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The Unseen Landscape of Abolitionism: Examining the Role of Digital Maps in Grassroots Organizing

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Prison and police abolition has become a major political philosophy in North American discourse following the 2020 George Floyd protests. The philosophy remains divisive, and North American abolitionists seeking to coalition-build, provide resources for vulnerable populations and garner public support continue to experience challenges. We explore current usage of digital tools among abolitionists and the potential of a digital mapping tool to address these challenges. We conduct an interview study with 15 abolitionist organizations to understand activists' perspectives on the value of digital tools for organizing and a content analysis of 25 existing digital tools that convey abolitionist ideas to the public. Our findings together reveal (1) opportunities for digital mapping and HCI to support abolitionist activism and grassroots activism more broadly and (2) the challenges of digitally and spatially representing a movement that is intentionally grassroots, clandestine, and often involves organizers working in disparate locations.

CCS Concepts: • **Human-centered computing** → **Empirical studies in HCI**.

Additional Key Words and Phrases: community organizing, digital mapping, abolition, social justice

1 INTRODUCTION

On May 25th, 2020, George Floyd, a 46-year old Black man, was murdered by Minneapolis police officer Derek Chauvin after he knelt on Floyd's neck for 9 minutes and 29 seconds [94]. This sparked the largest series of protests and civil unrest in the United States since the Civil Rights Movement, a global reckoning with racism, and calls to abolish the police and prisons [87]. Prison and police abolitionists believe that the criminal justice system exacerbates societal harms instead of fixing them. They therefore seek to remove prisons and policing from contemporary society and replace it with other systems of rehabilitation and community accountability that do not focus on punishment. Abolitionists argue for a world beyond prisons and policing that instead creates institutions and programs that address societal harms holistically. These abolitionist practices exist in many communities today [46]. However, the philosophy remains poorly supported and

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understood within the United States, with recent polls only showing 15% of Americans in support [23].

During the period of civil unrest following the George Floyd protests, prison and police abolitionists took to digital platforms, building websites, posting on social media, forums, and other messaging platforms, in order to organize protests and educate the public about alternatives to prisons and policing [50, 84]. Hashtags such as #BlackoutTuesday and #ShutDownStem were disseminated on Twitter and Instagram in July 2020 as a means of elevating issues of anti-Black racism [17, 21]. Websites like abolitionist.tools enabled organizers to garner public support and to share valuable abolitionist toolkits and resources. Other tools, like The Digital Abolitionist, Abolition Journal and 26 Ways to be in the Struggle Beyond the Streets, helped document existing organizing efforts and educate the public about both the experiences of incarcerated people and what steps they could take to support abolitionism.

These tools are part of a longer history of activists appropriating digital technologies to aid their work. Over the past several decades, they have facilitated organizing and uprisings including the Arab Spring and the Occupy Wall Street Movement [96, 102]. In particular, in grassroots activism—in which a variety of disparate actors coordinate in an ad-hoc manner in order to provide aid or conduct protests without a clearly established non-profit or NGO in charge—the ease with which digital tools and resources are constructed and disseminated on the Internet has the potential to accelerate organizing [72]. In recent years researchers have examined how activists have used digital platforms to (1) articulate their political philosophies, (2) reach broader audiences, (3) communicate and coordinate protests or demonstrations, (4) deliver mutual aid, and (5) advocate for policy change [11, 76, 89]. Abolitionism is a particularly relevant grassroots movement that has not been widely studied in HCI. In addition to being a highly controversial topic in contemporary US political discourse, abolition involves work with highly marginalized populations such as the formerly incarcerated. Understanding how these organizations advance their objectives is necessary for future research and design with abolitionists, and contributes to HCI and CSCW studies of grassroots organizations and social justice more broadly.

This study examines how abolitionists are using public-facing digital tools, and digital mapping in particular, in their organizing efforts. Digital tools, as we used in this paper, may include but are not limited to a directory of resources, blog, or social media page, which enables organizers to coordinate and interact with the public in order to aid in their organizing efforts. An important, if under-explored, research area in HCI work on social justice is the role of digital mapping. The topic of digital maps and mapping practices came up in many of our early conversations with abolitionist organizers during the planning phases this research. Maps offer unique perspectives into the relationships between elements in space, perceived or actual; information that is not easily garnered from, or conveyed by, other forms of data representation. However, their contribution to activist organizing is still evolving. In one project, The Anti-Eviction mapping project, evictions of residents in the NYC area and the San Francisco area were recorded on a map along with oral accounts of the eviction process for a number of these tenants. This project enabled the public to simultaneously understand the vast number of tenants displaced by gentrification while placing this information in an anthropological context [64]. Another example is The Mapping Project, which helps to expose the flow of funding and institutional support around Massachusetts tied to "policing, U.S. imperialism, displacement and ethnic cleansing." Elsewhere, maps have also been used to map police violence in the United States, map vulnerability to COVID-19 in British Columbia, and map redlining in New Deal America.

The growing adoption of mapping technologies by a number of high-profile activist projects illustrates the potential for maps to provide information that is not as easily conveyed by other forms of

data presentation. To explore this opportunity further, we formulated the following research question: how might digital tools, and in particular digital mapping, facilitate abolitionist organizing? In this study we conducted semi-structured interviews with 15 North American organizations either publicly identifiable as "abolitionist" or self-identified as engaging with work using abolitionist praxis. Through the interviews we sought to understand how abolitionist organizers use digital tools to coalition build and grow public awareness about abolition and challenges involved in using or developing these tools. The interviews provided us with a sense of what abolitionists desired from digital tools, but we also sought to understand the extent to which these aspirations were currently being achieved in practice. We therefore conducted a content analysis of 25 websites that communicate concepts related to prison and police abolition. Through this, we shed light on common features of digital tools for abolitionist organizing and how these features accord with or differ from the desired uses for digital tools that organizers articulated in the interviews.

Our interview findings underscore the importance of coalition-building, data storytelling, history, and long term maintenance to organizers in building across movements, demonstrating the need for their work and engaging people for the long-run. In contrast, the results of the content analysis suggest a relative minority of websites use mapping, visualizations, or storytelling that could aid in supporting these goals. We draw on these results, combined with prior literature in critical cartography, to suggest an opportunity for the practice of counter-mapping to challenge dominant narratives that frame the contemporary political debate surrounding prison abolition in North America. However, our interviews also highlight the complexity involved in designing digital tools and mapping tools for social justice organizations who are loosely defined coalitions, have no single location from which their organizing is based, or work with individuals who need to remain anonymous in order to avoid retribution from police or ICE. Organizers also expressed mixed feelings about using public-facing digital tools and digital mapping tools, on the one hand seeing them as a powerful way to express their ideals but on the other hand concerned about their sustainability, accessibility, and security.

This study contributes to computer supported cooperative work (CSCW) by drawing the tools and approach of HCI for Social Justice into dialogue with abolitionist organizing, datafication, and critical cartography. We articulate the potential digital mapping could have for abolitionist organizers, and grassroots organizers more broadly, to connect organizers, articulate complex political philosophies, and demonstrate the necessity and impact of their work. We also draw attention to the care required when collaborating with organizations that work with and for marginalized communities and political perspectives. We hope our findings will support deeper engagement between HCI researchers and abolitionist organizers by providing insights into the potential for digital mapping to advance abolitionist agendas and considerations for successful partnerships between these communities.

2 RELATED WORK

In this section, we outline recent HCI research into the design and development of digital tools for social justice, which has thus far had limited engagement with abolition. We then discuss prison and police abolition and its deep relationships to notions of place-making. We draw on these relationships to connect to research in the areas of critical cartography and digital mapping for social justice. Through this, we intimate how HCI can expand its work on digital tools to engage digital mapping and support abolitionist organizing, and social justice more broadly.

2.1 HCI and Digital Tools for Social Justice

Evaluating the contribution of digital tools, such as websites of resources, blogs, social media, etc, in supporting social justice efforts is a growing areas of research within HCI. Recent work has

examined mutual aid organizing and technology choices [89], co-designing social media platforms for migrant welfare support [85], data practices of community organizers [79], the role of social media to support youth organizing [53], technology interventions to reduce violence against sex workers [91], and the role of digital technology for augmenting the social capital of former guerilla fighters to support reintegration [61]. Other studies have engaged with critical race theory [77] and gentrification [20], offering recommendations for how HCI can better engage with issues of race and displacement in service of justice goals.

