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ABSTRACT

Institutions of higher education can use communication design to more fully realize the transformational potential of applying for the Carnegie Elective Classification for Community Engagement. In particular, we contend that chorography is one way that institutions can seek spatial justice in conjunction with place-based community engagement understandings. To support this argument, we focus on the location of community-engaged work as a defining characteristic of that work. We further process one year's worth of our home institution's community-engaged work by using a three-step research methodology called chorography, in which we (1) collected community engagement data; (2) designed a multi-layered community engagement map; and, (3) reflexively considered the inclusivity and sustainability of our institution's community-engaged work. Our aim is to use this map-making method to orient our institution to more inclusive and more sustainable community-engaged work.

CCS Concepts

Social and Professional Topics

Keywords

Critical cartography, Mapmaking, Rhetoric, Civic Engagement, Spatial justice, Carnegie Classification for Community Engagement

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INTRODUCTION

The science and practice of mapmaking—cartography—is a particularly complex communication design activity, and the artifacts produced by this activity—maps—have increasingly been understood in terms of their rich rhetorical function. Decades ago, Harley (2001) asserted that “rhetoric permeates all layers of the map” (p. 37), and this assertion has found support in scholarship that examines the rhetoric of cartography (Barney, 2016, 2017, 2019b; Denil, 2003) and foregrounds maps as visual, material, and rhetorical artifacts (Getto & Moore, 2017; Lucaites & Hariman, 2001; Propen, 2005, 2007, 2011, 2012).

As this growing body of scholarship shows, maps can forge ideologies of inclusion and exclusion (Barton & Barton, 1993/2004, 1993), clarify stories and encourage user interaction with data (Kostelnick, 2007), intervene in policy debates by advancing particular knowledge claims and mediating among competing claims (Propen, 2012), articulate and promote national and international interests (Barney, 2009, 2013, 2014, 2015, 2016, 2019a, 2020), and visualize risk by providing context (Stephens & Richards, 2020) and promoting participation (Welhausen, 2017). Maps “can counter the violence of erasure and express the multiplicity of places” by “weaving together science and story” (Butts & Jones, 2021, p. 3), as well as address environmental problems (Propen, 2012; Stephens & Richards, 2020), health problems (Welhausen, 2015), and community-based problems (Carlson, 2021). Maps can further be used as rhetorically effective teaching and learning tools (Butts & Jones, 2021; Hurley, 2018; Propen, 2012).

In brief, the rhetorical function of any map far surpasses the map's ability to communicate knowledge about territory. Rather, maps marshal design elements to advance claims about the social values and cultural features of a given territory. Rhetorically, then, maps function to persuasively communicate a social landscape, and this point is stressed by critical cartographers, who view maps in terms of their persuasive communicative potential. These cartographers understand that “maps impose their own innovative interpretation of the world, even within the same mechanism of social control that produced them” (Casti, 2015, p. 107). They recognize that

maps possess the potential both to reify dominant social landscapes and also to reinterpret, revise, and resist these same landscapes. Given these twin potentialities, critical cartographers stress that the function of any map is much broader than communicating territorial knowledge. For these individuals, maps are strategic communicative tools, and cartographic emphasis—whereby a mapmaker highlights a particular feature of a landscape—proves “a most effective type of rhetorical strategy” (Casti, 2015, p. 107).

A rhetorically rich conceptualization of maps and cartography, in which maps are understood as creating social space and cartography is recognized as a subjective art, has come to be known as chorography. As defined by Casti (2015), *chorography* means “a cartographic representation that recovers the cultural and social sense of territory within the relation that the individual establishes with a place, expressed by the reality of landscape” (p. 115). In coining the term *chorography*, Casti has drawn upon the Greek term *chora*—a term that is, itself, “complex and unstable” in its ancient meaning (Kymäläinen & Lehtinen, 2010, p. 252)—to push back upon rhetorically reductive and overly objective notions of mapmaking. The term *chora* roughly connotes a place outside of those which are typically known, a “place in process” (Kymäläinen & Lehtinen, 2010, p. 252), or “the wild, open surrounds as yet-unmapped and outside the town’s street grid and infrastructure” (Clary-Lemon et al. 2022, p. 57; see also Alford, 2016; Rice, 2007, 2012; Rickert, 2007, 2013; Ulmer, 2008). *Chora*, thus, signals the important communicative potential of places not fully known, of places that “can be described only momentarily and imperfectly” (Kymäläinen & Lehtinen, 2010, p. 258). Building upon this incomplete understanding of place that is signified in the Greek *chora*, the practice of chorography, according to Casti (2015), involves two elements: first, rendering a landscape; and, second, recovering the subject-as-social-actor and the space-as-cultural-community. Together, these elements enable a chorographic understanding of maps as expressing “the value of a societal world adopted in its relentless becoming” and promoting this value through the use of “multiple points of view,” “many techniques,” and “many languages that combine and intersect” (Casti, 2015, p. 254). In its embrace of multiplicity and social subjectivity, chorography makes space for complex rhetorical inquiry.

In this study, we draw upon chorography to investigate the inclusivity and sustainability of community engagement initiatives at our home institution. Foregrounding the location of our institution’s community engaged work, our own complex rhetorical inquiry began with a *where* question—namely: Where does our institution’s community-engaged work take place? To answer this question, we used chorography to analyze one year of our institution’s community engagement data, interrogating the spatial location of our institution’s work alongside understandings of inclusivity and sustainability. Ultimately, we contend that chorography is a way that institutions can seek spatial justice in conjunction with place-based community engagement understandings. To support this argument, this article: (1) surveys disciplinary and institutional definitions of community engagement; (2) details our data collection process; (3) profiles our communication design decisions; and, (4) mobilizes reflexivity to discuss our results.

REVIEWING THE LITERATURE ON COMMUNITY AND CIVIC ENGAGEMENT ACROSS INSTITUTIONAL AND DISCIPLINARY TERRAINS

The term *community engagement* is a contested terrain insofar as varying definitions differently emphasize the *what*, *who*, *why*, *how*, and *when* of community engaged work. Less central to these varying definitions, but perhaps more crucial to the actual work, is the *where* of community engagement. The importance of the *where* of community engagement—that is, the precise location where a discrete instance of community-engaged work takes place—has recently grown with the emergence of the place-based community engagement framework that has been adopted by some institutions of higher education (Yamamura & Koth, 2018, 2019). Just as the place-based community engagement framework focuses on geography (Yamamura & Koth, 2019), so too does our study. Our study emerges from the *where* of community work, amid definitions of community engagement advanced by our institution, the Carnegie Foundation, and the field of technical and professional communication.

In 2018, we were working alongside students, staff, faculty, administrators, city personnel, and community leaders to help refine and better realize what our university defined as community engagement. At the time, author one was working with our university’s Office of Institutional Effectiveness and Office of Community Outreach as a faculty fellow and author two was working in our university’s Office of Service-Learning as the coordinator of service-learning.

