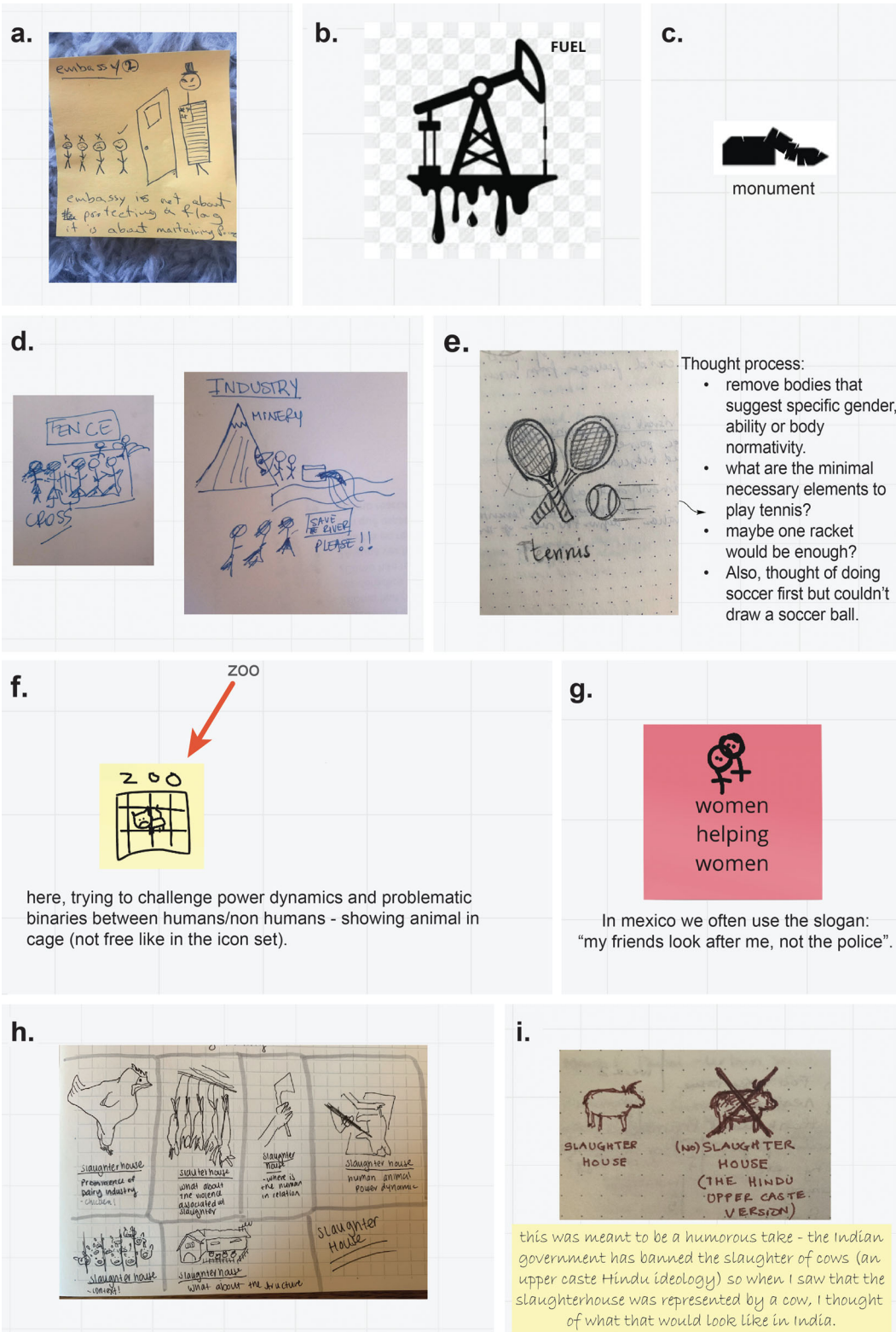


Figure 5 A closer examination of alternative icons within the gallery of feminist map icons.

provided supplemental information to help understand the mapmaker's design process and reflections including the limits, opportunities, and suggested context for their map icons. Following Gallon (2020a), both scenarios simultaneously enable possibilities for "oppression and liberation." In other words, even with the best intentions, the gallery of possibilities and engagements with intersecting systems of power have the potential to inadvertently harm by reinforcing power structures. In the words of Costanza-Chock (2020), "good intentions are not enough." In these instances, it is imperative to remain accountable, working to repair the harm caused.