This growing body of literature is contributing new approaches for HCI research at large. For example, one paper offers principles for social justice design in HCI that include enabling those that are disenfranchised to take advantage of opportunities, foster reciprocal relationships between those in power and the disenfranchised, and foster equity in resource distribution [29]. Another study identifies the importance of storytelling as an effective means of elevating stifled racial voices in HCI [77]. While these studies, among others, advance key concepts that facilitate ethical and equitable engagement in social justice partnerships and digital tool development, there is little literature examining how particularities of abolitionist theory and praxis may contribute to the practice of HCI research. In our examination of the ACM Library, we identified only one study that bridges HCI and abolition [37]. Using a participatory and speculative design approach, this project developed interactive exhibitions and digital artifacts to help a predominantly Black community in Ferguson, Missouri imagine futures where their neighborhoods are kept safe without policing. This demonstrates the feasibility of making concepts of abolition personal, practical and rooted in place using approaches from human-centered computing. In the following sections, we discuss abolitionism more in depth and lay out a case for HCI to engage more deeply with this movement.

2.2 Prison and Police Abolition

Abolitionists such as Professor and renowned activist Angela Davis liken the existing carceral system to slavery, showing that it inflicts violence on individuals, families, and communities [27]. Similar to historical U.S. slavery, incarceration disproportionately affects people from Black, Brown, Indigenous and poor communities [8]. Davis argues that governments are incentivized to use surveillance and policing to imprison more people in order to use them as low-wage workers, in what she calls the "prison-industrial complex" [92]. Geographer and abolitionist scholar Ruth Wilson Gilmore expands on this characterization of the contemporary prison system as a monetary endeavor in her book *Golden Gulag*, where she argues that prison building in California was a response to economic precarity from waning agricultural production and surplus land [38]. From 1984 – 2007, California built 23 new public prisons at a cost of $280-350 million dollars a piece, making prisons the largest investment by the California government. Politicians then constructed new crime laws like the STEP Act of 1988 that would help the state succeed in getting a return on their investment. In *The New Jim Crow*, Michelle Alexander draws on this description to characterize "crime" and the contemporary carceral system as an outgrowth of slavery and modern racial capitalism that meets dual needs of economic and social control [8].

Abolitionist philosophy thus concludes that our current criminal "justice" system is not fundamentally designed to deliver justice or rehabilitation to individuals or communities. As such, prison and police abolition demands a world without carceral or punitive systems. However, abolition argues not only for discarding the existing criminal justice system, but also consists of positive programs aimed at establishing new systems of care in their place [26]. In bestselling book *We Do This 'Til We Free Us*, Author Mariame Kaba describes prison abolition as "a vision of a restructured society in a world where we have everything we need: food, shelter, education, health, art, beauty, clean water, and more things foundational to our personal and community safety" [56]. In this vision, abolition requires us to experiment, activate our imaginations, and explore alternatives

outside of what we have been conditioned to accept. Housing the homeless is an example of a new system of care that studies have shown reduces crime victimization [36]. In other cases, communities employ the use of non-police populations as first responders. One popular effort of a police-alternative program is Crisis Assistance Helping Out On The Streets (CAHOOTS) which was created in Oregon in 1989 to specifically support the city's response to mental illness, substance abuse, and homelessness using a dual response of a crisis intervention workers and EMTs.

At the time of writing, prison and police abolition is a divisive view in the United States [23]. While most Americans (58%) agreed that the current system of policing needs major changes, many Americans are unsure who they would call in the event of an emergency or who would enforce the law [23]. They are also unsure how violent crime would be deterred in the absence of police or prisons. Prison and police abolitionists, through decades of scholarship, have provided their responses to these legitimate questions and documented abolitionist practices that exist in many communities today. However, this scholarship has not fully entered public discourse. Thus, abolitionist organizing faces a challenge of gaining public support for a poorly understood and highly controversial sociopolitical philosophy. In the next section, we explore how concepts of space, place and mapping can be employed to communicate abolitionist philosophy to the public in a more personal and practical way, expanding on Gerber's place-based study of abolitionist futuring [37].

2.3 Abolition, Space and Place

Abolitionist philosophy acknowledges that the prison industrial complex is intertwined with geography via urban development noting that "homeless removal, privatizing public spaces, and expansion of practices that police the poor redraw the social and political geographies of urban spaces" [63]. The place-based and spatial character of these practices are captured by the term "abolition geography," coined by scholar Ruth Wilson Gilmore. Gilmore developed the concept in order to urge people to go beyond the identification of abolition with decarceration/destruction and into an understanding of abolition also as a spatial process of building new institutions, capacities, and relationships that sustain people and place [35].

We can look to some examples of this spatial process of abolition in action. Moulton argues that because of the importance of memoryscapes, place-based epistemologies, and spatial histories (e.g. slave trade, plantations, freedom rides etc.) to the Black community, building new memorial sites that celebrate Black heritage is foregrounded in abolitionist practice [71]. Returning these memoryscapes to those from whom agency was previously removed on these lands is therefore an abolitionist act. One example of this comes from Sapelo Island, a former plantation owned by slaveholder Thomas Spaulding who was known for cultivating cotton and the first varieties of sugarcane in the United States [47]. In recent years, the Saltwater Geechee people, a community of Westt-African slave descendants that still reside in Sapelo today, have worked to obtain property rights to the land and "re-Earth" it as an agricultural commons. They cultivate many of the same crops—sugarcane, sour oranges, garlic—that were once toiled by the Geechee community under slavery to sustain the economic livelihood of their community in present day. These descendants both build new institutions and memories on land previously taken from their community while deconstructing the hegemonies lingering in this landscape.

We can also look to Minneapolis, the site of the murder of George Floyd in May 2020, to see an example of place-making entangled with abolitionist work. After protests erupted in Minneapolis and ten thousand National Guard rolled into the city, homeless people faced dangers of increased policing and scarcity of food as stores closed due to riots [18]. In a massive effort, community organizers raised funds to take over a 136-room Sheraton hotel providing shelter and food to people for two weeks. One organizer involved in the effort noted that through this show of mutual aid,

"it suddenly became possible to imagine that the space and resources are there, that everyone deserves housing." Through this anecdote, Chua argues that "housing is a site where care and reproductive work can become crucial sites of anti-capitalist abolitionist transformation" [18]; here again we see the abolitionist work of creating spaces that sustain life. These examples capture the dual destructive and constructive project of abolition:(1) the abolition and escape of oppressive institutions and (2) the creation of *new spaces* that sustain marginalized communities. Abolition is thus a geographic endeavor as much as it is social and political. In the next section, we discuss the historical and contemporary uses of critical cartography and digital mapping to advance social justice work, and point to the need for further investigation into the role of mapping practices as a means to engage the spatial and place-based character of abolition.

2.4 Critical Cartography, Digital Mapping and Social Justice

Spatial representations are thought to provide information about the relationships between elements in space, perceived or actual, that are not easily garnered from more standard types of data representations [78]. Maps can be useful for highlighting the distribution of what are typically non-visual elements of society such as health, income, or demographics [13, 69]. Specifically in the digital realm, it has been argued that digital maps can not only make subject matter more interactive and engaging but also change the way people think about and investigate the subject matter [73]. As tools, they therefore offer a number of promising affordances for social justice and abolitionist organizing.

For all the potentials of mapping, traditional mapping sometimes embeds harmful biases and other pitfalls. These pitfalls began to be critiqued in the 1980s, giving birth to what is now known as critical cartography. Critical cartography rejects traditionally positivist views of cartography that argue that the world can be represented objectively [43]. Scholars working in this area have argued that close attention to the design and use of maps reveals that they often serve as tools to support the agendas and worldviews of the powerful [24]. A deeper reading of the purpose of maps beyond visually representing spatial information, is that they often are and have been used to support dominant political structures. To assess the values and political valences of maps and mapping practices, scholars in critical cartography suggest considering the historical context in which a map was created, the decisions made by the map designers, and how these design decisions highlight some and leaves others "silenced [88]." Critical cartographers offer a variety of approaches to develop alternative maps including open-source, participatory, or collaborative mapping practices [15], representations that undermine dominant notions of space, knowledge, and power, challenging generalizations and globalized perspectives, and explicitly providing mappings not included in the products of official state agencies [40, 101].

Critical cartography has a strong historical connection to social justice organizing. Within the field of critical cartography, we draw particular attention to the technique of "counter-mapping" which refers to a practice of applying a critical cartographic lens to mapping as a form of activism against dominant power structures [80]. Counter-mapping aims to render visible landscapes that would otherwise be invisible by creating new maps that contradict the hegemonies and narratives present in the maps before them. Early examples of counter-mapping in social justice organizing are seen in the African American Freedom Struggle, such as in civil rights leader W.E.B. Du Bois' design of 60 vibrantly colored maps and graphs to visualize African American contributions, delegitimize racist stereotypes of Black people, and visualize African American socioeconomic contributions to the U.S. [7]. Another example comes from the Detroit Geographic Expedition and Institute (DGEI) led by Dr. Bill Bunge and Gwedolyn Warren. In 'Field Notes II', the DGEI detailed a map illustrating the impact of school district gerrymandering on school resources [31]. Counter-mapping has also been employed as a means for Indigenous communities to establish inter-state claims on territories

they have traditionally managed [59, 98]. Overall, counter-mapping may serve as part of a toolkit for oppressed communities to challenge power or push forth minoritized ideas.