More specifically, we had both assumed roles on committees supporting our university’s reapplication for the Carnegie Classification for Community Engagement. This elective classification supplements the basic classifications that the Carnegie Foundation uses to describe institutions of higher education according to their settings, student populations, enrollment numbers, and research profiles (Carnegie Elective Classification, 2022a; Indiana, 2021; Johnson et al., 2017; Saltmarsh & Johnson, 2020; Yamamura & Koth, 2018). Unlike the basic classifications, this elective classification serves as “an evidence-based documentation of institutional practice” pertaining to an institution’s community engagement (Carnegie Foundation, 2016). Behind the Carnegie Classification for Community Engagement lies a theory of change that strives for institutional transformation through community engagement (Saltmarsh & Johnson, 2018, 2020; Welch, 2016; see also Eckel, 1998). Here, the idea is that transformative change “comes about through change in academic culture” (Saltmarsh & Johnson, 2020, p. 111), and the application process asks institutions to document aspects of their culture around community engagement that might indicate change. As Saltmarsh and Johnson (2020) explained, “transformation through community engagement comes about through changing the core academic culture of the institution” (p. 111). After having been piloted in 2006, the classification has accepted four cycles of applications since—one in 2008, 2010, 2015, and 2020 (Saltmarsh & Johnson, 2018, 2020; Carnegie Elective Classification, 2022b).

Our institution committed to reapplying for the Carnegie Classification for Community Engagement and renewing its initial 2010 classification as part of its 2015 strategic plan (Western Michigan University, 2015). During the reapplication process, our institutional definition of community engagement aligned very

closely with the definition of community engaged advanced by the Carnegie Foundation. The Carnegie Foundation uses the term *community engagement* to describe “the collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial creation and exchange of knowledge and resources in a context of partnership and reciprocity” (Carnegie Foundation, 2016, p. 1). Further, the Carnegie Foundation states that the purpose of community engagement is to “to enrich scholarship, research, and creative activity; enhance curriculum, teaching, and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good” (Carnegie Foundation, 2016, p. 1).

As our committees discussed this definition, we became acutely aware of the way in which this definition minimized the importance of location to our institution’s community engaged work. In this definition, for instance, we observed a strong emphasis on the *who* and the *why* of community engagement. Emphasizing the public purpose of higher education, the Carnegie Foundation defines the *who* of community as an institution and their larger communities. Likewise, the Carnegie Foundation stresses the *why* of community with an explicit purpose statement that mobilizes verbs like *enrich*, *enhance*, *prepare*, *address*, and *contribute* all in service of “the public good” (Carnegie Foundation, 2016, p. 1). Further, according to this definition, the *what* of community engagement involves “collaboration” and “the creation and exchange of knowledge and resources,” while the *how* of community engagement describes activity that proves “mutually beneficial” (Carnegie Foundation, 2016, p. 1). Ever-present, also, in the Carnegie Foundation’s framework is the *when* of community engagement, demarking the work of community engagement as occurring in accordance with academic years and aligned with classification and reclassification cycles. For instance, the 2020 reclassification framework tasked applicants with focusing on the community engaged work occurring during the 2017–2018 academic year (Carnegie Foundation, 2016).

While the Carnegie Foundation’s definition references the context of community-engaged work, little emphasis is placed on the *where* of community engagement and perhaps understandably so. As a national classification that has recently become international in scope, the Carnegie Elective Classification for Community Engagement seems to tacitly recognize that the work of community-engagement occurs in many different locations across the United States and the globe (Carnegie Elective Classification, 2022b). Defining community engagement in terms of geographic location would, therefore, limit the ability of the elective classification for community engagement to appeal to institutions whose community-engaged work is situated across a wide variety of global geographies.

Although the location of community-engaged work might not serve as a defining feature of the Carnegie Foundation’s definition of community engagement, our discussions with our committee members suggested that the location of our own institution’s community-engaged work was an essential component of our reapplication self-study. One reason why this focus on location was so prominent in our committee discussions was because our reapplication self-study for elective community engagement classification occurred in conjunction with a master planning process undertaken by the city in which our institution’s main campus is located: Kalamazoo, Michigan. The City of Kalamazoo classifies our institution as a neighborhood—one of among 22

neighborhoods in our city—and the Kalamazoo City Planner was one of the community members who served as a committee member. The city’s master plan included nearly two dozen map overlays that pinpointed the geographic location of current city amenities and transit paths (City of Kalamazoo, 2017). These maps, as those of us who were familiar with the plan saw, also helped demonstrate sites of future community improvements with the goals of facilitating a connected city, establishing great neighborhoods, and supporting downtown life. The master plan emerged from the City of Kalamazoo’s own community engagement efforts, which achieved 4,058 points of contact about the plan through living walls, in-person meetings, online platforms, and surveys (City of Kalamazoo, 2017). Maps were crucial to this planning process.

Besides acknowledging the importance of mapping to the planning process that was undertaken by the city that houses our institution’s main campus, our committee discussions about location also echoed much of the work on community partnerships, civic engagement, social justice, and advocacy emerging from the field of technical and professional communication. Particularly important to our reapplication self-study process was a call for researchers in technical and professional communication to move “beyond the buzzword of civic engagement” that was issued by Gonzales and Simmons (2018) during a plenary talk at the Association of Teachers of Technical Writing Conference in Kansas City, Kansas. Situated within the context of top-down administrative initiatives that require faculty and staff to tabulate community-engaged work, the call summoned researchers in technical and professional communication to expand “notions of advocacy both within and beyond academic institutions” and to “more ethically engage in civic engagement” (Gonzales & Simmons, 2018). Gonzales and Simmons advised caution when these administrative initiatives seem implemented only for the attainment of recognition and prestige, for that is when community and civic engagement elide institutional responsibilities to community stakeholders—hence, the need for increased advocacy and increased ethics on the part of researchers (2018).

Offering an example of an initiative that an institution of higher education might potentially implement in a way that overlooks its “layered responsibilities” to its community stakeholders, Gonzales and Simmons discussed the Carnegie Classification for Community Engagement (2018). The speakers elaborated on the problems with poorly implemented, uncritical, and unreflective top-down dictums to attain the Carnegie Classification for Community Engagement by highlighting the immense amount of institutional labor invested in collecting data, clocking hours, and shoehorning “community-based work into sometimes ill-defined categories” (Gonzales & Simmons, 2018). One of the concerns voiced in the plenary talk was that the space opened by the elective classification for community engagement “doesn’t necessarily acknowledge the layered responsibilities” (Gonzales & Simmons, 2018) that are crucial to community-engaged work.