- *Contextualized process:* The alternative feminist map icons created by workshop mapmakers are contextualized with notes and comments via typed or written text providing processual evidence. Like their engagements with power, mapmakers provided context to varying degrees (Figure 5E). Some relied on simple labels like "monument" (Figure 5C). Others provided additional details like the historical, personal, or processual context documenting the pros and cons of their designs or provided supplementary context via comments (Figure 5F). Several mapmakers maintained accountability by adding their names to their alternative designs, situating themselves within their work. Names, however, have been removed from the figures for publication. Contextual information or metadata are conventionally kept separate from the icon themselves. For the original Maki icon set, context on how it was made, who it was made by, and any "issues" in its making are buried within an online digital archive (i.e., Github). In contrast, the gallery of possibilities places context front and center with the feminist map icons and does not separate processual context from the icons. Instead, the icons are rendered incomplete without their underlying contexts (Figure 5G).

In sum, like the small multiples mapping technique, this gallery of possibilities allows viewers to engage more deeply with each icon and how they are made as well as their relationships to power and process in a collaborative environment. The alternative, feminist map icons produced in these workshops curate a gallery of possibilities as they are attentive to intersectionality, varying domains within the matrix of domination, and the underlying context in their designs.

Conclusion

Despite the growing influence of intersectionality, the matrix of domination, and Black feminist thought, more broadly, in mapping and related data and visualization fields, many maps remain rooted in unexamined perspectives of power and privilege. There remains a need to engage and materialize the commitments of Black feminist thought within existing mapping techniques and everyday mapping practices. Black feminist thought opens alternative graphic vocabularies and ways of expressing how power operates in and through data, maps, and mapping processes. When viewed as power-laden processes, feminist mapping requires reflexive accountability and contextualization. Attention to power and context disrupt perceived objectivity and stasis encoded within maps and, instead, stretch mapping as well as feminist thought in new directions. These interventions, however, remain at the margins of or are often strategically erased from mainstream mapping conversations (Kelly 2020). As such, there remains a need for feminist mapping methods that center the nuance and complexities of Black feminist conceptualizations of intersectionality, systems of power, and context. To fill this need and to contribute to an evolving feminist mapping toolkit (Kelly and Bosse 2022), I introduce a gallery of possibilities as a methodological intervention in mapping that expands traditional thematic mapping techniques, specifically small multiples. Curating in this way destabilizes the presentation of a single decontextualized map by presenting multiple or multipart visualizations that trace variations or material possibilities enabled through mapping processes. I illustrate the five elements of the gallery of possibilities using a case study on feminist map icons. At its core, the gallery of possibilities examines and challenges intersecting systems of power and the context that underpins their making. The gallery of possibilities embraces process by including context like annotations as well as multiple perspectives, iterations, and even incomplete drafts. In sum, the gallery of possibilities offers a feminist mapping method as one tool to nudge and transform contemporary mapping practice. The gallery of possibilities, along with Black feminist thought, expands the range and availability of feminist mapping methods and tools. Together, the gallery of possibilities and Black feminist thought transform everyday contemporary mapping practice. ■

