DIGITAL PLACE-MAKING: INSIGHTS FROM CRITICAL CARTOGRAPHY AND GIS

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Abstract

History, including contemporary history, is as much about time as it is about space, place, and territory. Not accidentally, historians have long used paper maps as their data (maps made at different time periods) and as a form of analysis (e.g., historical atlases, maps of historic battles, etc). Maps have always been an incredibly succinct and visually powerful way to tell a story. On the one hand, therefore, turning to digital mapping technologies is continuous with this tradition. On the other hand, geospatial technologies created new ways of analyzing and representing by connecting digital maps to data behind the map. In this way, they open new opportunities and pose new challenges to historians and other humanities scholars who engage with place and space on the crest of "spatial turn" and digital revolution.

Geographers working in the fields of critical cartography and critical GIS have addressed these opportunities and challenges in a number of ways. This chapter will address some of these challenges and opportunities in relation to historical and contemporary mapping practices that contribute significantly to digital place-making and include but are not limited to the web-based and neogeographical representations of place. In particular, how can digital place-making be understood in the context of such issues as maps as a medium of power, ontological power of maps and digital representations of place, authorship of maps, what gets to be represented and what is silenced, and what kind of information is conveyed and which is excluded? What are the implications of digital divide for digital place making and online citizenship? I will examine the above questions drawing on a combination of critical social theory, feminism, post-structuralism, and post-colonial thought. Keywords: Feminism, Post-structuralism, Postcolonialism, Geographical Information Systems, Critical cartography.

1. INTRODUCTION

This chapter brings out the insights from critical, feminist, and qualitative cartography/GIS scholarship that might be useful to historical understanding of the past and present practices of digital place-making. In particular, how can we understand digital place-making as an outcome of contestation and social power? What does the ontological power of maps contribute to digital representations of place? What role does the authorship of maps play? What does get to be represented and what is silenced? Under what conditions does digital place-making acquire prominence in contemporary history? What kind of information and tools does it rely upon? What are the implications of digital divide for digital place making and online citizenship?

In Western scholarly tradition, there has always been a tension between Chronos (time, history) and Choros (place and space, geography). They have been seen as distinct by philosophers from ancient Greeks to Immanuel Kant. In modern sciences, this often resulted in static geography and placeless history. Yet, history always takes place and geography changes throughout time. History is as much about time as it is about, space, place, and territory. Making of the geographical territory or a place is often a goal, part, and outcome of a historical event or process. Space and place are involved when states are created and fall apart, political economies are transformed, collective memories emerge, and when people live their everyday lives. Historians, therefore, have long studied place, space, and territory although not always explicitly.

In addition, historian have used maps as their data and an object of analysis (e.g., European maps of the world made at different time periods) and as a form of analysis (e.g., historical atlases, maps of historic battles, etc.). Maps provide an incredibly succinct and powerful way to tell a story, whether scholarly or personal, contemporary or the one that illuminates the past. When historians reconstruct peoples' lives in different time periods, maps allow for grounding their stories in place.

Mapping, therefore, incorporates geography into historical storytelling in a direct and visually powerful way. Maps have played various and important roles in historical narratives. On the one hand, turning to digital mapping technologies is then continuous with this tradition. Historians could now analyze and make digital maps instead of the paper ones. On the other hand, geospatial technologies offer new ways of analyzing space, place, and territory. They do so by connecting digital maps to data behind the map which brings to historians the tools for spatial data exploration. Geospatial technologies also allow for overlaying (analyzing together – visually or algorithmically) the specific spatial data layers with ease. In short, using geospatial technologies opens new research opportunities to historians and humanities scholars who engage with place and space on the crest of "spatial turn" and digital revolution.

Furthermore, as contemporary histories are being written, they continue to remake and be remade by place, space, and territory. An on-going shift to digital spatial representation brings tools for "digital place-making" to a much wider community beyond academic historians and geographers. As digital technologies spread, places are being constructed in the cyberspace as

much as they are outside of it. Moreover, those with access to cyberspace, make a targeted effort to use it as a major tool of place-making. The digital place-making is becoming the combined or competing effort by academics, governments, architectural and planning consultants, artists, activists, and the publics. By participating in practices of digital place making, these diverse actors make this process blended ontologically and epistemologically as well as contested politically.