As we embarked on our reapplication process, we saw our focus on the *where* of our community-engaged work as one means by which to better represent and reimagine our responsibilities to our community partners. By foregrounding the location of our institution’s community-engaged work, we reasoned that we might move toward increasing the spatial justice of that work (Hurley, 2018; Soja, 2010). Spatial justice seeks to remap spaces, places, and locations in a way that promotes equity and rights, fairness and freedom. As Soja (2010) explained, the geographies where

we live and work create and maintain “lasting structures of unevenly distributed advantage and disadvantage” (p. 20). Spatial justice works to establish new geographies and alternative spatial structures that might redistribute advantage. We follow Hurley (2018) in connecting the practice of map-making with the goal of increasing spatial justice. Further, the practice of making maps to increase spatial justice is a practice closely aligned with the complex design work undertaken by technical and professional communicators. Spatial justice is, in fact, explicitly listed among the key theoretical frameworks associated with the social justice turn in technical communication (Haas & Eble, 2018, pp. 13–14); among the goals are fostering “more critical understandings of our responsibilities to the cultures and communities within which, to whom, and about whom we communicate” and of “the relationships between rhetorics, places, power, agency, networks, infrastructures, and institutions—and how space and place have real political and embodied effects on (in)justice and rights” (Haas & Eble, 2018, p. 12).

Our study seeks to answer the call from Gonzales and Simmons (2018) and to “push the boundaries” of our university reclassification initiative by using map-making to better locate our institution’s community-engaged work and better advocate for spatial justice. Concomitant with our interest in advancing spatial justice through mapmaking is our aim to bring the inclusivity and sustainability of the geographies of our institution’s community-engaged work into a sharper focus. To be sure, our use of mapmaking responds to the need identified by Gonzales and Simmons (2018) in their plenary talk—namely, “the need for sustainable efforts to increase and support diversity not only in the communities we engage with but also in the communities we foster within the discipline.” Here, we invoke work from technical communication and community engagement to define geographic inclusivity and geographic sustainability. Geographic inclusivity refers to a goal of increased diversity achieved through spatially just and equitable practices (Jones et al., 2016; see also Yamamura & Koth, 2019). “A focus on inclusivity,” as Jones et al. explained (2016), “prompts infrastructural correctives, drawing attention to practices, policies, and processes for decision making” (p. 224). Mapmaking can advance the goal of geographic inclusivity by allowing users “to occupy a deliberate positionality that privileges action and social change without being prescriptive and relying on only passive representation” (Jones et al., 2016, p. 224). Similarly, geographic sustainability can be defined as a goal of increased resiliency achieved through equitable, place-based commitments and durable, high-quality resourcing. Johnson et al. (2017) connected such sustainability with the use of “procedures and technologies that advance programmatic aims and viability in the short and long term when competing for limited institutional resources without compromising the natural environment or ignoring needs of diverse populations” (p. 8). Further, such sustainability functions as a goal in the place-based community engagement framework, and this goal is characterized by stability not only in commitments but also in leadership and funding (Yamamura & Koth, 2018). Mapmaking can advance the goal of geographic sustainability by helping to visualize the distribution of commitments and resources across space. Accordingly, the questions that guide our study are:

- Where in our communities did our institution’s engaged work occur?
- How might we increase spatial justice by envisioning more inclusive community-engaged work?

- How might we increase spatial justice by envisioning more sustainable community-engaged work?

In the next section, we describe the methodology behind our data collection, map design, and our reflexive process.

APPLYING A CHOROGRAPHIC METHODOLOGY TO OUR INSTITUTION’S COMMUNITY-ENGAGED WORK

To suggest some answers to our research questions and to more fully consider the location of our institution’s community-engaged work, we adopted a reflexive chorographic methodology for our study. This methodology connects the notion of community with processes of socio-spatial remembering (Kymäläinen & Lehtinen, 2010; see also Casti, 2015; Gogan & Harrison, 2018). In particular, our chorographic methodology involved three broad steps: (1) collecting community engagement data; (2) designing a multi-layered community engagement map; and, (3) reflexively considering the inclusivity and sustainability of our institution’s community-engaged work. Given the scope of these three steps, our Human Subjects Institutional Review Board determined that our research protocol (#230305) did not require board approval. In the next three sections, we detail each of these three broad steps.

Chorographic Step 1. Collecting Community Engagement Data

The first broad step that we took toward enacting our chorographic methodology was a robust process of data collection and analysis. This process began with the data required by the Carnegie Foundation’s reclassification application and was expanded to include partnership information that would foreground the locations of our institution’s community-engaged work. This process anticipated the codes we would use to segment and categorize our data and it also involved a sampling plan.

Reclassification self-study data

To receive the Carnegie Classification for Community Engagement, institutions of higher education must complete an extensive application that documents a culture of transformative community engagement. By design, this application guides institutions through a process of self-study and encourages university stakeholders to engage in critical and strategic reflection about their community-engaged work. The application process aims to effect “campus change” (Saltmarsh & Johnson, 2020, p. 108)—that is, the application is designed to help institutions “mark their progress and identify areas for improvement in their commitment to community engagement” (Driscoll, 2008, p. 40).

In alignment with its design as a rigorous self-study process, the 2020 reclassification framework required applicants to collect a significant amount of data. The Carnegie Foundation tasked 2020 reclassification applicants with reporting granular details across three large categories of community engagement activities, which were defined by the Carnegie Foundation as:

Curricular engagement, or collaborations, such as service-learning, that “address community identified needs, deepen students’ civic and academic learning, enhance community well-being, and enrich the scholarship of the institution” (Carnegie Foundation, 2016, p. 9);

Co-curricular engagement, or “structured learning that happens outside the formal academic curriculum through trainings, workshops, and experiential learning opportunities,” such as alternative breaks or community service projects (Carnegie Foundation, 2016, p. 12); and,

Outreach and partnerships, which, in the former case, apply “institutional resources for community use” and, in the latter case, establish collaborations “for the mutually beneficial exchange, exploration, and application of knowledge, information, and resources” (Carnegie Foundation, 2016, p. 15).

For the category of curricular engagement, the application asked applicants to quantify the numbers of:

- students who conducted community-engaged work
- tenured or tenure-track faculty who conducted community-engaged work
- full-time non-tenure-track faculty who conducted community-engaged work
- part-time faculty who conducted community-engaged work
- courses that involved community-engaged work
- departments that featured community-engaged work.

The reporting spreadsheet further requested calculations of these numbers that included:

- Gross total number
- Change in total number from 2010 application
- Gross total number as a percent of the total institutional number
- Percent change since from 2010 application

Finally, the application sought supplementary descriptions of 30 concentrated areas of community engagement, split evenly across the categories of curricular engagement and co-curricular engagement.

