Mapshop: Learning to Map, Mapping to Learn

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Introduction

One of the premises of critical cartography and critical GIS is that mapmaking and GIS is worthy of study due to the possibilities for intervention—that how we know matters for what we might do. This sensibility toward mapmaking hit an inflection point in the late-1990s, as the GIS & Society debates reached fever pitch.¹ Now, as we enter the third decade of these discussions, what might be the new possibilities for intervening with maps and GIS? What are the new capacities for resonate and responsible mapmaking? In an attention-economy how might we cultivate care differently?

In what follows, we overview Mapshop, an initiative at the University of Kentucky that attempts to leverage the technical resources and the expertise of students and faculty in the Department of Geography to both support community partners with mapping and visualization needs as well as offer training opportunities for campus and community.
Of course, the scholarship in community geography recognizes that there are no one-size-fits-all approaches to doing engaged work with mapmaking and GIS. Therefore, we do not suggest that our efforts will necessarily have similar results, effects, or affects. Our work begins and ends with a recognition of the unique histories and ongoing struggles in our communities, noting that we might only ever scratch the surface, and our work is inconclusive and perhaps suggestive at best.

We situate Mapshop within a longer history of the university and its relationship to the city. The college that would later become the University of Kentucky was carved out of Transylvania University in 1878, a university that was established in Lexington, Virginia (later Kentucky) in the late 18th century. The support of the Morrill Act of 1862 funded a federal land grant to establish the A&M College as part of Kentucky University (as Transylvania University was named at the time) in 1865. The stories of the histories of University of Kentucky and Transylvania University are inextricably tied to the stories of settler colonialism in the Bluegrass and the emergence of Lexington as a frontier city for a new nation.

The importance of these universities in Lexington cannot be emphasized enough. Along with the Bluegrass Community and Technical College, these institutions are the largest landholders in the city—stabilizing, creating, and generating new speculation on real estate in a city that has had an urban growth boundary since 1958 (the first of such boundaries in the United States). Lexington has a population of over 300,000, and a combined statistical area of nearly 900,000. The University of Kentucky student population is just over 30,000 and the campus is one of the few flagship public universities with all liberal, fine and performing arts, sciences, professional, and applied colleges on a single, urban campus. The opportunities (and risks) associated with university-community relations are ever-present.
University-community partnering

Geographers in North America have a well-established history of engaged scholarship. Perhaps most famously, William Bunge’s *Fitzgerald: Geography of a Revolution* (1971) encapsulates a collaborative and boots-on-the-ground study of a community’s struggle for justice.² By focusing on ‘concrete peculiarities’, Bunge advocated for geographers to be “engaged in the radically democratic project of providing pedagogical resources to enable suppressed and exploited communities to manage for themselves, to facilitate flourishing geographical lives”.³ Although dismissed by some of his contemporaries⁴, Bunge’s sentiments were later echoed by David Harvey’s call for a people’s geography: a geography that would depict, analyse, and understand the world not as an abstract ideal, “but as it really is”.⁵

However, it was not until the 1990s, with the rise of the GIS & Society debates, that geographers began to more seriously and systematically partake in engaged and participatory scholarship as a tool to leverage the power and resources of universities to address community concerns, social inequalities, and environmental injustices.⁶ Considering GIS as a social, political and power-laden process rather than an analytical tool solely designed to represent and analyse spatial relationships, initial participatory efforts attempted to invert power dynamics, were context and issue-driven, and emphasized community involvement in the creation and/or use of geographical information.⁷

Public Participation GIS (PPGIS), for instance, sought to address growing concerns over the prevalence of state-produced spatial data and the use of persuasive visualizations to inform public policy.⁸ Developed within the field of planning, PPGIS initially emphasized ways in which it could make “decision-making tools available and accessible to all those with a stake in official decisions”.⁹ Under this approach, universities often acted as intermediaries or facilitators providing community members with access to expensive technology and training, student labour, and a variety of other institutional resources to support their engagement with public policy making.¹⁰ In exchange, community members provided academics and students with opportunities to gain invaluable contextual knowledge and apply their research both within and beyond the classroom. PPGIS approaches have diversified, covering topics from food insecurity, to housing, to transportation, to natural resource management.¹¹ As such, they are often resistant to clear categorization. However, PPGIS can broadly be considered as the confluence of social and participatory activities, community advocacy and technology—all grounded and contextualized in specific places.¹²