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Notes

¹ My epistemological leanings recognize and embrace the situatedness and partiality of data, mapping, and historicizations in academic thought, perspectives that remain at odds within GIScience conversations. Like the broader academic arena, White, cisgendered, masculinist, and ableist ideals permeate GIScience curriculum, including those in which I was indoctrinated. My own position as White, cisgendered, nondisabled, educated, middle class, woman, and settler on Indigenous land has directly benefited from and is further imbued within the matrix of domination. Yet, the power that I wield continually shifts, affecting the pressure points of my own interventions. When I submitted this article, I was a postdoctoral scholar on a one-year contract navigating a crumbling job market amidst the ongoing pandemic. My race, class, cisgendered identity, and nondisabled body along with a PhD from a “land-grab university” (see <https://www.landgrabu.org/> for details) helped me secure an academic position in the United Kingdom where I now navigate academic and social structures as an immigrant, albeit an American immigrant with relative power. Given these shifting positionings, I remain accountable to the work and narratives that I produce now and into the future.

² The visibility of mapping has been critiqued from multiple perspectives and here, I touch on two. First, feminist scholars critique presumed objectivity imbued within maps given traditional top-down perspectives, otherwise known as the God’s-eye view, that present the world from an omnipotent and “all-seeing” maker (Kwan 2002a; Kelly 2021). The visibility of maps presented in this way erases the power and influence of the mapmakers and their role in shaping partial worldviews indoctrinated within systems of power. Second, maps and mapping practices are often reliant on visual practice despite growing bodies of cartographic work that rely on alternative bodily senses like touch (Cole 2021). Further, the dominance of visibility in mapping or their ocular-centrism can also be critiqued from a disability justice perspective as a majority of maps produced today are not accessible to many groups of people (Lee 2020).

³ Relief maps are conventionally used to depict changes in elevation or terrain using a variety of techniques like shading or hachuring to provide a three-dimensional

illusion (Kennelly 2017). They are most frequently used to illustrate mountainous landscapes (see <https://www.swisstopo.admin.ch/> and <http://www.mountaincartography.org/> for examples).

⁴ Colloquially, heat maps illustrate the magnitude of a particular spatial phenomenon using gradations or shades of a color and sometimes two or more colors. They are used to identify hot spots or areas of high concentrations of a particular spatial phenomenon (Slocum et al. 2008).

⁵ For me, this concept originated in CIVIC’s (2020) Structured Context Program, an interdisciplinary working group organized and facilitated by the CIVIC Software Foundation and inspired by a *Data Feminism* (D’Ignazio and Klein 2020) reading group. Librarians, designers, educators, community organizers, and others came together to envision and develop methods and tools for “collecting, documenting, and sharing contextual information about public datasets” that are grounded in principles of intersectionality and the matrix of domination (CIVIC 2020). I worked with a team to devise strategies that document and share data context. To avoid prescription, we created “a catalog of possibilities” to illustrate multiple ways of bringing data context into public conversation. Our catalog prioritized data context as dynamic processes, not static objects. I revisited the catalog of possibilities while writing a feminist mapping book chapter (Kelly 2020) where I overviewed feminist mapping practice with real-world interventions. I drew on feminist principles for data science outlined by D’Ignazio and Klein (2018, 2020), including examining and challenging power, considering context, embracing pluralism, representing uncertainty, elevating embodiment, rethinking binaries, and making labor visible. In their work on data feminism, D’Ignazio and Klein (2018, 2020) distilled feminist ideas into a series of feminist principles. The number and names of these feminist principles have fluctuated and changed over time. These changes are reflected in their publications and presentations on data feminism, which further illustrates how theory and writing, much like mapping, are ongoing processes. I then adapted the principles to mapping contexts by illustrating each with multiple examples, not wanting to prioritize any singular example. I envisioned this chapter as a visual introduction to feminist mapping that I started calling a “gallery of possibilities,” a shift from “catalog,” given the visibility of mapping. The gallery collated and reappropriated “feminist perspectives in mapping and geospatial technology, perspectives lost within historical and contemporary” mainstream mapping (Kelly 2020, 21). In time, the gallery of possibilities became a metaphor that I routinely returned to in my writing and mapping. As I ruminated on the concept (and after some prompting from a mentor), the gallery of possibilities crystallized as a feminist mapping method.

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