To complete the reclassification self-study, we needed to gather data about the community-engaged work undertaken by our university, across its various divisions—Academic Affairs, Advancement, Athletics, Business and Finance, Diversity and Inclusion, Student Affairs, and Research and Innovation—and within its particular units, including its colleges, offices, schools, departments, and programs.

Placed-based partnership information

To foreground the *where* of our institution’s community engaged work, the data that we collected for this study exceeded the scope of the data required by the Carnegie Foundation’s reclassification application. Indeed, we requested information from our stakeholders that went beyond numbers of students, faculty, courses, and departments.

We sought key pieces of information that would help us to locate our institution’s community-engaged work and to place this work on a map. In total, we requested sixteen pieces of information from our stakeholders, and these pieces of information consisted of:

- Division

- Unit
- Course
- Date
- Institutional point of contact
- Number of university personnel
- Hours per individual
- Partner organization name
- Partner address
- Partner city
- Partner state
- Partner zip code
- Partner country
- 5-word description of project
- Partner URL
- Partner Logo

We envisioned most of these additional data points as sub-coding categories, since each data point could be combined, sorted, or segmented in a way that would produce a unique coding scheme and advance our eventual analysis. Our intent was for these coding schemes to elaborate upon the where of our institution’s community engaged work and, ultimately, allow for this work to be located and represented on a map. We anticipated that these additional data points would be instrumental in establishing three specific coding schemes:

- Geographic location, a code that emerged from the partner address, city, country, zip code, and state data points, as applicable
- Institutional location, a code that emerged from the division and unit data points
- Time investment, a code that emerged from a calculation using the number of university personnel and the number of hours per individual dedicated to the particular instance of community-engaged work

Our three-phased data sampling process, which is described in the following section, helped us to secure these sixteen data points for the vast majority of the community-engaged work reported to us. Detailed information for any partnership that was established in confidence—such as the partner organization name or location associated with a number of community-engaged research projects—was not shared with us.

Cross-divisional sampling plan

Our data collection process began in May 2018 and involved a three-phased sampling approach led by author one.

In the first phase of data collection, committee members approached the administrative leaders of units housed in Academic Affairs and Student Affairs. Our approach in this phase of data collection could best be described as “purposive sampling” (Kumar, 2014, p. 244), in that we exercised our judgment as to which institutional divisions could most readily provide the type of information—both in depth

and breadth—that we sought. Emails requesting sixteen pieces of information for every instance of community-engaged work were sent to chairs of departments as well as to directors of schools, programs, and offices within these two divisions. We sent follow-up emails to these administrators until a response was received, or until we had sent a total of four emails. If respondents returned incomplete data, committee members would often complete the data set by most commonly finding a URL for a community partner’s website or piecing together a complete address when given partial information for the location of the work. In some cases, committee members would follow-up directly with the faculty or staff member who spearheaded the community-engaged work to clarify the information or complete the data set.

In the second phase of data collection, committee members approached the administrative leaders of units housed in other institutional divisions and requested information similar to that requested in the first phase of data collection. Most times, these units were invited to supply the same sixteen pieces of information that would enable us to craft a robust response to the framework and fully plot the community-engaged work on our map. Other times, these approaches requested different kinds of data that would be used to answer a specific question posed by the Carnegie Foundation in its reapplication framework but that would not yield data for our map of community-engaged work. For instance, one question on the framework asked about university hiring and purchasing practices that demonstrate our institution’s commitment to community engagement. To answer this question, we contacted the director of logistical services, a campus unit overseen by our university’s division of Business and Finance. The individual we contacted was able to send our committee a list of nine responsibilities that the unit seeks to uphold during procurement. These responsibilities included educating local businesses on our institution’s relationship with vendors, offering programs that enhanced local business opportunities, publicizing local vendor opportunities, and encouraging local business.

In the third phase of data collection, we contacted individuals who we learned, during our first two phases of data collection, were involved in community-engaged work during the 2017–2018 academic year. This phase of data collection enacted a method of network sampling that is often referred to as “snowball sampling” (Kumar, 2014, pp. 244–245), in that we followed leads offered by previous contacts in the earlier phases of data collection to identify additional contacts in this phase of collection. For instance, we contacted our institution’s Office of Research and Innovation seeking information on community-engaged grants and contracts administered by our university. This office, which functions as its own university division, provided us with two lists of such awards. The first list detailed community-engaged work supported by the division and included research projects focused on the community and community-sponsored projects. The second list contained information for any project classified as a “public service” project by its principal investigator. Using these two lists, we then communicated with the faculty and staff leading these projects to collect additional data for the reapplication and for our map. In this way, communication with one contact to gather data snowballed into communication with dozens of principal investigators, all of whom supplied us with data points.

Together, these three phases of data collection spanned seven months, from May 2018 through November 2018, and yielded 2,848 discrete community engagement activities. The data revealed

that our institution’s community engagement efforts involved over 1,500 unique community-based organizations and invested over 1.34 million hours into this community-engaged work. Having collected these data, we were prepared to design our map.

Chorographic Step 2. Designing a Multi-Layered Community Engagement Map

The second broad step we took toward enacting our chorographic methodology was designing an interactive map that plotted our community engagement data and allowed user to interact with that data. As our two committees desired to highlight the location of our institution’s community-engaged work, designing a map seemed to be an appropriate choice to fulfill this purpose (Clary-Lemon et al., 2022). And, our choice of a digital, interactive map underscored the map’s function as a piece of multi-dimensional communication (Alford, 2016).

Committee deliberation

Our design process began with robust inquiry into the affordances of various mapping applications. Our committees discussed a number of mapping projects housed at our institution (e.g., HDReAM, 2016) and, after surveying the technical specifications of a number of different mapping applications (e.g., Google My Maps), chose to use Esri’s ArcGIS StoryMaps application to construct our map. Indeed, GIS technology has been understood as a cartographic tool so highly novel that it shifts the focus of mapping from technical considerations to communicative ones (Casti, 2015). Capitalizing on GIS technology, the StoryMaps application allows for the exact coordinates of locations around the globe to be plotted with pinpoint accuracy. The StoryMaps application is also a platform that has been adopted by researchers in the fields of technical and professional communication and rhetorical studies for a range of location-based projects (Getto & Moore, 2017; Malkowski & Klenke, 2020; Stephens & Richards, 2020). With the support of a mapping specialist housed in our university libraries, the expertise of faculty members in our Department of Geography, Environment, and Tourism, and the assistance of an undergraduate technical communication intern, we began composing our map.

Map design

After choosing to work with the ArcGIS StoryMaps application, we used an iterative process to arrive at the final design for our map. The process relied upon prototyping and frequent discussions among various stakeholder groups including our committees, our administrative sponsors, and our campus mapping experts (Gogan & Harrison, 2018). The work of our undergraduate technical communication intern was especially crucial to moving the design of our map forward, as this individual was able to conduct design-focused research and provide us with customized user documentation that met the needs of stakeholders. In its final form, the design of our map prioritized user navigation, comprehension, and exploration.