An alternative approach, Participatory GIS (PGIS), re-evaluated and more critically examined the definition of public inherent to PPGIS projects. Apprehensive over representation, PGIS focused more explicitly on participatory methods to engage marginalized populations, especially in the developing world.¹³ Although sometimes collapsed into PPGIS, PGIS draws its methods, context and understanding more specifically from community-integrated-GIS and counter mapping.¹⁴ By enabling the participation of underrepresented populations, and considering them as experts in their own right, PGIS has provided avenues to map alternative views and to articulate different, even contradictory, narratives of the same problems from different positions of power.¹⁵

Despite the successes of both PPGIS and PGIS (shortened to P/PGIS), familiar barriers persist, and new challenges have emerged. For example, although P/PGIS have diffused the means of participation, particularly in terms of access to cheaper and a greater diversity of geospatial technologies, “at the bottom of the digital divide relatively little has changed”.¹⁶ P/PGIS is subsequently in danger of “becoming a numbers game”, whereby a reliance on ever changing technologies prioritizes the participation of a greater volume of technology adept users.¹⁷ Community-based and grassroot organizations, for example, despite a
desire to participate in geographic and GIS-based inquiries, continue to lack capacity, in terms of time, skills and financial resources.\textsuperscript{18}

Community geographies (CG), a more recent approach to participatory university-community collaborations, seeks to address some of these constraints. Ideally CG programs develop sustained and reciprocal relationships between university and community partners, negotiate collaborative knowledge production and shared power, flexibly respond to a variety of community priorities, and leverage the assets of universities and communities to bridge the spatial digital divide. Whilst CG continues to implement the P/PGIS ethos of confronting existing power structures to address community concerns, it has a broadened focus including the use of a multiplicity of methods, not all dependent upon the use of computer technology. Examples of these methods include sketch mapping, community-input surveys and focus groups, participatory radio shows and film-making, as well as the use of local archives and oral narratives.\textsuperscript{19} Similarly, the structure, scale, scope and duration of CG projects vary, often even within the same CG program or institution. Given greater autonomy to determine the limits and expectations of participation, community partners actively and more collaboratively delineate the research objectives, process and outcomes.\textsuperscript{20}

CG has highlighted a series of new pressures facing university-community collaborations. Most prominently, CG challenges community-engaged scholarship to be more fully integrated into academic disciplines and institutions.\textsuperscript{21} Eric Sheppard, as president of the American Association of Geographers, highlighted that “elite universities’ rhetoric talks the talk of public scholarship without walking the walk: It remains too often a pro bono activity to be undertaken in additional to everything else”.\textsuperscript{22} A more integrated CG advocates for changes to the traditional academic reward system, flexible teaching schedules and evaluations, as well as updated student learning outcomes, a recognition of community partners as peers in the peer-review process, and more formalized professional and financial support.\textsuperscript{23} Without integration and institutional support, CG can struggle to materialize and be sustained given the extent of time necessary to establish reciprocal partnerships and given the difficulty in evaluating and communicating some of the more intangible, yet valuable, impacts of CG projects. Finally, CG has also drawn attention to the ways in which the politics of research becomes increasingly complex as community geographers remain in place and as the boundaries between scholar and community blur.\textsuperscript{24}

Engagement and attention

Mapshop was established in 2015, growing alongside these debates and experiments with P/PGIS and community geographies. Originally offered as a course in the Department of Geography (GEO509) since 2012, Mapshop now operates both a connected course and supports undergraduate student research assistantships. As the campus is located in the heart of downtown Lexington, the opportunities for greater reciprocity with the neighbours and neighbourhoods near the university meant that the course for university-community partnerships was insufficient. By sponsoring research assistantships with undergraduate students, we were able to expand these partnerships out of the academic semester.

Mapshop has provided an opportunity to pause and reflect upon the ways in which maps and mapmaking might intervene in as well as disrupt hegemonic narratives about Lexington, as expressed by undergraduate students and new faculty, as well as challenge long-standing tensions created by the university: what might be generalized as ‘town-gown’ relations. We advance a post-representational viewpoint in Mapshop. In doing so, we draw upon Kitchin, Perkins, and Dodge (2009) to suggest that mapmaking is not about providing a view upon a world; instead, mapmaking is worlding.\textsuperscript{25} Mapmaking, as art, “does not
reproduce the visible, but makes visible”, to borrow an oft-cited quote of Paul Klee. Mapshop is therefore an invitation to experiment with engagement and the fashioning of attention—about how to produce greater care for things of urgency. Here, we are inspired by renewed efforts in psychogeography, map art, and radical cartography.26

However, the space of potential engagement and attention is a crowded one.27 For non-profits and for-profits as well as activists, students, faculty, and neighbours, the ability to capture the attention of those who would be impacted by such methods is increasingly challenged. New forms of media and new platforms for interaction have fragmented any simple notion of ‘the public’ and ‘the community’. Engagement and attention are subjected to algorithmic sorting and herd-mentality. Far from letting this numb us to getting involved, Mapshop instead experiments with multiple forms of engagement and attention-capture.