Though the study of mapping practices and social justice is nascent in HCI, we see relevant work that emphasizes attention to place and to non-dominant perspectives, reflecting core concepts of critical cartography. For example, feminist data visualization's principles of empowerment, context, and embodiment all speak to the importance of non-dominant perspectives, bodies, and ways of knowing [32]. In the context of disasters and crisis, Soden and Palen highlight the role of mapping in enabling participants to represent their own experiences and perspectives, enabling "new forms of sense-making, information-sharing and collaboration in response" [90]. Corbett explores how gentrification—"the spatial expression of economic inequality"—is mediated in current sociotechnological systems, and lays out design principles to combat these forces, including the potential for counter-mapping to enable "alternative ways of seeing and knowing" a place [20]. Public digital maps specifically relating to policing and incarceration are also growing [1, 2]. In the remainder of the paper, we build on the concept of abolition as a spatial project to explore how digital tools, and in particular digital mapping, might advance abolitionist organizing and extend the long history of critical cartographic practices that have been leveraged for social justice.

3 METHODS

In this project, we endeavored to answer the following research question: How might digital tools, and particularly digital mapping, facilitate abolitionist organizing? To examine this question, we first conducted semi-structured interviews with organizations either publicly identifiable as "abolitionist" or self-identified as engaging with work using abolitionist praxis. Through the interviews, we aimed to understand interviewees' perceptions of the general public's awareness and understanding of their work, the use or potential uses of digital tools in their work, and perceived benefits or complications of representing their work in a digital map. While the interviews provided helpful insight into organizer approaches and their perspectives on digital tools, we remained interested in whether current public-facing digital tools supported these approaches in practice. We thus conducted a content analysis with the aim of understanding common features of existing digital tools, how they articulate prison and police abolition, and how they make use of digital mapping. We hypothesized that the content analysis could provide insight into how existing digital tools serve, or do not serve, the interests of abolitionist organizers, as identified through the interviews. The interview thematic analysis and the content analysis together elucidate the current state of digital tools in abolitionist organizing and the perceived opportunities and challenges of leveraging digital tools for abolitionist organizing. Both methods, along with descriptions of researcher positionality, are described further in detail in the following sections.

3.1 Semi-Structured Interviews

16 semi-structured interviews were conducted between May and early August of 2022; 10 conducted by author Carrera and 6 conducted by author Hussein. These interviews lasted roughly 45 minutes. Interviews were conducted and recorded on Zoom where they were then processed through the transcription application Otter. The recruitment process consisted of interview requests sent through email. Organizations were found through extensive Internet searches and existing connections with members of the research team. Initial outreach focused on abolitionist activists and organizations in the Massachusetts area who were devoted to "abolitionist" causes, broadly defined. These included bail fund initiatives, prison outreach initiatives, initiatives to help the formerly incarcerated find housing, and more. Some of these initiatives exist as coalitions in an official capacity, often composed of activists from other organizations working on causes that are tangentially related to abolitionism. Because abolition is a marginalized political philosophy and

Participant ID	Background
1	Outreach for prison abolition and prison outreach organization
2	Member of two abolitionist groups
3	Director of social justice organization
4	Education director at social justice program
5	Founder of justice program
6	Manager for education/outreach program with prisoners
7	Organizing director for racial workshop
8	Co-founder of social justice organization
9	Editor of prison rights magazine
10	Member of prison abolition collective
11	Member of prison abolition collective
12	Founder of prison abolition organization
13	President of social justice organization
14	Chair of a national abolition working groups
15	Founder of social justice organization
16	Executive director of a community action agency

Table 1. Interview Participants

abolitionists are often concerned about their identity being revealed to the police or right-wing extremists, many abolitionist organizations were initially unsure about participating in the study. After a few organizations agreed to participate, we obtained more participants through snowball sampling.

Our interviewees were from 15 organizations across North America. After 7 interviews with organizations in Massachusetts were conducted, the geographical scope of the study was expanded to include organizations across North America due to difficulty obtaining additional interviews in the Massachusetts area. Of the 9 interviews that followed this expansion, 2 participants represented Canadian organizations, 5 participants represented American organizations and 2 represented the same cross border collective in which one participant is currently based in the United States and the other is currently based in Canada. We find merit in cross-border analysis because the ideologies and implementations of the prison abolition are transnational and abolitionists in Canada have worked to unify the prison abolition movement on a global scale. Of the 16 interviews, 11 interviewees identified as being part of explicitly abolitionist organizations, and 5 identified with abolition but were explicitly not abolitionist organizations.

The goal of the interview was to determine what public-facing digital tools abolitionists were currently using in their organizing efforts. Interviews were conducted using a "semi-structured" interview process. Initial interview questions focused on general questions about the organization's work, what the organization's relationship was with the public and with the media, collaborations with other organizations, and what digital tools the organizations were using. In the second part of the interview, we proposed the idea of a mapping tool for abolitionist organizing, using the Anti-Eviction Mapping Project "Narratives of Displacement" in New York City map as an example. We found the Anti-Eviction Mapping Project particularly relevant because it was an example of a mapping project which uses geospatial data visualizations for a social justice cause in addition to oral storytelling. We asked organizers if such a tool may be useful in supporting the organization's work, what form they thought a mapping tool should take, and what potential challenges we might

face if we pursued creating such a tool. An outline of questions used by interviewers is provided in the appendix.
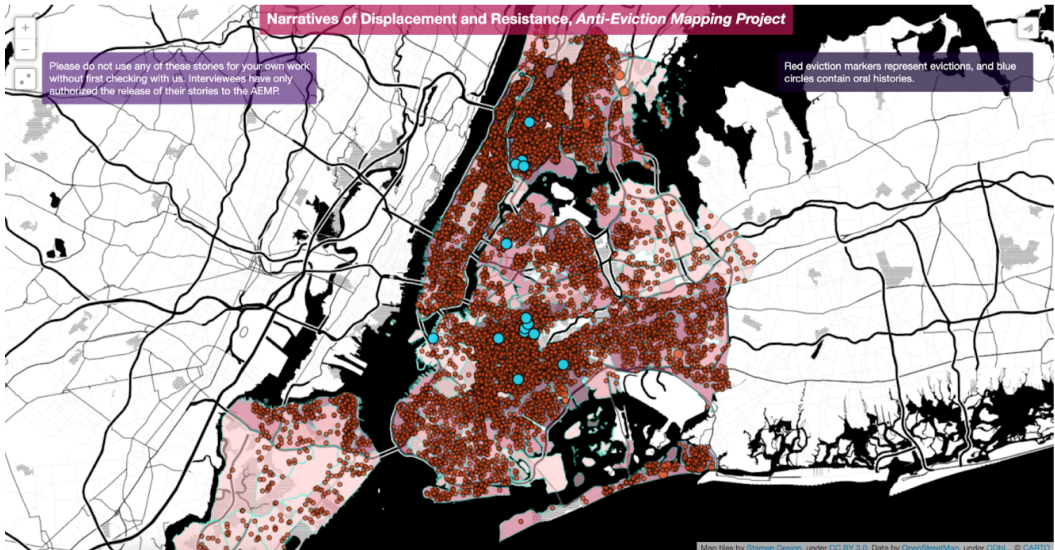

Fig. 1. Screenshot of the Anti-Eviction Mapping Project's Narratives of Displacement for NYC, under CC BY 3.0.

In keeping with prior work in CSCW [54, 60, 89], we sought to identify themes, or recurring "patterns of meaning" from our interview data relevant to our research questions through reflexive thematic analysis [19]. Thematic analysis of this paper was conducted by author Carrera and author Hussein. Initial light coding was conducted on Otter from which preliminary themes were developed by each author independently. The codebook included 7 codes: Data security concern, Definition and identity concern, Coalition or trust reference, Accessibility concern, Longevity concern, Community partners reference, and Reference to desire for better data analysis. In the supplemental materials, we have provided the initial light coding and codebook used by the research team, as well as a listing of the corresponding final themes in the paper. Coded data was refined and further developed into (sub)themes. In each iteration of theme development, themes that were mentioned by less than 4 interviewees were removed. Modifications of themes during this stage resulted from further conversation between authors around early drafts of the paper and included converting themes to subthemes, extracting unique themes, and removing subthemes that lacked sufficient supporting examples. The final themes are presented in Results Section 4.1.

3.2 Content Analysis

The second part of our study involved a content analysis of 25 public-facing digital tools used by abolitionist organizers. Content Analysis is a method using rule-guided techniques to analyze and categorize the informational contents of any form of data [41]. This method has been used in HCI for analyzing government social media [44], assessing the role of online platforms for artistic expression [93], and identifying self-disclosure of negative emotions on Instagram [9]. The general steps of content analysis are to explore what is already known about the topic, identify a unit of analysis, identify a sampling method, then immerse, reduce and interpret the data into categories

meaningful to the research questions. In our study, we apply this method, in a primarily qualitative approach, to the analysis of digital tools.