Navigation. Our first series of significant design decisions involved our choice of one of seven StoryMaps templates. After analyzing all seven templates (see Stephens & Richards, 2020, pp. 13–14) and reviewing samples of each, a deeper assessment of three templates—the Journal, Series, and Cascade templates—was conducted across 24 criteria, many of which involved navigation (Peña, 2018a).

We chose the Series template with side accordion layout as the base template for our map design. This version of the Series template possessed “refined navigability,” which allowed for scrolling within input boxes, and “highly customizable” features, which enabled the adjustment of “text font, color, orientation, type and face” as well as the use of pictures and graphics (Peña, 2018b). Further, the side accordion layout assisted users with navigation by employing both numbers and descriptive text on the on the left side of the screen display to distinguish various map layers.

The buttons featured on this template’s accordion-style layout did, however, present an initial design challenge related to navigation. By default, the screen-left navigation buttons included over-complicated formatting and a hovering setting. The formatting and the additional setting impeded user navigation. A sequence of custom HTML code allowed us to address this challenge by removing the formatting and simplifying the setting (Peña, 2018c). Ultimately, this custom code made user navigation easier.

The layout also possesses some standard navigational components that are common to most StoryMaps templates. Most notably, a cursor or a keyboard command enables users to freely zoom in and out of the map. Pressing a graphical icon marked as “+” will transport the user closer to street level, while pressing a graphical icon marked as “-” will move the user’s perspective farther away, retracting the view, minimizing scale, and increasing the perceived distance. An additional icon—this one shaped like an a-frame house and serving as a home button—is located between the zoom buttons. With a single click, this button returns the screen to its initial settings and resets the map’s scale. These three navigation icons are always available in the top left corner of the map, regardless of where the user’s cursor is on the map.

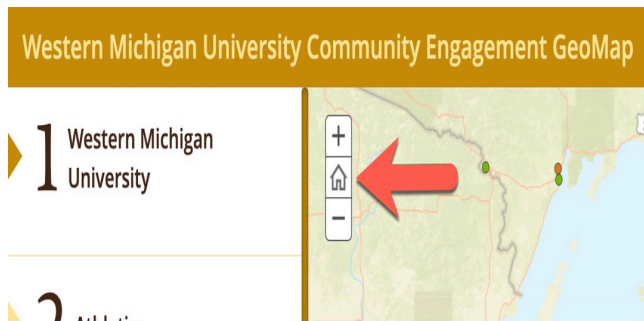


Figure 1. Screen Capture of the Map’s Navigational Components.

Comprehension. StoryMaps projects have been shown to be particularly effective in crafting “a public-facing message intended for nonacademic audiences” (Malkowski & Klenke, 2020, p. 182). We wanted our users not just to receive our message, but to understand that message. Accordingly, we focused a second series of design decisions on strategies that would promote user comprehension of our institution’s community-engaged work. For these decisions, we relied upon the StoryMaps interface as a tool that would allow us to author, publish, and share dynamic stories that might “include maps, narrative text, lists, images, videos, embedded items, and other media” (Esri, 2022).

To begin crafting the story of our institution’s community engagement, we populated the map with 2,848 plotted points.

Each plot represented the location of one community engagement activity (see Figure 2). Mapped with street-level accuracy, these plots span the globe and are color-coded to signify the university division or unit that undertook the community engaged work. The color-coding scheme capitalized on the interactive map legend to promote user comprehension. The legend can be opened and closed with a single click, and is constantly available to users in the top right corner of the map, regardless of where they are on the map. The legend automatically adjusts to the interactive filtering system, ensuring that users will be able to understand the data points at all times.



Figure 2. Screen Capture Showing Institutional Community Engagement Points across the Globe with Open Legend.

Moreover, each plot is linked to a pop-up window feature, the goal of which is to provide users with a quick yet informative snapshot of each partnership. By clicking on a plot, a small window appears overlaid on top of the map view (see Figure 3). This window displays information about both the community partner and the university’s dedication to the partnership. Information about the community partner includes a logo, physical address, and a URL. Information about the university’s dedication to the partnership includes the associated academic college, unit, and course number, if applicable, as well as the time and personnel committed to the partnership. For example, the pop-up window displayed in Figure 3 includes the community partner name (Fair Housing Center of Southwest Michigan), unit (Public Affairs and Administration), course number (PADM 4000), number of university personnel (six), and number of hours contributed per individual (25). To minimize the window, users click anywhere on the screen and return to the previous position on the map.



Figure 3. Screen Capture Detailing Map Data for One Local Engagement Activity.

These pop-up windows also presented us with an initial design challenge. A centrally attractive feature of the Series template was the map’s ability to display input boxes that, themselves, would showcase text and multimedia elements. We saw this component as important for providing detailed, easy-to-understand information about specific instances of our institution’s community engaged work. By default, however, the template’s pop-up input boxes consisted of one open space, and this space contained no substructure within which to organize information. A sequence of custom HTML code again allowed us to modify the pop-up window’s structure (Peña, 2018c). As with the other elements of the map, the color of the pop-up window was changed to adhere to our university’s branding standards.

Exploration. We further made a series of design decisions to allow map users to explore our institution’s community-engaged work from various perspectives and for various purposes. To encourage exploration, we seized upon a “layered approach to communication design” (Butts & Jones, 2021, p. 11). This approach created map layers by stacking data filters and representing that data in a novel way.

We chose to apply 19 filtered layers to our map. Rendered as accordion-style buttons and positioned on the left quarter of the screen display, these filters enable quick data access and allow users to explore our institution’s community-engaged work from multiple perspectives. The first layer presents a broad view of the entirety of our institution’s community-engaged work during the 2017–2018 academic year. This layer is comprehensive and encompasses all of the engagement plots that appear as color-coded points on our map (see Figure 4).

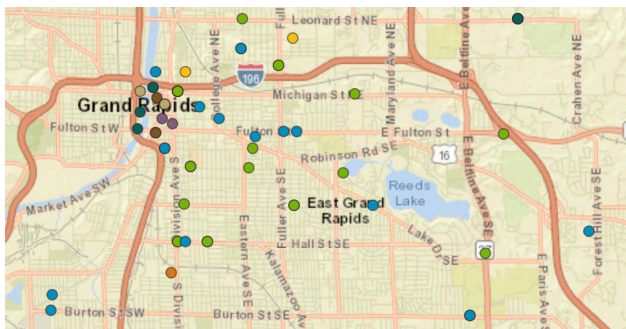


Figure 4. Screen Capture Illustrating Engagement Plots as Color-Coded Points.