One of these experiments was to fully-alter the format of the connected course (GEO509). Taught as a lecture and lab course, students were presented with projects imagined by community partners and asked to choose which projects to work toward—with mixed results. For example, community partners would put forward projects asking students to map locations of community gardens, analyse the spatial relationships around waste management, or create a reference map for a service-providing organization. The effort and responsibility to design the projects required months of meetings with community partners in advance of the course, leaving the instructor with the task of managing expectations such that the community partner would ideally receive something of direct value. Some of these projects would meet the needs of community organizations; others came up short. Regardless, any engagement with the community partner began and ended inside the course—leaving the partner without the crucial follow-up as their needs changed. After running a version of this course for four years, it was felt that students were missing the most important part of this partnership—design—and that community partners were generally treated as clients and not as experts in their own domain.
In 2015, the course was redesigned using a studio model. The students were presented with a first assignment—to understand the issues that shape Lexington, using what is available from the American Community Survey. This first assignment then, by week four, emerges into a series of concerns driven by the students’ explorations (e.g. housing affordability, food insecurity, transportation access, educational attainment, class and racial segregation). Community partners are brought in as experts to discuss these issues and provide feedback on student research projects. Lectures and technical demonstrations are given as needed, and not pre-planned. Instead, the instructor and students work, week by week, to better understand through mapmaking the impacts of these issues on our neighbours and neighbourhoods.

In that same year, a research assistantship was created with support from the College of Arts and Sciences. These assistantships run the entire academic year, allowing the mapping efforts of the connected course to expand into other projects with community partners. A project submission form was created, allowing community organizations and non-profits to contact Mapshop with mapmaking ideas or questions for spatial analysis. We have found the submission form to be an important, if still underutilized, aspect of our support for community partners, decentring the course and the schedules of students in the process of requesting mapping expertise. Unbounding these efforts from the classroom puts us one step closer toward the idea of the land-grant public university—one that leverages the expertise of the university in support of our communities.

New this academic year, we have created an Instagram account. The intent was to modularize some of our Mapshop research efforts into a format for shorter attention spans. This has provided an enjoyable way to connect with members of our communities, while providing Mapshop with an intermediate outlet for impactful ideas and representations. Here, we can try on different forms of analysis and a different approach to map stories.
Implications

While Mapshop continues to experiment with engagement, we also encounter a series of ambiguous and often conflicting implications. For example, as we work to create, curate and analyse data around a multitude of topics within Lexington, we are also increasingly viewed as a consultancy service for our partners. Of course, for the fashioning of attention, this means that Mapshop is given opportunities to direct the gaze of our partners—to draw focus to the concerns and injustices that we believe require attention. Some examples of this work include highlighting the ways in which the city’s legacy of a racially divided urban morphology continues to influence the contours and effects of contemporary development, visualizing the missing data points that while collected, remain inaccessible to the public, and demonstrating inequities in city services.

However, being viewed as consultants also works to legitimize the authority of the university as a knowledge producer and re-establishes problematic forms of objectivity and neutral science that further black box urban data processes and decision-making. This is evident, for instance, in project requests that seek to legitimize the anecdotal stories of community members with the facts of data. Although these data are undeniably relevant and important, we attempt to resist participating in a digital culture where there are many maps but few stories being told through them.

We face similar concerns over reconstituting the city as a laboratory; a playground for teaching and learning. The framing of Lexington neighbourhoods as opportunities for project-based learning (for students of GEO509) or for gaining hands-on experience (for assistants), or to situate case studies (for academics), for instance, can all be seen as extractive processes that once again privilege and locate the university as separate from its neighbours. This is particularly pertinent as institutions of higher education throughout North
America and Europe face neoliberal pressures to provide students-customers with greater opportunities for applied learning experiences and to provide philanthropic benefactors with socially relevant research with broader impacts. Programmes, like Mapshop, always have the potential to be co-opted for the interests of the university. As we work, therefore, we are cognizant of the ways in which we can direct the attention of the university to reflect on its own footprint as well as the shadows that footprint casts on its neighbours.