Digital place-making, then, poses challenges to historians of the past and the present that combine the challenges of the digital era with those of production of place and space that geographers have long studied explicitly. Therefore, critical human geography and critical GIS could usefully contribute their insights on the role of map-based spatial representations in the production of space and place. Of particular importance are the ideas about maps as medium of power, the ontological power of maps, exclusions and silences that maps create, digital divide and barriers to citizenship and digital place-making.

2. CRITICAL, FEMINIST, AND QUALITATIVE GIS ON POWER, TRUTH, AND MAP-BASED ONTOLOGIES

1) From maps as facts to maps as mediums of power

Traditionally, cartographers, geographers, historians and other social scientists have viewed maps as factual and true statements about the world. Maps were thought to mirror the existing knowledge about the territory while making visible its most significant natural and social features. As at once a pragmatic toolset for navigation and storage of the geographical knowledge about distant places, cartography incorporated the Classical and Arab learning traditions during the European Renaissance, supported Western voyages of exploration, and advanced the development of science more generally. Maps and globes served as symbols of power as the geographic knowledge embodied in them signified the power of the sovereign. Cartography has contributed in important ways to the Enlightenment project and the rise of Europe as a colonial power.

In the second half of the 20th century, human geographers began to critically examine the role of cartography in the imperial conquest (Driver 2001; Godlewska and Smith 1994). They saw cartography as a frontier of imperial knowledge and highlighted its role in establishing European control over conquered territories. The colonizers needed maps of the conquered territories as a source of knowledge about the colonized and a means of governing. Human geographers have also criticized the ways in which the state and corporations use mapping and GIS technologies for military conquest, imperial practices of resource mapping, and surveillance. They revealed technocratic barriers that restrict access to the technology for women and people of color (Kwan 2002; Schuurman and Pratt 2002), theorized the integration of geographic knowledge into capitalist production (Leszczynski 2012; St. Martin and Wing 2007), and outlined the role of mapping technologies in production of social body in accordance to the requirements of those in power (Hannah 2001).

Inspired by Foucault, a map historian Brian Harley (1988, 1989, see also Crampton 2009) began looking at maps not only as instruments of power but also as products of and participants in power relations. Feminist geographers and GIS scholars have further developed these critiques. They saw maps as embodiments of social power relations similar to other practices of knowledge production. Therefore, the question of map authorship now mattered not as a technical issue but as a political and power-related question. The question of which spatial knowledge is included on a map and which is excluded or silenced also became a central concern. Imperial maps, for example, both projected European knowledge and power on the territory and silenced, erased, and obliterated the landscapes of the indigenous people.

These critiques of mapping have transformed the maps from technical instruments of spatial knowledge into contested knowledge terrains and given birth to numerous struggles for the right to represent and be represented on a map. These struggles include, among others various counter-mapping initiatives such as the indigenous mapping projects across the world, public participation GIS, community-mapping projects, radical cartography, and other grass-root campaigns.

2) Epistemological critiques: GIS for feminist research

Geospatial technologies have made mapping particularly versatile and powerful. They offered new ways of analyzing and representing places by connecting digital maps to data behind the map. This means that maps are no longer fixed surfaces to be presented to and used by the state, corporations, and the public in a specified way. Maps became dynamic processes that include myriads of interactions between their many participants. Those involved include map authors and the authors of the spatial data used to make the maps. They also include the many mapping tools that allow widely ranging groups of people, besides the GIS professionals, to make maps. Different kinds of the publics involved with making and using the maps are also part of the process (Crampton 2009).

In the first decade of the 21st century, feminist and qualitative GIS scholars have advanced the critical examination of power relations embedded within cartography, digital mapping, and GIS. Feminist scholars saw GIS as a technology rooted in quantitative and positivist epistemology and the one that embodies masculinist foundations of science despite asserting itself as a an objective analytical tool (Kwan 2002, Schuurman and Pratt 2002). Feminist geographers, however, have been reluctant to discard GIS on these grounds. Instead of giving up the technology, they began advocating for feminist GIS that, in contrast to the mainstream GIS that supports status quo, would advocate for mapping that destabilize the dominant hierarchies of class, race, and gender. Feminist GIS, they argue, would also cultivate the new mapping subject who, disregarding their gender, embraces feminist sensibility and transforms GIS into a tool for progressive research and social change (Kwan 2002; Schuurman and Pratt 2002; St. Martin and Wing 2007; Pavlovskaya and St. Martin 2007).