Subsequent layers narrow the view of our institution’s community-engaged work and filter the plots by our institution’s major divisions—from athletics to global education, student affairs to information technology, diversity and inclusion to research and innovation. Using a similar approach, eight separate layers each present the community engagement of different academic colleges. Across these layers, community engagement data is filtered by the College and Unit fields with the map only plotting the locations of community-engaged work that meet the specifications of the filter. Figure 5, for instance, captures a view of our map that only displays data from one of our academic colleges. Note, first, that the triangle-shaped indicator adjacent to the number “5” on the left of the screen display appears in a shade of mustard yellow that is deeper in shade than the other triangle-shaped indicators.

This deeper shading communicates that layer five—the layer that features data only from our institution’s College of Education and Human Development—is displayed by our map. Note, second, that the map displays only cyan blue plots. The color of these plots also communicates the vantage point offered by this map layer, as cyan blue was the color associated with the display for the College of Education and Human Development data points.

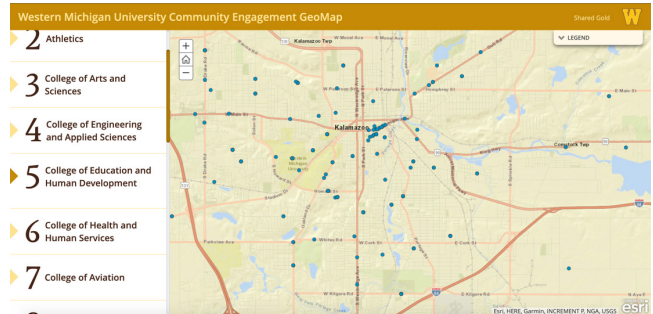


Figure 5. Screen Capture of College of Education and Human Development Filtered Layer.

Another layer displays engagement activities by mapping intensity rather than discrete activities. To show the distribution of total engagement hours across our map, we used a heat map effect. The areas of the map with the most opaque and intense gold color, including metropolitan areas such as Detroit, Chicago, Grand Rapids, and Kalamazoo, are those community locations where our institution invested the most hours of engagement work (see Figure 6). Put differently, this layer of the map represents location according to the total number of hours per partnership per location. As such, this heat map acknowledges that even one plot on the map might mark a significant investment of time in community-engaged work.

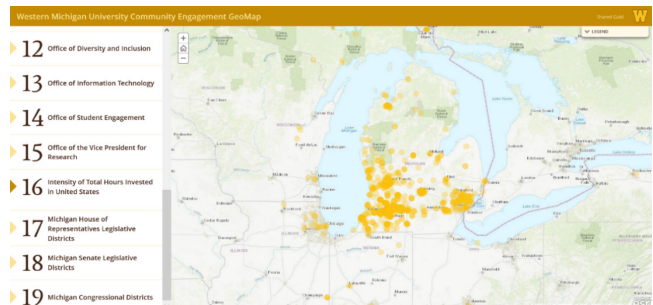


Figure 6. Screen Capture Showing Heat Map Representation of the Intensity of Engagement Hours.

Two other filtered layers include political district overlays (see Figure 7)—one for each division of our state’s bicameral legislature. These layers were added late in our design process as a response to a request from our stakeholders. The overlays allow our stakeholders who work closely with members of our state legislature to display the partnerships undertaken in each legislator’s district and potentially advocate for more state support.

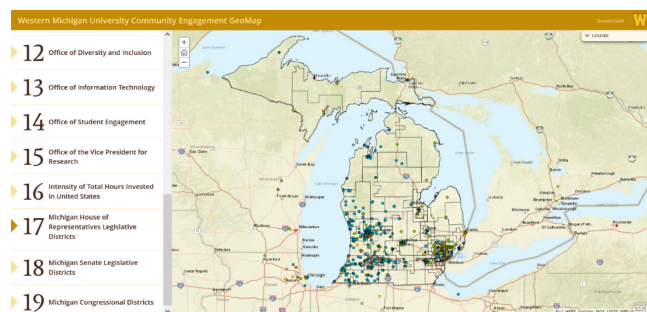


Figure 7. Screen Capture Showing Legislative District Overlay for Michigan House of Representatives.

With our map designed in a way that allows users to navigate, comprehend, and explore one year’s worth of our institution’s community-engaged work, we were poised to move onto the third step in our methodology. This third and crucially important step required us to mobilize reflexivity and arrive at an understanding of our map that identified ways our institution could increase the inclusivity and sustainability of its community-engaged work.

Chorographic Step 3. Reflexively Considering the Map of Our Institution’s Community-Engaged Work

The third broad step of our chorographic methodology required us to use reflexivity to better understand our data by way of our map. As a kind of critical cartographic practice, chorography tasked us with recalling and remembering intentions that informed our map-making, so as to critically exceed intentions and consider social effect (Gryl, 2012; Lehner et al. 2019). The methodology also called upon us to consider the “focal points, themes, and hierarchies” (Clary-Lemon et al. 2022, p. 121) emerging from the first two steps in our process. In this section, we, first, define reflexivity, and, second, examine the map as a future-focused orienteering instrument—a tool designed to increase spatial justice by identifying places where our institution can better improve the inclusivity and sustainability of its community engaged work. Such a reflexive discussion of the results of our mapmaking can be understood as helping our institution “identify potential areas of opportunity” (McKenzie et al., 2016) for improving our community engaged work in the future and moving more toward spatial justice.

Reflexivity

Reflexivity describes an approach to data and representations that critically considers positionality. Reflexivity, as Chiseri-Strater (1996) noted, distinguishes itself from reflection based upon the demand for another: “to be reflective does not demand an ‘other,’ while to be reflexive demands both another and some self-conscious awareness of the process of self-scrutiny” (p. 130). Reflexivity has been described as a “methodological tool” (Pillow, 2003, p. 176), and its ability to engage researchers, designers, communicators, and cartographers in developing “complex understandings of position and privilege” (Jones & Walton, 2018, p. 250) makes it a hallmark of approaches that seek social and spatial justice (Agboka, 2014; Haas & Eble, 2018; Jones, 2014).

Reflexivity proves especially germane to studies of representations (Pillow, 2003), including narratives (Jones & Walton, 2018) and critical cartographic studies of maps (Del Casino & Hanna, 2006). Reflexivity is facilitated through narrative engagement and encourages the development of “critical insights” that relate self

with other and past with future (Jones & Walton, 2018, p. 247; pp. 248–249). As connected to narrative, reflexivity emphasizes the multiplicity of perspective, the relationality of work, and the dynamics of power as relative to different social positionings (Jones & Walton, 2018, pp. 250–251). Reflexivity further serves as “an analytical feature of critical cartography” and it provides chorographers with “a set of tools” that bridge past understandings with “future improvements” (Casti, 2015, xi). Reflexivity gives chorographers opportunities to “raise questions involving the rendering of [map-making’s] social significance, possibly by looking at areas traditionally quite alien to its field, such as the language of technical and visual arts” (Casti, 2015, p. xii). The suggestion, here and one that is supported by the work of Jung (2018) and Stephens and Richards (2020), is that a reflexive approach to studying maps connects the field of critical cartography with other fields interested in technical languages and visual storytelling—fields such as technical communication and communication design.