At the same time, Mapshop intentionally works to transform the role of community members from participants in student-led projects to community experts directing our attention and critiquing the results. In this way, we follow calls within P/PGIS, CG and citizen science literatures to recast community members as more than bodies for data collection, but as analysts, peers and community experts in their own right. In doing so, we seek to destabilize the casting of the university as the sole voice of authoritative knowledge. This does not mean pedestalling the voice of community, rather it requires listening, with an intent to reset our own rhythms of project design and implementation.

Navigating these changing relationships with our partners and our students requires its own form of care and attention. For instance, in a previous iteration of the Mapshop connected course, a student group became frustrated that their community partner was not responding to their emails, and further, that this lack of response was going to impact the students' ability to finish the project and the course. In these moments, it becomes important to work toward an understanding alongside our students that community partners are not beholden to the academic semester. They are not employees nor students of the university. The rhythms of partners' work are not the same as the rhythms of the course. For them, there is no such thing as a 'final grade'. Some students are sought after by community partners following their time with Mapshop, to continue the relationship and the work. Altering this dynamic has been instrumental to lengthening the rhythms of engagement, while also providing both students and partners with a more realistic sense of this relationship.

Treating community partners as experts, as well as moving away from forms of partnerships that treat partners as clients receiving a Mapshop 'service', we believe, creates greater opportunities for reciprocity. In particular, we judge the reciprocity of our partnerships by the ability of community experts to decline to engage. Not only is the space of potential engagement crowded, but the demands to engage are increasingly pervasive requiring organizations and individuals to devote ever more resources, more time and already limited capacity to potentially unrelated project aims. As academics face increasing expectations to make their research more directly relevant and socially engaged, it is pertinent to remember the demands that such calls place on communities themselves. Situated within an elite institution, with a series of potential resources to leverage, we recognize the ability of community experts to decline requests to engage as a metric of the flexibility and resiliency of our partnerships.

To resist slipping into some of the endless ambiguities of these thoughts, we attempt to cultivate within ourselves and our students an intense engagement with and responsibility to place. Mapshop is more than creating maps within the detached confines of a university classroom or computer lab. It involves an investment in the study area, its community members, and the peculiarities of its concerns. The experiences that students have through engaging with Mapshop are designed to be intensive, collaborative, and unfinished. They are an entry to further engagement. For some, that continued engagement may not be situated within Lexington. Yet, Mapshop aims to instil independent and ethical mapmaking practices within all of its students and assistants so that while at the University of Kentucky our engagement extends beyond simple play and experimentation to scratch (however suggestive or inconclusive) at issues of social justice and inequality. We hope that even as students leave the university, they will take these practices with them.
Conclusions

Mapshop will continue to seek support from the university in order to provide student assistantships while supporting our community partners with spatial data analyses and visualizations. We continue to build community-based projects into the design of our introductory and advanced mapmaking coursework, to best prepare students with both technical expertise and more substantial knowledge about the issues that impact our neighbours and neighbourhoods in Lexington.

However, the work of Mapshop is incomplete. This is perhaps one of the more difficult lessons of learning to map and mapping to learn. The GISciences have taught generations of students how to design a research project, collect and analyse data, and find ways to represent the findings from that research. However, what might it mean if the project is one that attempts to address social and environmental injustices? How might these projects be designed and implemented? When does one report findings? Instead, the experiences assembled by Mapshop have no easy end-points. There are only more data, more community concerns, more meetings to attend. To pull these struggles out of the confines of the classroom and the syllabus is the real objective. To fashion novel and imminent forms of inquiry that keeps students and instructors on their toes is the goal. Learning to map is not enough. In Mapshop, on our best days, we prefer to map in order to learn.
Endnotes

All unaccredited images taken of the Mapshop Mid Review, held on 7 March 2019, with several guests in attendance, including the Vice Mayor of Lexington and two members of the Lexington City Council. Source: Authors.


28 The American Community Survey (ACS) is a continuous and sample-based demographic survey administered by the United States Census Bureau. Supplementing the decennial census, ACS data is released annually and intends to provide more up-to-date estimates of demographic trends. Beginning in 2005, the ACS tracks variables such as income, employment, poverty, housing characteristics, ancestry, language proficiency and migration. The ACS is often used by public and non-profit entities for a variety of strategic planning efforts such as allocating funding, identifying at-risk populations, community advocating and much more. There is some debate over whether the ACS is constitutional. For more see: https://www.census.gov/programs-surveys/acs