3) Epistemological critiques: GIS for qualitative research

In addition to claiming GIS as a tool for feminist visualization and critical human geography, feminist geographers have deconstructed the prevailing notion that GIS is a quantitative tool not suitable for qualitative research and representation (Pavlovskaya 2006; Cope and Elwood 2009). They argued that GIS mapping and visualization can incorporate the non-measurable and non-quantified aspects of human experience vital for representing experiences of women as well as other conceptually and politically marginalized yet important social, economic, and cultural practices. They argued for pushing the "bounds of GIS" (McLafferty 2002) to represent gendered household labor, emotions and affect, the informal economy, geographies of gay and lesbian spaces and immigrant groups, black geographies, and spaces of other commonly invisible struggles (Pavlovskaya 2004; Ciery 2003; McLafferty 2002; McKittrick 2011). In sum, opening up GIS to uses within critical epistemologies and with qualitative information has paved the way for its embrace by spatial humanities. Digital place-making thrives on the novel combination of qualitative information (e.g., indigenous people's sacred sites) with quantitative data (e.g., census) within visual representation and digital mapping.

4) Epistemological critiques: the ontological power of maps

Finally, one more notion articulated by critical cartographers and GIS scholars becomes particularly important in the context of digital place-making. This is the idea that maps do not mirror the world but produce the landscapes they portray (Wood and Fels 1992; Crampton 2009) In my own work, I refer to this as the ontological power of maps (Pavlovskaya 2006). Maps not only represent certain ideas, knowledges, and power relations. They create the worlds through these representations; they generate ontologies of territories and places. The ontological power of maps stems from their unique position at the intersection of knowledge and visual representation. The long-standing association of maps with science provides them with the authority that today is augmented by convergence of mapping with information technologies. Maps are also powerful visual statements; people are attracted to and easily understand maps; maps show particular and recognizable locations which makes the information they contain even more plausible and relevant. Spatial patterns are grasped instantly (e.g., census data) in contrast to lengthy narratives and tables with data.

In short, maps acquire authority as truth statements because of their ability to visualize things as facts in particular locations. The privileging of the visual in Western culture, association with science, and technological prowess make maps irresistible rhetorical devices; maps produce powerful affect.

5) Exclusions from place-making through census statistics

The ontological power of maps makes mapping an important strategy that can enable and assist in bringing about social change. To visualize something on the map means to bring it into existence. To exclude something from the map means to marginalize this phenomenon's ontology with a subsequent epistemological, theoretical, and political marginalization. Both

historical accounts of the past places, contemporary practices of place-making, and imaginations of the future can all be empowered or disempowered through their visibility on a map.

Census data, for example, is an important source for mapping past and present societies. Because the census data is inherently spatial, all the critiques discussed directly apply to its uses and visual representations. Census data in the West is a single, largest, and the most important source of information that is mandated by the state (in the USA to assure the democratic elections) and widely used for research, policy support, and advocacy. Yet, census data is far from being simply factual and objective. The census categories of race that constitute the core of the gathered information are not "given" but defined and redefined by a group of professionals, scholars, and politicians. They have considerably changed over time and, according to researchers, they do not simply describe but produce social body (Hannah 2001). In particular, census categories of "Black," "White," and "Hispanic" have been co-constitutive of the contemporary racial hierarchies of the American society (Foner 2001). On the other hand, ethnic groups not reflected in the past or contemporary census categorization become ontologically absent not only in terms of lack of statistics about them but also discursively and politically.