Thus, a reflexive approach to our map underscores not only the cartographies plotted, but also the stories told, through our use of Esri’s ArcGIS StoryMaps application. As the final broad step to our chorographic methodology, reflexivity enables us to study the past locations of our institution’s community-engaged work and envision a future in which our institution’s community-engaged work might be made more inclusive and sustainable.

Toward a More Inclusive Geography of Institutional Community Engagement

By approaching our map of our institution’s community-engaged work reflexively, we can assess our institution’s past community engagement efforts and identify ways to make these efforts more geographically inclusive in the future. As defined above, geographic inclusivity refers to a goal of increased diversity achieved through spatially just and equitable practices that can be advanced by chorography. Our focus on geographical inclusivity directed our attention toward the positioning of the 2,848 plots on the map with respect to socially established spatial borders such as postal codes, counties, states, and nations. This focus also directed our attention to the relative proximity between these plots, our institution, and socially established borders.

Our map afforded us an opportunity to adjust the scale of our perspective and consider the relative degree of inclusivity demonstrated by one year of our institution’s community engagement initiatives. Most immediately and most readily visible at almost any scale, the map shows that our most concentrated community-engaged work occurred in close proximity to our institution’s main campus with some community engagement initiatives—such as guest lectures, summer youth camps, and fine arts performances—occurring on our university’s main campus. The geographic areas abutting main campus appear saturated with engagement activity from most views of our map. More precisely, the three postal codes that encompass parts of our institution’s Kalamazoo campus included 1,346 plots and accounted for just under 50% of our annual engagement activities (see Figure 8). In each of these postal codes, hundreds of instances of community engaged work occurred. Of these three postal codes, the most densely saturated postal code boasted 713 community-engaged initiatives, while the least densely saturated postal code still hosted 281 community-engaged initiatives.

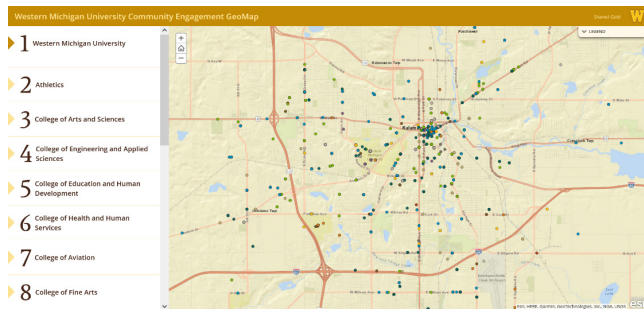


Figure 8. Screen Capture Displaying Cluster of Engagement Activities Near Main Campus.

While the number of engagement activities in these three nearby postal codes is commendable, the geographical distribution leaves much to be desired in terms of inclusivity. To be sure, the map allows for us to transform our perspective by zooming out farther and locating postal codes and surrounding neighborhoods where engagement activity has been less concentrated. When we do so, we can see that the distribution and saturation of our institution’s engagement activities varies considerably. For instance, see Figure 9, which displays a full view of our institution’s home county, Kalamazoo. To better emphasize the county’s border, which our map displays using a light grey dotted line, Figure 9 marks the county line in red. Of the 13 non-unique postal codes in Kalamazoo County that do not encompass part of our university, one postal code had no community-engaged work occur within its geographical boundaries, seven other postal codes hosted between one and 20 initiatives each, and the five remaining postal codes each averaged around 100 initiatives each. Figure 9 shows that those postal codes more removed from our county’s city centers experienced fewer community-engagement initiatives.

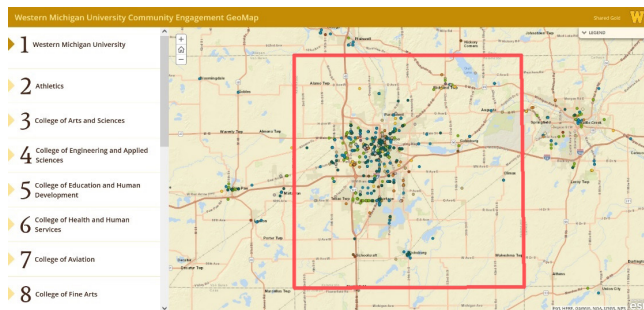


Figure 9. Screen Capture Displaying Distribution of Engagement Activities in Kalamazoo County.

A similar view of our institution’s community-engaged work emerged as we viewed our region (Figure 10) and our state (Figure 11). The map of our institution’s community-engaged work suggested that less densely populated areas and those areas further removed from one of our institution’s campuses were, in turn, less likely to be the location of a community-engaged initiative. We noticed that the densest plot clusters are within close proximity to our university and its respective branch campuses and, conversely, that the map revealed relatively sparse activity across the remaining locations in our state (see Figure 11). Understood in terms of our state’s 917 non-unique postal codes, our university

located its community-engaged work in just over 25% ($n = 236$) of these postal codes. When we gain some distance from postal codes and consider the distribution of our community-engaged work across Michigan’s 83 counties, we see that our institution located a community-engaged initiative in at least 64% percent ($n = 53$) of our state’s counties. Although postal codes and county borders signify two different types of spatial configurations—the former, a delivery route, and the latter, a territorial division—the two calculated percentages provide one indication of the range of the statewide geographic diversity of our institution’s community-engaged work.

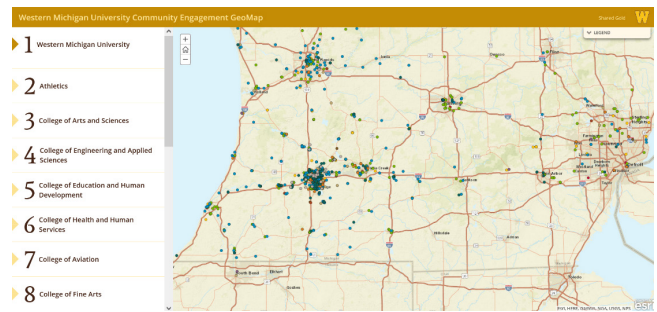


Figure 10. Screen Capture Displaying Regional Distribution of Engagement Activities.