Digital tools can take many different forms including software, digital video, digital images, digital maps, social media and more. We focused on public websites for a few reasons. First, in several of the interviews, participants provided examples of websites, digital binders and other digital resources—all resources that could be found on websites through a search engine. In addition, as stated in the Introduction, we are interested in public-facing platforms or tools used to communicate abolitionist concepts—other digital tools that may not be connected to the web in some way are less likely to be broadly accessible to the general public or impact public sentiment. Lastly, websites often contain many of the aforementioned other forms of digital media. For these three reasons, we assume the website represents a reasonably comprehensive data object for initial characterization of public digital tools relating to abolition.

The Content Analysis was conducted by author Ovienmhada between the dates July 18, 2022 and August 10, 2022. The sampling method used the Google search engine, as it is the most popular public search engine [83]. The search terms used are shown in Table 1. The first two search terms are generic to reveal what a user might see when searching generally about the topic of police or prison abolition. The latter four terms are specifically aimed at identifying tools or maps relating to abolition. For each search term, we clicked on the first 10 result pages each with approximately 10 results per page. Six exclusion criteria were generated and applied for every search to remove results that could not be identified as digital tools, such as a website of resources (blog, social media page, etc) that enable organizers to coordinate and interact with the public in order to aid in their organizing efforts. These criteria are:

- Result was referring exclusively to slavery abolition rather than prison or police abolition
- Result contains domain of major news outlet known for broader objectives than communicating concepts of prison or police abolition e.g. Fox, The Nation
- Result contains domain of a vendor with known broader objectives other than communicating concepts of prison or police abolition e.g. Amazon, Haymarket Books
- Result is a single journalistic article
- Result is broken or otherwise not functioning
- Featured text snippet of result unrelated to prisons, police or abolition

Table 2. Search Terms

Search Terms
"Prison Abolition"
"Police Abolition"
"Digital Abolition"
"Prison Abolition map"
"Police Abolition map"
"Abolition Tool"

After applying the 6 exclusion criteria, 32 websites were clicked on for further analysis. Websites were subsequently excluded if they fell into any of the aforementioned exclusion criteria. This resulted in a remaining 25 websites. 11 of these websites were from non-profits or other official organizations that had a public presence. In many cases, these organizations had one or more physical addresses across the United States associated with the organization in major cities such as New York, Chicago and D.C. The other 14 websites were from individuals or unofficial coalitions

of individuals, half of which were anonymous. Several of these websites did have physical places associated with them including Los Angeles, Oakland, Atlanta, and Richmond. All of these websites were either targeting populations affected by policing and incarceration and/or the general public with mission statements such as "ending mass incarceration and investing in communities" and "build[ing] and support[ing] transformative justice responses" [3, 4].

In analyzing the data, we proceeded inductively, meaning the categories for obtaining meaning from the websites, were derived from the websites themselves, then applied to the websites through close observation [34, 70]. For each website, author Ovienmhada clicked through every tab of the website and then wrote a short memo describing the website including mission statement, how text is presented, and use of imagery, videos, audio, or maps, the navigational options, and how they might be used. Then, for the first iteration, author Ovienmhada inductively generated an initial set of categories pertaining to the "Content Features" and "Functions" of a website. Here, Content Features refers to the means and format by which a website objective is given form. This includes text, images, blogs, audio, maps—any element of a website that a user might interact with. The term "Content Features" comes from several studies including Braddy et. al 2005 in which researchers examined the effects of four 'careers' website content features (pictures, testimonials, organizational policies, and awards won) on viewers' perceptions of organizational culture attributes [55]. In our analysis, we focus on high-level organizational and structural Content Features of the website that are used to convey information about abolitionist concepts or provide utility to abolitionist organizing.

Website Functions are verbs describing the implied purposes for how the site might be used. Functions enable users to complete tasks, such as navigating the site, submitting an online form, or using interactive design features that help users get the information that they want [5, 68]. An example of a study that explores website Functionality against meeting some user objectives is Mierzecka and Suminas where the authors identify the main functions of library websites using literature modified to consider only student objectives (and exclude functionality that would be high priority for librarians but not students) [67]. Here, we are interested in evaluating website functions according to how well they bridge the gap between public understanding of the theory and practice of abolition. In other words, we want to identify how the public could interact with a site in a way that facilitates abolitionist organizing. In considering the Functions of abolitionist websites, we draw on the concept of the "relational website" which describes websites that are mainly oriented towards the development of relationships with users, curating a virtual community, meeting specific user needs and/or engaging users in particular actions [6, 12, 74]. We also draw on previous research on typical features and functions for non-profit organizations which include elements like engaging, sharing mission and obtaining volunteers or donors [30, 51, 52, 103]. As there was little literature specifically on website Functions for social justice organizations, the process of defining the Function categories was adapted to consider relational Functions that facilitate organizing. The final Function categories shown in Results have some similarity with Functions for non-profit organizations, but diverge to consider other aspects of organizing such as political education, coalition-building and coordinating protests.

The process of refining the categories was done iteratively with all authors by collaboratively and individually examining a portion of the websites to reach "consensus" on the categories and definitions, a technique used to bolster the integrity of qualitative research [97]. In this process, categories were renamed, combined, removed etc until landing on categories that 1) related to our research question of characterizing digital tools, especially the use of digital mapping, 2) represented the range of websites in the sample, and 3) could be applied to subsequent websites obtained. After finalizing the categories, each website was tagged with one or more Content Features and Functions observed in the website.

In the interpretation phase, we present counts of the Content Feature and Function categories across websites. In the counting, if a Content Feature appears at least once among the web pages of a website, it receives a (maximum) count of 1. We represent these count of websites with that Content Feature or Function over the total number of websites (n = 25). We also present descriptive and interpretive memos of patterns across the data, with an aim to highlight existing digital tools related to police and prison abolition, their common features, and the use of spatial representations within them. A spreadsheet of the 25 websites and assigned Content Features and website Functions is provided in the Supplementary Materials. We do not claim that the summary statistics or memos presented are statistically significant or representative of the entire population of digital websites for prison/police abolition. Rather, with the sampling approach employed, we believe that we have captured sites that are accessible to the public through Google, therefore enabling us to produce a broad characterization of existing digital tools related to abolitionist organizing.

3.3 Researcher Positionality Statement

Our team is comprised of two graduate students, one undergraduate student, and one assistant professor. We pursued this topic out of a commitment to abolitionist futures and an interest in seeing how our team's interests in mapping and HCI could advance this commitment. One researcher has an academic focus on the intersections of anti-prison organizing and mapping, another has significant background in mapping technologies, and the others have a vested interest in HCI for social justice. Authors' previous work in mapping, GIS technologies, and critical cartography contributed to this study's focus on these topics, as opposed to other forms of digital technologies. One author has been engaged in campus organizing around police and abolition for several years, while another has a background in community organizing around other topics. The other two authors have minimal community organizing experience. Given the linkages between race, gender, and carcerality in the United States, we also note that our racial backgrounds include two white men, and two Black women.

Our appearance and backgrounds may have had impacts on both the information we obtained and its interpretation. For example, the physical appearance of the researchers may have impacted the information participants decided to share or restrict in the interviews. Prior assumptions by the researchers on what constitutes abolitionist organizing may have impacted who we chose to interview and the type of websites we reviewed. Academic biases likely also impacted interpretation of our data in that we had an explicit focus on mapping and digital tools, whereas there may have been other interventions that address the aims raised in this paper. We acknowledge that our positionality resulted in a study that is just one piece of understanding the role of digital technologies in support of abolitionist organizing.

4 RESULTS

We begin this section with the thematic analysis of the semi-structured interviews with organizers. The analysis explores organizer perspectives on the role of digital mapping in abolition. Then, we present the Content Analysis of public-facing digital tools related to abolition. Together, our findings provide insight into (i) interview participants' perspectives on how digital tools can support their outreach and service work as abolitionist-oriented activists, (ii) key priorities and approaches of abolitionist organizing that should be considered in any HCI partnerships or projects and (iii) the methods by which prison and police abolition concepts are currently communicated to the public using websites.

4.1 Thematic Analysis of Abolitionist Interviews

In this thematic analysis we explore how abolitionists use digital tools in their organizing work. We find that trust and coalition building are fundamental to abolitionist organizing and that digital mapping could advance coalition building storytelling, and demonstrating the need for abolition. However, our findings also reveal the complexity of mapping a grassroots activist community whose work is often ad hoc and involves coordination between organizers in often disparate locations. Additionally, we note the complexities involved with building trust between abolitionist organizers and digital platforms, which some organizers distrust because of issues with longevity, accessibility, and security.