The experience of Arab Americans in the United States is a particularly telling example of the struggle for visibility and empowerment while being excluded from the social body produced by the census (Pavlovskaya and Bier 2012). Arab Americans have one of the longest histories of immigration into the US. They began migrating in significant numbers since the 19th century – concurrently and even earlier than such well known immigrant groups as Russian Jews, Irish, and Italians. Yet, Arab Americans are still perceived as exotic and foreign and their ancestry is not celebrated as the ancestry of the European immigrants. Since 9/11, they experience increased stereotyping and hate crimes while being presented as a homogeneous and hostile to the US group. Arab Americans, however, are a solidly middle class and diverse population. They are predominantly Christian (although recent migrants are mainly Muslim), they have different degrees of integration and linguistic proficiency in Arabic, and they come from different countries, and are committed to different politics.

Arab Americans have attempted to increase their positive visibility in the USA in order to counter the racialization through negative stereotyping. When turning to the census data for statistics on the group income, naturalization rates, etc. (and the group is as mainstream American as one could be), they ran into the problem of being ontologically absent. Indeed, on the major census form, Arab Americans cannot identify as a separate group. Moreover, they are supposed to identify as "Whites" because they legally won this identification in the first half of the 20th century when citizenship rights were tied to race. While blending with the white majority brought them access to citizenship, it also removed the basis for protection from hate crimes and discrimination. Moreover, it subsumed them under White category in the census statistics making it impossible to accurately estimate the size and socio-demographic characteristics of Arab American population. American Americans are severely undercounted and their characteristics are poorly known. Using "Arab ancestry" category of the now discontinued long

form of census and the rolling American community survey (ACS) does not produce fully valid results at finer spatial scales for the group of this size because of sampling. Arab Americans have fought for inclusion into the census as a separate racial category for a long time with some possibilities currently negotiated for 2020 census[1].

Our attempt to counter negative stereotyping and homogenization by constructing the diverse geographies of the Arab American of the New York City Metropolitan Area, led us to a critical engagement with census categories and their impact on production of social ontologies (Pavlovskaya and Bier 2012). While the case of Arab Americans is particularly eloquent, census and all kinds of socio-economic statistics similarly shape social cartographies. Adding the diverse populations of Arab Americans to the socio-cultural landscape of New York from which they were entirely absent is an exercise in digital place-making that aims to expand the place citizenship. With more historical data becoming available for digital mapping, the challenges of inclusion into and exclusion from mapped landscapes are directly relevant to digital place making not only in the present but in and of the past as well as.

What about maps created by historians then? It seems that the epistemological challenges emanating from critical cartography and GIS literature can inform historical place-making through mapping as they do the contemporary practices. As historians and other humanities scholars attempt to place and spatialize their stories about the past and the present, the role of maps in production of the historical and contemporary truth and related epistemologies of knowledge come to the foreground. Today the truth is no longer uniformly seen as singular, objective, and fact-based. Critical scholars tend to assert that it is grounded in social experience and political projects and, furthermore, inseparable from knowledge itself. Understanding maps as knowledge practices that are co-constitutive of reality (and truth) opens up the role of maps in historical research to new interrogations. Are historical maps factual statements or are they implicated in power relations? What inclusions and exclusions do these maps produce? What ontologies do they bring into being and what historical truths do they silence? What role do the maps play in constructing places and territories of the past? And, what is their role in contemporary digital place-making and construction of the present?

3. NEW PRACTICES OF DIGITAL PLACE-MAKING IN THE PAST AND THE PRESENT

The recent emergence of digital humanities is a result of the transformation of the scholarship under the influence of the technological and informational revolutions on knowledge production. New fields of GeoHumanitities and Spatial Humanities focus on the construction of place through digital literary geographies, histories and memories, and local community participation (Dear 2015; Creswell et al. 2015). In contrast, social computing and geoinfomatics seek to directly visualize the high volume and dynamic data generated by social media and other public

[1] The Arab American Institute has been advocating for a category that would encompass the Arab American community. The Census Bureau is considering the inclusion of a Middle Eastern or North African (MENA) category on the 2020 Census. This category, however, includes some and excludes other Middle Eastern groups (for details see http://www.aaiusa.org/making_sure_arab_americans_count).

tools (Manovich 2016). Together with the new conceptions of space developed by critical human geographers, these transformations enable new practices of place-making. In contrast to prevailing Cartesian notions of space as a container or a backdrop for human (and environmental) history, critical human geographers theorized space as a part of socio-spatial dialectic (Soja 1980; Massey 1984, 2005; Harvey 2008) where space is both the outcome and a shaper of social really. This new views of space (and place) have invigorated digital humanities scholarship (Bodenhamer 2010) although they were adopted in a somewhat simplified form and often without tracing roots to geography.