4.1.1 Trust and Coalition Building Fundamental to Abolitionist Organizing. In keeping with prior research on the topic [16, 48, 100], our interviews suggest that the digital sphere brings about new opportunities for organizers to coalition build from disparate locations, asynchronously, and with people who may not be able to otherwise.

As several organizers put it, though clear gains from organizing can be modest, consistent progress may come in the form of new relationships with community members, other organizations, and government authorities. Many organizers argued that even if a particular initiative failed, the relationships they built continued to be valuable as their work moved forward:

> "We like to really think about our project as being situated in mutual aid organizing and think about our campaign work or any organizing work that we do as the long term partnerships and coalition ships that we hold… Our work is only as good as our community partners and the people that we're in relationship with." - P4

Equally important to organizers was their relationship with the communities which they serve. Organizers noted that these communities were often vulnerable—formerly incarcerated, impoverished, homeless, or undocumented—and therefore more cautious to connect with organizers. Organizers noted that creating these connections could be difficult, especially if they were themselves not from the communities with which they were seeking to work.

> "But again, how do you build relationships with communities that you're not a part of? It takes time to get people to trust you. And trust is only built if you are consistent… because the last thing people need is to be disappointed." - P8

Trust and coalition building is especially important for abolitionist organizers because of the risks involved. Abolitionists may be targeted by right-wing extremists, police, and other government authorities. In many situations, there is a risk to the well-being and safety of community members and organizers.

> "ICE conducted this one raid on a poultry processing plant in Mississippi some years ago under Trump because there were a number of people wearing [GPS tracked ankle bracelets] going to work there. They saw it and thought, 'Oh, there's a lot of undocumented people who work here,' and did this big raid." - P2

Risks to organizers themselves include doxxing, harassment, and as one activist worried, even a mass shooting. Stories of activists being harassed or targeted are commonplace in the activist community:

> "I constantly worry about getting blown up on 4chan or a Reddit thread and facing vigilant trollish people. Another similar organization [to ours] had a very public hotline that got posted on some Reddit thread and people just made spam calls to it and rendered it totally unable to function." - P2

Lastly, a couple activists noted that trusting digital tools was risky because it wasn't clear how much of their "digital fingerprint" was being tracked by a given application. These activists worried that, akin to the Cambridge Analytica scandal, tech organizations may be trying to sell their data or the data of the populations they serve.

Across our interviews, organizers emphasized the significance of relationship building with other activists as well as community members, especially given the risks associated with abolitionist organizing. The risks to trust and coalition building were: 1) a lack of follow through 2) infighting and 3) data security breaches. All three have important implications for designers of digital tools for organizers, mapping or otherwise. Designers working with this population need to consider if they can cultivate and maintain relationships with these populations and whether they have the capacity to handle these risks carefully.

4.1.2   Possibilities for Digital Mapping of Abolitionist Work. When presented with the Anti-Eviction Mapping Project's "Narrative of Displacements" and the proposed idea of a similar digital map that displayed stories of abolitionist activists and vulnerable populations, activists responded in one of two ways: (1) they saw the potential for coalition building with qualitative storytelling data or (2) they suggested using the map to display quantitative data that would help them further their arguments to each other, the public, and government officials.

Activists who saw the potential for a digital storytelling map of abolitionist work noted that such a map could underscore the care and beauty that goes into building infrastructures that enable abolitionist work:

> "I'm thinking about mapping this in Boston. I think that there are so many different ways that community members, organizations, collectives, are really creating the infrastructure that is lacking systemically, and I think it's a beautiful example of how we can hold each other." - P3

Another participant agreed, saying:

> It would be brilliant if you could map abolition resources. And when I say abolition, like this is so broad, right." - P9

For both interviewees, maps could help make visible the hidden labors and resources that abolitionist rely on to support their organizing, identifying current lack of visibility as an important challenge to important activities such as outreach, coordination, and coalition building. However, other proposed uses of the map involved more traditional representations of data intended to support abolitionist arguments in visual form. For example, one activist expressed interest in demonstrating the need for their work by mapping government housing data. As the activist explained, the Massachusetts housing authorities require that parents be housed before their children are returned to them from foster care. The organizer explained that with additional data they could argue that if formerly incarcerated people were not discriminated against in obtaining housing, then the Massachusetts Department of Family Services could take more children out of the foster care system. Several other organizers expressed an interest in mapping resources that would be useful to the communities that they served, and could connect them with useful resources. One organizer tells us that:

> "I would love to see, for the work that we do, (locations of) sober homes, halfway houses, any place that will give someone a place to live, for where we pay for a month of housing, when people get out." - P1

Before the idea of a digital mapping tool was presented, activists indirectly expressed interest in the role of place and memoryscapes when they discussed the importance of history in articulating their work. The organizer (P3) quoted above who identified the opportunity to map abolition

infrastructures also argued that maps could be used to raise awareness of the long history of abolition work in the city where they lived. In the past, critical cartography has helped display historical timelines which have otherwise been elided [42]. If this technique was applied to abolitionist activism, it may likewise help reveal the rich history of abolitionist organizing. Not only was constructing a history important to several organizers, but they noted that it was instrumental to keeping activists—especially new activists—perseverant, focused on the longview, and less susceptible to burnout. They explained:

> "There's such a long history to all of this that we're building on and [timelines] can really help ground us. Sure, city council said 'no' this time, but if you look at the bigger picture and everything we've accomplished, there's a feeling of empowerment... it's slow, it takes forever... and I think people just come into it thinking it's going to happen sooner and get discouraged." - P3

Additionally, many activists mentioned a feeling of being siloed, both between organizations and within organizations. They also mentioned how difficult it is to develop and maintain relationships, particularly with organizers outside of their field of activism, yet they still recognized the significance of collective action in their work. A digital map has the potential to address these concerns as well.

4.1.3 Challenges to Spatialization of Abolitionist Organizing. While discussing how abolitionist activism might be represented on a digital map, a number of participants noted prospective challenges. These stemmed largely from the fact that abolitionist organizations are most commonly grassroots and formed in an ad hoc manner in response to community needs. This poses several issues for geo-location: 1) it is often ambiguous whether or not these organizations are active at any given time, or what it means for them to be active; 2) it is often ambiguous whether or not they should be considered "abolitionist" or what it means to be "abolitionist"; and 3) they may not have a single fixed address or location that would allow for mapping.

Abolitionist coalitions are not limited to formal inter-organizational collaborations; rather, they are composed of a shifting field of actors engaged in a range of activities including mutual aid or other volunteer work which is sympathetic to an abolitionist philosophy. These acts of mutual aid include: 1) conversations between organizations that lead to collective action (active collaboration), 2) means of addressing the lack of resources within the organizing community through resource pooling, and 3) community member referrals where the services one organization meets the needs of a community another organization is unable to address.

> "[Inter-organizational collaboration] has more to do with just being aware of each other's services and the availability of support so that if a family or a household contacts us and says I've got this problem, and it's not something that we deal with directly, we may refer them to those organizations." - P16

While organizers do work consistently with and collaborate with organizations that have the exact same ethos, one organizer recalls instances in which organizations with seemingly unrelated missions and values ended up interacting and working collectively. Alternatively, there are instances where organizations working within the same field do not collaborate due to differences in the methodology or long-term implications of collaboration. This provides a particular challenge to constructing a digital map of abolitionist work, because there are unclear boundaries around what should and shouldn't be considered abolitionist organizing.

Additionally, organizers noted that abolitionist organizations or collectives often exist on an ad-hoc basis. Many organizations are temporary coalitions of activists who also hold positions at larger, more institutionalized activist organizations. Other times they are formed by community members

looking to address a particular issue rather than abolitionism more broadly. These organizations provide mutual aid on a volunteer basis and flicker in and out of participation depending on the needs of the community and the capacity of the organizers. Because these organizations rarely exist in a clear, institutionalized capacity, it can be difficult to determine whether or not they are "active" and can accurately be placed on a map of abolitionist organizations.

> "A lot of the folks doing this kind of work may not identify as abolitionists unless they're a fairly radical project. If it's a collective of six people, they come and go." - P11

Additionally, many activists noted that, because abolitionist organizations are rarely institutionalized, they consequently lack a clear, singular location that represents where they work, or the communities they work with. Furthermore, even if the individual organizers themselves have fixed locations, these organizations can be far from one another—even extending beyond national borders.

> "We don't have a PO Box or an address somewhere. It's people moving around the US and people moving around Canada." - P10

Presenting a series of fixed locations on a map poses several other issues. As one organizer noted, maps readily lend themselves to areas in which geospatial data is dense. Because there aren't many official abolitionist organizations, such a map runs the risk of being too sparse for viewers to navigate easily. By the same token, a map naturally favors activist work happening in urban communities rather than rural communities. Underscoring security issues stated earlier, activists also noted that even if they did have a location, it wouldn't necessarily be advantageous to reveal that location to the public.