I would like to suggest that two on-going shifts in practices of place-making have taken place, both related to the spatial turn and the advent of digital mapping in humanities and social sciences. The first is the shift from archives to cyberspace that occurs in place-making through historical accounts. The second is the shift from streets to cyberspace that characterizes digital aspects of place-making of today's cities.

1) New historical place-making – from archives to cyberspace

Until recently, most histories of places were based on archival information and narratives supported by some historical maps. Today, places of the past are being recreated in cyberspaces through digital mapping of archival information and literary texts.

The recent decade has seen an explosion of digital information of all sorts, bringing about the term "big data." In addition to contemporary socio-economic, scientific, and consumer data, large amounts of historical and cultural information have emerged from the archives. The archives are digitized and made accessible remotely; the information they store can be analyzed using digital analytical tools. These data are also spatial which means they are tied or can be easily tied to geographic locations. I am talking about historic censuses, digital collections of paintings, letters, diaries, novels, songs, etc. that are literally at scholars' and activists' fingertips today. As a result, the epistemological challenges of mapping discussed above are directly relevant to the new opportunities provided by digital place-making through historical research.

2) Digital place-making in today's cities – from streets to cyberspace

The last decade has also seen an explosion of new mapping tools that are tied to the internet as opposed to the traditional desktop GIS software. It includes GoogleEarth as well as other rapidly proliferating mapping tools many of which are open source and free. Using them no longer requires technical expertise and investment that was necessary to make maps using a corporate desktop GIS such as ESRI software. The democratization of mapping tools and expertise has shifted geographic knowledge production to a whole range of publics. Many of these tools are designed for artists and humanities scholars making them useful for historical mapping projects and contemporary digital place-making. It encouraged grassroots participation in public science projects including generation of geographic information (neogeography). New fields of inquiry about place and space have recently emerged such as spatial humanities, geohumanities, deep mapping, and social computing. Local governments and corporations have increasingly

participate in digital place-making strategies through expansion of e-government and neighborhood-based marketing.

The second shift, therefore, is in the contemporary practices of place-making. Even two decades ago, interactions between communities and governments as well as between different groups and individuals within communities took place face to face. Today, interaction has been moving from streets to cyberspace, where digital urbanism, deep mapping, neogeography, and e-government converge to create on-line spaces for creating citizenship. Digital place making involves the production of place through its representations on the internet. In the age of information technologies, images of a place circulated on the internet acquire a particular importance. Localities – from small villages to urban giants – actively use digital place-making to brand themselves to attract investment, creative classes, and tourists (Bachin 2015; Koning 2015). Local governments shift many of their services (from education to social welfare) to the internet which reconfigures citizenship as dependent on access to digital technologies. The internet is becoming populated with various neogeography projects that produce place-based collective geographic knowledge by the efforts of the self-selected groups of people (Polson 2015). The shift of the control of production of knowledge to the decentralized publics is in the eyes of the observers another pivotal shift (Warf and Sui 2010).

Finally, some of the emerging multi-disciplinary projects that present places to the world also seek to engage local citizens through digital urbanism and deep mapping projects. They attempt to invigorate place-making through on-line representations while keeping participation active in the real world as well. These projects often involve collaborations between academics, artists, local governments, and the public. The knowledge about the past and present of the place produced through these collaborations is presented on-line as deep mapping. Deep mapping involves the convergence of various layers of information from different sources – historical, statistical, quantitative and qualitative, involving social media and official documents, and, of course maps of different sorts – from scanned historical to interactive contemporary.

These developments open new opportunities and pose new challenges to historians, historical geographers, historians of cartography, and historical GIS scholars.