Another complication posed by constructing a digital map is that it's not clear what should and shouldn't be represented on an abolitionist map because the term "abolition" is ambiguous. Organizers noted that abolition is a broad term which can encompass a variety of different types of activism. Our interviewees noted not only that different activists have different takes on what "abolition" means to them, but that they're aware that the term is often used to mean different things depending on the context. After bringing up the broad nature of abolition, one activist noted that an entire binder had been filled with a collection of resources that aided in the definition and evaluation of abolitionist work.

> "Abolition is super broad. Is it around policing? Is it around immigration?... Housing, prisons, ICE detention facilities?" - P7

However, another activist noted that this ambiguity of identity could be an asset, stating that:

> "Abolitionism has the potential to bind together all these other types of movement work… housing justice, environmental justice…" - P14

A different activist (P2) noted that a variety of different acts of care and mutual aid that people may not think to classify as abolitionist could be classified as abolitionist, for instance a retired person sharing their empty room to a formerly incarcerated person in need. These broadly defined goals rarely had direct relevance to the ostensible goal of prison and police abolitionism, to shut down all elements of the carceral state, but involved mechanisms of care and support between community members and volunteers without the administration of a governing authoritarian force.

Activists noted that both the activist community and the community which these activists serve are often divided about prison and police abolitionism. Even activists that were working on similar issues to those studied by abolitionist activists—like housing justice, anti-poverty, and environmental justice—are not necessarily sympathetic to abolitionist work, because their life experiences and experiences with safety were reportedly diverse. Similarly, members of communities which are most adversely affected by prisons and policing were not necessarily sympathetic to abolitionism.

> "Community is not a monolith, right? And so there are some people who are fully bought into this idea of prison abolition, or police abolition, while some people have zero conceptual understanding of what those words mean." - P13

Activist organizations also present themselves differently depending on the context in which they are doing their activism. Broadly, when dealing with more public or official channels of communications, activists noted the importance of downplaying abolitionist sympathies and instead emphasizing aspects of their work which have broader acceptance, like bail funds or housing justice. Activists noted that the reason they presented differently in different contexts is because it could radically alter their support from other organizations who may not have abolitionist sympathies.

> "For example, we have court accompaniment volunteers often trying to present as very respectable, upstanding US citizens who are vouching that someone will fully comply with their immigration process and that they're committed to pursuing relief under US law. And then at the same time we work in coalition with organizations that do things like interrupt shareholder meetings for private prison companies or interrupt a sheriff who's running for office. And so part of it is trying to achieve our goals in different areas without them interfering with one another. Because we don't want a judge to Google the bond fund and find someone screaming 'Fuck 12' in front of a sheriff because then they're probably not going to see the bond fund as positive as, for instance, a respectable network of faith based volunteers and direct service professionals." - P2

These findings underscore the difficulty in designing a digital map for abolitionist activists, because not only is some of the most important work not clearly abolitionist, active, or easy to geolocate, much of the work is deliberately ambiguous in order to avoid detection from government authorities or to appear abolitionist to government authorities when it is advantageous to do so.

4.1.4 The Importance of Longevity and Accessibility in Digital Tool Development. For many of the abolitionists we interviewed, the usefulness of a digital tool is evaluated in large part by its longevity and accessibility. If abolitionist activists put a great deal of time and energy into building relationships through a digital tool, they want to ensure that 1) the tool won't suddenly become inactive, causing them to lose those relationships and 2) they'll be able to use the tool to connect with members of the vulnerable communities with which they're working. Therefore, in order for designers of a digital mapping tool to gain the trust of organizers, they need to be sure that the tool will last and is accessible.

Many of the abolitionist organizers we spoke with are in it for the long haul. Years of work are required in order to precipitate significant change. But grassroots organizations and coalitions can change quickly, both in membership and ethos. One organizer interviewed left organizing for years in order to focus on child rearing, only to return years later. When presented with an existing digital mapping project, one participant noted that:

> "My caution to [digital map builders] - because everyone moves on and gets tired - you need to think about implementation in terms of [longevity]." - P15

Organizers noted that digital tools for social justice, in particular, have a history of poor longevity, a phenomenon that has been noted elsewhere in the CHI literature [58]. For instance, one said:

> "It seems that there's been a lot of activists and young people, they get funding to do some type of app or digital device, and there's a little bit of fanfare for it. And that just kind of fizzles." - P9

The organizers we interviewed expressed concern about digital tools which may not be accessible for all members of the populations which they serve. Many organizers were concerned that the

communities they cater to would not be able to access a digital map either because they did not have access to technology or lacked technological expertise.

> "It's hard because there's community members who don't even have a phone, you know. So we can't reach them that way. I guess it would be nice. If there was way more access to technology for folks who don't have the means… because we are cognizant of the fact that we miss people, who don't have that access." - P8

Organizers are unlikely to adopt a technology unless they're sure that they can trust it. In order for a digital mapping tool to effectively build trust and coalitions for abolitionist organizers or other organizers of a politically contentious philosophy, these concerns surrounding longevity, accessibility, and security must be addressed. A successful digital mapping tool should allow as many organizers and community members to stay safely connected for as a long as possible.

4.2 Content Analysis of Websites relating to Abolition

Through the Content Analysis, we identified six categories of Content Features and seven types of website Functions present in websites relating to prison or police abolition. In the following paragraphs, we define the categories of interest, present the counts of each category in our website sample over the total number of websites (n = 25), and describe some of the websites in more detail in order to provide an overview of how abolition activists are currently using digital tools and mapping to accomplish their goals.

4.2.1 Content Features. The six website Content Features are following:

- Blog is a collection of blog-style of writings, opinions etc from multiple authors not all affiliated with a specific organization
- A Mission is a text box, web page or set of web pages that articulate the goals, principles and/or platform of an organization
- Navigation Map is an interactive map that geo-locates places of interest and can be used to locate a place, person or object, look at the distance between points or find the nearest places of interest and more. e.g. Google Maps
- Thematic Map, in the field of GIS [57], is a static or interactive map that is designed to emphasize the spatial pattern or distribution of one or more spatial attribute or theme e.g. population density, maximum daily temperature, electoral college map
- Resource Hub is a centralized hub or library of materials curated by a website for their target audience. This may or may not contain a search feature for navigating the content
- Infographic is a visual representation of information or data that gives an overview of a topic

The most common website Content Feature is a Resource hub (17/25). In general, the Resource hubs present an aggregation of educational information from external sources, such as abolitionist scholars, videos, templates for organizing materials, and strategy guidance, though sometimes Resource Hubs includes original content. For example, one could take to abolitionnotes.org to read essays entitled "the problem of prisons" and "why transformative justice?" While these sites have many materials, many of the Resource Hubs are unsorted lists, rather than searchable databases, which can make them difficult to navigate (see Figure 2.B).

Other less common website Content Features include the Navigation Map and Thematic Map (5/25 and 3/25 respectively). Among websites that have either type of map, the Navigation Map is more common. Navigation Maps are used as a visual aid for navigating information that has a spatial component. A prominent example comes from digitalabolitionist.com where the site features a map that can be used to see names and contact information of abolitionist organizations and where they are geographically (see Figure 2.A). Cops off Campus UCLA similarly uses a map to

navigate historical content about the geographic sites of University of California police-related events occurring in the LA area. Thematic Maps are even less common; one occurrence comes from nokidsinprison.org where chloropleth maps are used to visualize data such as the racial disparity of youth incarceration across the U.S.

Other visual Content features such as the Infographic are also less common (6/25). Infographic examples from the websites reviewed use colorful visualizations to illustrate key concepts relating to abolition, including but not limited to restorative justice, self-accountability, and response to violent/sexual offenders etc (see Figure 2.C from abolitionist.tools). Blogs are the least common Feature (4/25). One example comes from usprisonculture.com, an anonymously written blog compiling issues around the prison industrial complex and how it operates.
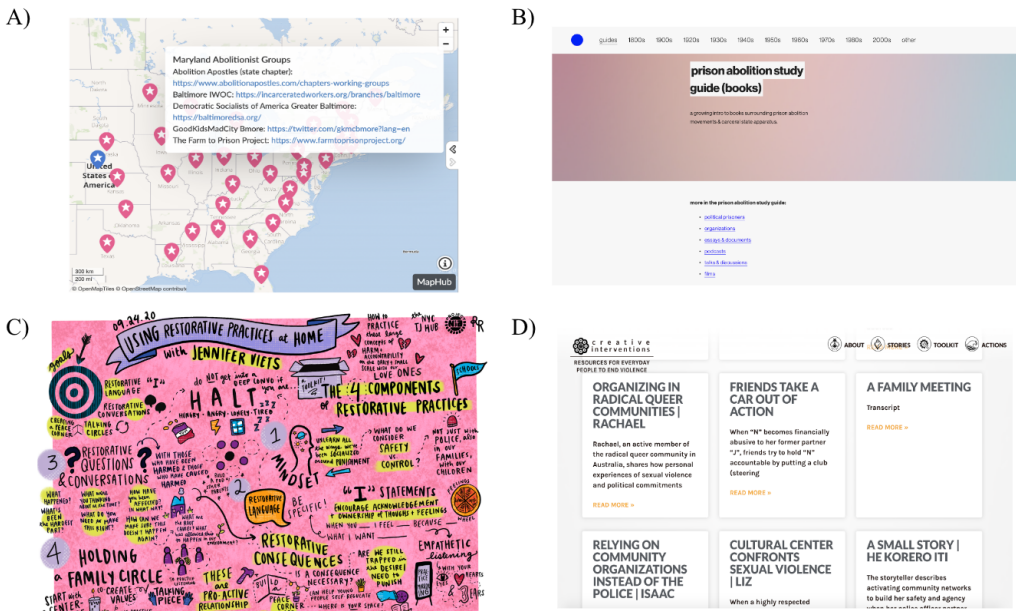

Fig. 2. A) The Digital Abolitionist, example of a Navigational map and Networking Function, B) abolition-notes.org, example of a Resource hub and Defining Function, C) abolitionist.tools, example of Infographic, Defining and Equipping Functions, and D) creative-interventions.org, example of Blog and Storytelling Function

4.2.2 *Website Functions.* Through our analysis, we identified seven website functions. They are:

- Defining refers to the use of written and/or visual techniques to explain the meanings of words, phrases or concepts related to abolition.
- Storytelling uses written and/or visual techniques to share stories about topics related to abolition
- Networking involves lists that contain the names and or contact information of related organizations/stakeholders which can serve to support recruiting, networking and coalition building to work towards common efforts related to abolition
- Analyzing indicates the site examines and presents results from data relating to police, prisons or abolition

- Equipping denotes that the site provides materials, in the form of how-tos or toolkits, to provide readers with information relating to abolitionist practices.
- Acting includes a call to action which could be in the form of donating or joining membership or a campaign
- Mapping refers to the use of cartographic tools and/or maps to put forth information and narratives relating to prisons, police or abolition

The most common website Function is Defining (19/25), followed by Equipping (13/25). Many websites include a brief definition of abolition as well as entire sections or webpages of elaborated definitions drawing on abolitionist scholarship. This can be seen in thedigitalabolitionist.com, defundpolice.org and criticalresistance.org. Half of the websites examined provided tangible resources equipping users with materials to leverage in their efforts to have an abolitionist approach to their own organizing or interpersonal relationships and conflict. Examples of these resources include materials like "Community Accountability: Emerging Movements to Transform Violence" and "What about the rapists? Anarchist approaches to crime & justice", as seen in criticalresistance.org and transformharm.org respectively. One website, dontcallthepolice.com provides contacts and addresses or organizations that can be reached as alternatives to calling 911.

Less common website Functions are Storytelling (9/25) and Networking (6/25). Generally, the websites that had Content Features such as Thematic Map, Blog and Infographic, had storytelling components to the website. A notable example comes from creative-interventions.org where stories from "everyday people taking action to end interpersonal violence" are collected and shared (see Figure 2.D) in the format of text boxes that can be clicked on and expanded. The navigational map in thedigitalabolitionist.com is an example of a Networking Function (and Mapping) because the map facilitates one's ability to visualize and build a network of abolitionist organizers in a particular geographic location (see Figure 2.A).

Mapping appeared in 9/25 websites. This category has overlap with both Storytelling (maps being used to tell stories) and Networking (maps being used to spatially support Networking as seen in the example from The Digital Abolitionist). What we want to draw attention to here is the use of Mapping for Storytelling. We focus on these as examples of the technique of counter-mapping from critical cartography where mapping is used to challenge power or push forth non-dominant narratives about people and places [80]. One example of a countermap is seen in cops-off-campus-ucla.github.io/ where a Navigational Map (Content Feature) is used to construct

Fig. 3. A) UCLA Cops off Campus Abolition Map showing overview of sites of carceral violence around Los Angeles, B) Story of one site where a patient experiencing a psychiatric crisis was shot and killed by police, source: cops-off-campus-ucla.github.io/

"a spatial and temporal journey towards a [University of California Los Angeles] campus and a world without cops" (see Figure 3). This can be considered to be a counter-mapping effort because of the site's intention to "disrupt typical spatial narratives of UCLA by mapping sites of carceral violence conducted by the University of California Police Department." Further, they do this with an explicit call for abolition, a non-dominant narrative amidst discussions of policing. Another counter-mapping effort explicitly identifies as such in its title Counter-mapping Post-Incarceration. In this webpage, several maps illustrate disparities in re-entry facilities, public transit access to reentry resources, and more. This site is similarly asserting a non-dominant narrative by critiquing the criminal justice system and lack of meaningful care provided to people after incarceration. This highlights a key belief in abolitionist philosophy: prison does not reform or prepare people for re-entering society.

4.2.3 Synthesis. Overall, these findings show that 1) there are already many examples of digital tools being used to support abolitionist organizing through educational website Functions such as Defining and Equipping but 2) few of these examples are taking advantage of digital tools that communicate abolitionist concepts in a personal or practical way by having website Functions such as Storytelling and Networking, or show abolition as a geographic endeavor through a website Function of Mapping. In addition, these results suggest that Resource Hubs could be improved through more interactive or mapping features that could facilitate easier navigation or more engagement. There are strong examples of websites with Mapping being used to make abolition more personal and place-based but these seem to be the minority of websites. Despite the results of the interviews suggesting that abolitionist organizers valued coalition-building, storytelling, history and longevity, a minority of the digital tools we reviewed seem to support these values with their Features or Functions. In the Discussion section, we draw on these findings to argue that the consideration of digital mapping in digital tools for abolitionist organizing is underdeveloped but should be explored more as a means to advance interests of abolitionist organizing that were articulated through the interviews.

5 DISCUSSION

Our interviews shed light on abolitionist perspectives on the uses of digital tools, whereas the content analysis provided an initial overview of the design of existing digital tools relating to abolition. Together, the findings present a surprising disconnect: despite the value that abolitionist organizers directly and indirectly placed on coalition-building and storytelling during the interviews, the public-facing digital tools in use don't generally support these objectives. Instead, the websites we reviewed tended toward more normative, less interactive, uses. In what follows we argue that one critical cartographic technique, counter-mapping, could play a role in addressing these stated interests, but has generally been underutilized and under reflected in the digital tools in this study. However, we also call attention to challenges with datafication and spatialization in this context. Abolitionist work can be hard to define with clear boundaries, and many organizations in this space may not lend themselves to being readily visualized in a spatial manner. Lastly, we add to previously discussed issues of trust and longevity in HCI participatory design research [86]. Beyond the instrumental importance of trust in working with community-organizers or non-profit organizations in general, we describe its centrality to abolitionist organizing ethos and objectives.

5.1 The Unseen Landscape of Abolitionism: The Role of Digital Technology, Data, and Mapping

Interviewees frequently emphasized the importance and value of coalition-building across multiple types of movement work to create community change. Many organizers expressed frustration with

inter-organizational as well as intra-organizational siloing. Coalition-building is something that, while not explicitly said in the interviews, data and digital tools could be poised to support, as shown in a few of the digital tools reviewed in the Content Analysis such as the platform from The Digital Abolitionist that can support networking across organizations. This type of digital tool design would respond to the Social Justice-Oriented Interaction Design strategy of Designing for Transformation which promotes designers to "move beyond individual action and toward designing for collective action" [29]. While there is a stated interest in coalition-building for abolitionist organizing, the Content Analysis revealed that in general a smaller portion of the websites examined had Features (e.g. maps, blogs, or visualizations) or Functions (e.g. Networking) that could address the desired uses of a digital tool for supporting movement building across organizations.

When discussing the role of data, many of the abolitionist organizers we interviewed noted that data is either critical to their operations, critical to their funding structure, or helps demonstrate the importance of their work through qualitative or quantitative data storytelling. These findings align with the results from Pei et. al 2022 [79] which found that community organizers value data practices "centered on the act of legitimization" of lived experiences, claims against the state, requests to funders and the need for change within the community. One of our interview participants exemplified the idea that data and digital mapping could be used to legitimize the need for their work and claims against the state when they described how data could help argue housing discrimination against formerly incarcerated people ends up subjecting more children to the foster care system. But it is also worth noting responses such as these reflect positivist uses for data that can threaten to "responsibilize minoritized communities for documenting harms already known to community members and the state," something Crooks describes as the "double bind" of data activism [25]. This type of use of data can also produce "epistemic burden," wherein resources and labor that could have been spent on productive activities for the communities they serve are instead redirected towards efforts to educate the privileged or justify their claims on the state [81].