4. INCLUSIONS AND EXCLUSIONS OF DIGITAL PLACE-MAKING

1) Making places through literary texts

Critical scholarship invigorated understanding of place through fictional texts as a form of geographic data and production of historical places through literature. Digital humanities and Qualitative GIS scholars began to map the spatial settings of literary narratives in order to reveal new aspects of their spatial organization and gain additional insights into their meaning. Two different traditions in spatial literary research have been converging. On the one hand, literary geographers have used the advanced visualization capabilities of GIS in the context of the insights from critical GIS (see Pavlovskaya forthcoming for details). An example is the work by

Travis (2014) who created 3D visualizations of the non-linear and even nested literary spaces (e.g., a novel within a novel) based on Irish literary texts and drawing on critical literary theory and feminist and Qualitative GIS. On the other hand, humanities scholars have directly used interenet-based new mapping tools (e.g., Google or Open Streets Maps) to construct literary landscapes and in doing so have bypassed critical cartography and GIS as well as desktop GIS. The literary cartography project "Mapping St Petersburg", for example, uses place-marks to construct the geography of Dostoevsky's "Crime and Punishment" novel (Young and Levin 2013). These two approaches to digital historical place-making based upon literature diverge in their social theoretical understanding of space and place. While researchers work with "fixed" literary texts, the resulting landscapes bear both the author's vision of the place and space and the subjectivity of the researcher. The latter affect the digital place-making of the past places in equally profound ways – from the theoretical lens, methodologies used for mapping, the tools that were used with their advantages and limitations, and, of course, the reading of the text by the researcher.

2) Making places through digital atlases

Geographers have long produced geographic atlases as collections of knowledge about places and digital mapping has encouraged them to create numerous interactive on-line atlases that combine mapping with querying the database behind a map. Soon after inception, digital humanities have also actively engaged into creation of the on-line interactive historical atlases of different sort. These atlases make available the previously inaccessible information from historical archives and can portray place history in a entirely different way and form. In this way, these projects participate in historical digital place-making.

One example is the Digital Harlem website (http://digitalharlem.org/) that portrays the everyday life in this famous New York City neighborhood for the period between 1915 and 1930. The website allows for searching the data "drawn from legal records, newspapers and other archival and published sources" by events, individuals, dates, and other categories. The search results are presented in the form of maps combined with the contemporary and historical maps of Harlem. The website presents an impressive amount of information previously unavailable to such broad audience. Yet, the police records predominate as the most systematic archival source and shape the portrayal of the everyday life in Harlem at that time as overwhelmed by crime of all kinds. As a result, the website both reveals the previously unknown aspects of the place and silences other sides of its everyday life that results in marginalization of the cultural heritage of this iconic neighborhood. Other qualitative historical information such as memories, diaries, and newspaper descriptions is much harder to incorporate into a searchable database but doing so would open up the Digital Harlem to other and no less important truths about its past.

Furthermore, what about economic livelihoods of households? Women's work as well as work of domestic servants and slaves in the USA is often silenced in spatial narratives and maps. What kind work a historian would have to do in order to incorporate these experiences into historical digital maps? In case of New York City, it would be of great importance because slavery is commonly associated with plantations of the South. It was, however, no less pervasive in the more urban North where slaves worked on the surrounding farms or, most significantly, lived and worked in white urban households, even in those of the modest income. As Wilder (2001) eloquently demonstrates, the economy of the north was inseparable from the slave labor.

3) Deep mapping, social spatial media, neogeography and citizenship

GIS and digital mapping have inspired humanities scholars because of the potential for "deep mapping" of places (Bodenhamer et al 2013). Deep mapping aims to produce multilayered descriptions of places that incorporate environmental, social, historical, political, economic, and cultural information that comes from such official sources as natural history, census statistics, newspapers, and historical archives as well as from less formal sources such as personal histories and memories, photographs, observation, interviews and conversations. In this way, deep mapping helps to articulate a collective sense of place and, therefore, becomes a collective place-making strategy. GIS and digital mapping allow for overlaying this diverse information in the form of spatial layers and generate complex meaning of place by visual means. In combination with digital media, mapping becomes a highly interactive and multilayered way to construct places in the cyberspace that can directly involve inhabitants of the place themselves. Digital deep mapping projects juxtapose historical maps, contemporary street networks, census statistics, and memoirs of past residents while also inviting local communities to project their sense of place by posting photographs, comments, and other materials. These projects have potential to become collaborative place-making modes in which artistic, scholarly, and community-based participatory (neogeographic) representations of places merge and interact.