Our findings complement prior research on data activism by also highlighting community organizers' desire for data as a means to understand the populations they serve, make resources known to community members, and analyze the impact of their organizing. Several participants relayed that data and digital mapping could support abolitionist organizing by "connecting community members to useful resources like sober homes, halfway homes, or other places that might give housing to a formerly incarcerated person" and visualizing "abolitionist acts of care," referring to everyday actions that resist the use of prisons and policing. We thus contribute to research on data practices of community organizers by highlighting specific ways that the potentials of datafication could be harnessed by the abolition movement. Several of the websites we reviewed perform these aims, including "Resource Hub" features and "Equipping" functions that provide materials and non-carceral alternative resources for public safety. However, the interviewees desires to show the need for abolitionist work or impact of organizing efforts through storytelling and mapping is under reflected by the websites reviewed.

A third gap between the perspectives of our interviewees and the design of current digital tools is the role of history in abolitionist organizing. As one participant put it, "[abolition] is rooted in history." For some people, the 2020 George Floyd protests may have been the first time they heard the concepts of prison or police abolition. However, the scholarship and organizing work around abolitionism dates back at least to the late 1970s [65]. None of the reviewed websites included a timeline or historical features to emphasize the longevity of the organization's work, or explored the broader history of the prison abolition movement. Tools that could help orient users to this timeline may better contextualize the movement, track impact of organizing efforts and display the feasibility of abolitionist aims.

Organizers' interests in coalition-building, data, storytelling, historical documentation could be supported in part through broader adoption of the practice of counter-mapping. As noted in the content analysis, we did find two examples of digital websites that use counter-mapping to map carceral violence in UCLA and illustrate disparities in re-entry post-incarceration (cops-off-campus-ucla.github.io/ and Counter-Mapping Post-incarceration respectively). These examples use counter-mapping to challenge prevailing wisdom and convey alternative narratives about policing and prisons. Counter-mapping might also be used to render visible the landscapes of abolitionist place-making necessary to create a future without prisons or police. Ruth Wilson Gilmore asserts that "abolition is about presence, not absence, it's about building life-affirming institutions." Place-making is thus a central aspect of abolitionist practice. Counter-mapping could share stories of community members employing alternative methods to respond to harm and interpersonal violence, or connect organizations across different movements engaging in efforts that enable abolition. The storytelling aspect of counter-mapping embodies tenets of critical race theory for HCI, which support storytelling as a core method for exploring oppression and displacing broadly held dominant narratives [77]. It also tends to Feminist HCI's commitment to epistemological openness towards understanding people's experiences [10, 33], and might support engagement, empathy and recall as part of abolitionist efforts towards coalition building. Finally, in contrast to the more traditional uses of data for legitimation of ones demands oriented towards the state, counter-mapping epitomizes Crooks' description of "agonistic data practices," which instead emphasize using data to motivate people to act, imagine alternative futures, and challenge dominant narratives [25].

A counter-mapping effort would also be reminiscent of geographer Katherine Mckittrick's concept of "plantation futures" which insists that the geographies of Black people can and should be defined not only by spaces of racism and racist violence, but also by the ongoing and powerful anti-colonial practices and narratives that shape these spaces [66]. This concept is part of a broader discussion in the area of Black Geographies, a sub-field of geography, that aims to uplift the situated knowledge, resistance and contributions of Black communities related to the production of space [45]. While Black Geographies generally focus on people of Black descent, this work on the benefits of defining spaces not only by their brutality, but also by their resistance, joy, and abundance, and can be extended to all marginalized identities and those affected by the prison-industrial complex. Counter-mapping and its contributions to visualizing resistance, building social power, and affirming the value of marginalized identities has an underrepresented place in social justice and liberation movements and specifically abolitionism. Broader adoption of counter-mapping practices, by visualizing the diverse and interconnected practices and impacts of abolitionist organizers, would contribute towards Gilmore's vision of abolition as 'making freedom a place' [39]. This paper thus puts forth several possibilities for activists to engage with technology as a means of challenging and undermining carceral regimes.

5.2 Spatialization, Security, and Trust

While the processes of datafication and spatialization have the potential to foster connectivity and subvert existing hegemonic narratives about people and place, there are several challenges involved with these approaches. For one, as the term "abolitionist" is so difficult to define, it's also not always clear what attempts to spatialize abolitionist work should include. Often this work is not tethered to a particular location, but is rather regional and amorphous. Much abolitionist work is done by loose coalitions or grassroots organizations which have no clearly defined address, or are spatially defined in ways that don't fit neatly into existing map schemas. This speaks to the limitations of the "Navigation Map" feature of digital websites; these maps can only represent organizations that have the resources and or privilege to be publicly georeferencible. It may be the case that maps are not a suitable mode of representation for certain types of data. Furthermore,

any attempt to spatialize abolitionist work must take great pains to avoid revealing the locations of vulnerable populations like those of undocumented immigrants, battered women, or abolitionist activists themselves, many of whom expressed concerns about being the target of violence from right-wing activists.

The challenges of spatialization and security further illustrate Noble's and Plantin's cautions that technology-focused solutions and datafication will not replace the need for large-scale organizing—or in the words of Crooks, "numbers will not save us" [25, 75, 82]. Here, the implications for designers that might want to design digital tools that *could* support large-scale abolitionist organizing are two-fold. First, designers must consider what type of information is uniquely poised for spatial representation, or the way spatial dimensions would change the interpretation of data related to abolitionist praxis. More generally, designers should not overemphasize the role of digital tools to address organizer needs in light of these complexities. We assert that while counter-mapping may be useful, it is certainly not the only technological innovation that might advance abolitionist organizing. Second, following the traditions of action research, participatory design and *Design Justice* [22], designers must ensure that the data collected and visualized is desired by the community organizers so as to avoid unethical HCI practices and undesired outcomes [14, 28, 49, 95, 99].

A final implication for designers is the importance of longevity, relationship-building, and trust to activist organizations. One organizer described the process of maintaining such relationships as requiring cognizance of the lack of resources organizers have and the costs of failing to follow through. In particular, they emphasized the importance of making a realistic assessment of the resources and tools at one's disposal before making commitments. Designers and researchers must also consider issues of maintenance and sustainability, and the labors necessary to ensure them, in their work. This recommendation aligns with other HCI work emphasizing the importance of creating tools that will survive beyond individual research projects and have a lasting impact with the communities they are meant to serve [29, 58]. Attempting to build a tool in collaboration with abolitionist organizers must also be made with the understanding that organizers often work with vulnerable populations and there is an inherent risk that comes with organizing around issues that are counter to the prevailing ideologies of the carceral state. Because of this reality, building trust must be a core commitment of any HCI collaboration with abolitionist organizers. The importance of trust in organizing is not new to the HCI community [58, 62], however our findings describe a community for which trust-building is especially important. Trust both pertains to the maintenance and sustainability of a project, but trust is also central to abolitionist ethos and organizing; breaches of trust can produce serious harm to organizers and the communities with which they partner.

6 CONCLUSION

The prison abolition movement calls for us to think beyond prisons and policing and instead create institutions and programs that address societal harms holistically and transformatively. While there is much scholarship and practical evidence supporting the concepts behind the movement, abolition has struggled to gain widespread acceptance and adoption as a philosophy. Digital tools and mapping may play a role in changing public perception of social justice issues and supporting movement work more broadly. While HCI research partnering with or studying social justice organizations and the role of digital tools has become more common in recent years, work engaging HCI and abolition is sparse. Through a combination of semi-structured interviews and content analysis, we consider how HCI and digital mapping might support different aspects of abolitionist organizing including coalition building, data storytelling, and documenting organizing impact across time and space. In our analysis of websites used for abolitionist organizing, we noted a relative scarcity of digital tools that attend to these aspects of abolitionist organizing identified by the interviews. We further develop an argument for how spatialization through counter-mapping is not only possible

for abolition, but a natural manifestation of the central ethos of abolitionist philosophy, which is place-making. We posit that an HCI and abolitionist collaboration could harness the technique of counter-mapping to show, through data, narrative, and place, the abolitionist belief that alternative methods of maintaining community safety to police and prison are possible.

We note the complexity of using a counter-map to represent a movement which is dynamic, informal, cross-border, expansive, and covert. Intentional efforts must be made to think through the best uses of a map for this context while also being open to other forms of digital representation, or non-technological solutions, that may better capture certain forms of information. We also caution against projects that are not prepared for long-term, careful engagement with organizers as those risk hemorrhaging the time, resources and trust of already marginalized and under-resourced communities. Overall, our work helps to contribute to an HCI research and design agenda that centers and serves a grassroots social justice organizations, thus advancing considerations for what it means to attain social justice through research. We also advance an agenda for HCI research whose collaboration with any social justice organization is not well understood by the broader public. We hope this paper will inspire HCI research that endeavors to design digital tools with and for abolitionist organizations and harness the potential of counter-mapping, while keeping in mind the design considerations raised in this paper. Such work could help increase public awareness of concepts from abolitionist theory and advance justice for those harmed by the prison industrial complex.

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