A "digital urbanism" project edmontonpipelines.org at the University of Alberta is an example of digital place-making. It seeks to construct an inclusive on-line urban space for residents of the Canadian city of Edmonton as a path to inclusive citizenship more generally. It is organized around the metaphor of pipelines that symbolically merges into a single website the past and present life of this oil city. In addition to academic and government generated content, the website invites citizens to articulate their sense of place by participating in the construction of the website's content. Digital place-making, therefore, draws upon neogeography or generation of highly decentralized, collectively constructed, and often qualitative geographic knowledge (or VGI, volunteered geographic information) by citizens themselves (see Warf and Sui 2010).

The website also incorporates memories of the indigenous people, although somewhat superficially. Digital place-making, especially in the form of "digital urbanism" with a strong planning and local government participation, tends to be dominated by white middle class urban officials, residents, scholars, and artists. It also tends to represent places through formal

economic and social practices and institutions and leave outside the diverse economies of care, gifting, creativity non-monetized work (e.g., housework) or the informal economy that all provide the foundation for livelihoods of many urban residents (Pavlovskaya 2004; Brennan-Horley and Gibson 2009). Thus, the question of silences created by maps becomes directly relevant here as well. What other citizens of Edmonton have been underrepresented in this digital place-making project and why? Ethnic minorities, especially blacks and recent immigrants, as well as their spaces are often excluded from urban citizenship. Does the on-line digital place-making replicate these exclusions? To what effect? (also see Polson 2015; Bachin 2015).

Exclusions from digital citizenship are already numerous and profound. They are glaring even in the Global North, where the digital divide often – and wrongly – is assumed to no longer exist (see Gilbert and Masucci 2011 on digital divide in Philadelphia; Crutcher and Zook 2009 on post-Katrina New Orleans). Forming along the lines of class, race, sexuality, and gender, they lead to silences in digital place making that have direct and embodied implications for those excluded from citizenship. This is particularly important when both urban policy and politics increasingly focus on place-making, including digital place-making. Exclusions of social groups and the neighborhoods they inhabit from digital urbanism also excludes then from imaginations and practices of citizenship.

5. Conclusion

In this chapter, I attempted to begin a discussion about digital place-making that would bring the epistemological interventions from critical cartography and GIS as well as feminist and qualitative GIS into digital humanities projects that are concerned with past and present place-making. Both historians and contemporary digital humanities practitioners increasingly use digital spatial information to reconstruct past places and shape the image of the contemporary ones. History is no longer placeless; it is embodied in space, place, and territory. Humanities scholars would find useful the insights from critical GIS which has struggled with representations of territories, space, and place on the map for a long time. Of particular relevance are the notions that maps are mediums of power as opposed to simply truth and factual statements, that maps have the ontological power, and that silences and exclusions from the maps and mapping processes extend to social and spatial imaginations.

Currently working on a mapping project which intends to produce as an ontological entity, the solidarity economy in the United States, I am constantly confronted with the challenges discussed in the chapter. The hegemonic image of the US economy is that of driven by profit maximization and cut-throat competition while solidarity economy is guided by ethical considerations, collectivity, economic democracy, and cooperation. While it is widely spread, it is not explicitly quantified by the US statistics and much of it occurs informally within the households, communities, and social networks. Solidarity economy is absent discursively and ontologically which precludes us from considering it as part of our imagined economic present and future. Our task is to incorporate solidarity economy into national economic landscapes and

highlight its place-making role in New York City and Philadelphia. For me, it is a way to break the silence about solidarity economy and include it into digital place-making practices.

As more archival historical and contemporary information is available on-line and proliferation of digital mapping tools is on-going, the shifts occur in the past and present place-making from archives and streets to cyberspace. While replete with exciting research and political potentialities, the development of new critical insights into these processes and recognition of the silences involved in digital place-making remain of the paramount importance.

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