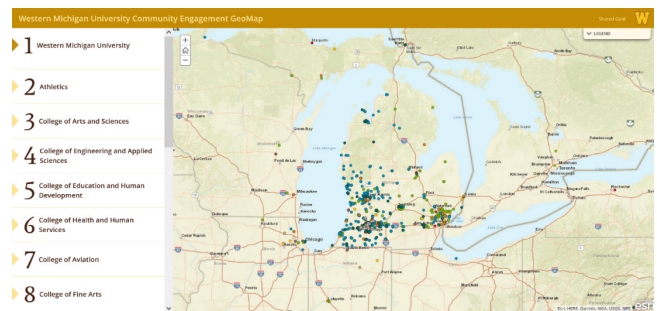


Figure 11. Screen Capture Showing Statewide Distribution of Engagement Activities.

Zooming farther out away from a statewide view and adopting national and global views, we see that plots fall across 29 of the 50 United States, plus the District of Columbia (see Figure 12), and in 15 additional countries (see Figure 13). At these scales, similar complexities regarding plot density and proximity emerge. Visible clusters serve as a visual confirmation of our institution’s commitment to engage with particular areas; thus, encouraging the university to remain accountable, responsive, and responsible for activities in these communities. At the same time, the absence of plots in some areas of the map—for example, South America—raise questions about curricular community-engagement programming, resource allocation, and institutional policies that may be impacting the distribution of community-engaged work at the local, regional, national, and global levels.

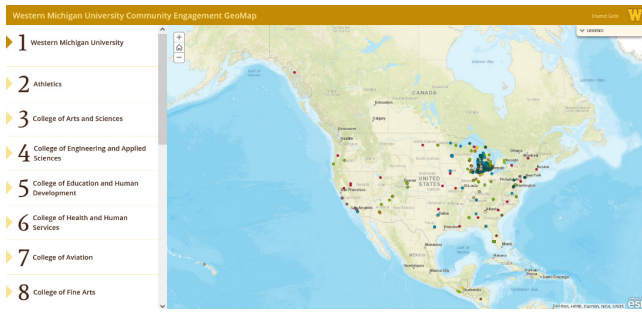


Figure 12. Screen Capture Showing National View of Engagement Activities.



Figure 13. Screen Capture Showing Global View of Engagement Activities.

Toward a More Sustainable Geography of Institutional Community Engagement

By approaching our map of our institution's community-engaged work reflexively, we can also assess our institution's past community engagement efforts and identify ways to make these efforts more geographically sustainable in the future. As explained above, geographic sustainability connotes a goal of increased resiliency achieved through equitable, place-based commitments and durable, high-quality resourcing. Our focus on geographical sustainability directs our attention toward the intensity of resource investment in a given site, the frequency with which one community partner engaged with our institution, and the numbers of university personnel who undertook the community-engaged work or coordinated the community-engaged work for our university.

Viewing the heat map layer of our map of institutional community engagement, we can see the relative level of investment our institution dedicates to particular locations. The average hourly investment by our institution at one location amounted to 860 hours. At just under 300 locations, our institution invested a total of 20 or fewer hours over the course of the year. At the top 20 locations, our institution invested between 4,935 hours and 123,623 hours in one year. Using the 2018 volunteer equivalency rate for Michigan, the labor that our institution committed to these most time-intensive partnerships can be estimated at a value of somewhere between \$122,000 and \$3,000,000 (Independent, 2018). We reason that, as the hourly investment at a specific location grows larger and more intense, so too does the potential for the partnership to reflect the qualities of sustainability. For the most part, the twenty locations that accrued the largest time investment from our institution cut

across institutional divisions and featured a range of curricular, co-curricular, and outreach initiatives that occurred close to our university's main campus. These locations ranged from a hearing clinic to an auditorium, an area hospital to a regional educational office, an educational nonprofit to a religious nonprofit, a design center to a courthouse.

The map further showcases the frequency with which one community partner at one location partnered with our institution on discrete community-engaged projects. By zooming tightly into our map, those locations at which multiple community-engaged initiatives occurred can be identified. These locations suggest the presence of community partners who desired frequent and sustained partnership with our institution. Over 80 of our institution's community partners undertook five or more initiatives with our institution; however, 1,200 locations hosted only one community-engaged initiative. Viewing our map and centering our perspective on the sustainability of our community-engaged work encourages us to take a critical look at these hundreds of locations. Our institution would do well to assess whether these sites can be maintained as locations for community-engaged work in both the short-term and long-term and to determine whether some of these sites might be grown into more sustainable locations for future engagement work. Further, our university might weigh the frequency of the community-engaged work against the intensity of that work to assess sustainability. For instance, one engagement activity involved College of Fine Arts personnel supporting an annual regional competition. Although this community-engaged work occurred once during the year, individuals affiliated with our university dedicated over 800 hours of service and support to this competition.

Geographic sustainability also requires a view of the human resources dedicated to doing the community-engaged work and committed to leading the engagement initiatives. Our top 25 locations at which community-engaged work occurred hosted 100 or more university personnel over the course of the year. These locations have a capacity for large-scale partnerships, the sustainability of which depends upon the interactions between the intensity and frequency of the work and the availability of personnel to engage in that work. In addition to our university needing to maintain certain levels of engagement to sustain these partnerships, our university also needs institutional leaders who will sustain these partnerships through their communication and coordination with site leaders across these various locations. Our map suggests that the institutional leaders of some of our initiatives might be strained. Indeed, the top 20 leaders at our institution oversaw at least 20 community-engaged initiatives each with a few individuals coordinating approximately 150 community-engaged initiatives. Depending upon the exact nature of this coordination, such a workload may threaten the sustainability and quality of our institution's community-engaged work.

For a more specific example of how our map represents our community-engaged work in a way that encourages us to reflexively consider the geographic sustainability of that work, we turn to our international community engagement initiatives. This community-engaged work reached a small number of countries; however, the work exhibited substantial depth, as it involved six of our university's eight colleges and some of our institution's most prominent global learning experiences. In fact, as result of our state's location, more sustained community-engaged work occurs in Ontario, Canada, than it does in ten states of the United

States. Consider, further, Figure 14. Information displayed in Figure 14 includes the community partner name (Ashay Patra), unit (InterProfessional Education), course number (IPE 3050/6050), number of university personnel (eight), and number of hours contributed per individual (20). As many of these national and international engagement activities depend upon the efforts of one or two faculty or staff leaders, the plots further visualize the need for more sustained leadership.



Figure 14. Screen Capture Detailing Map Data for One International Engagement Activity.

One of the ways we used our map to examine the sustainability of our university's engagement activities was to track how many university personnel were involved with international engagement activities. In total, just 12 university faculty and staff members coordinate 27 international activities. Considering the sustainability of our global community-engagement work, this ratio is not optimal. The visual nature and interactivity of the map supplement presentations and reports to key stakeholders, including senior leadership at our university and decision-makers in our community, with the hope of opening meaningful conversations regarding how to both sustain and grow our civic engagement efforts.

CONCLUSION

Chorographic mapping of community engagement initiatives encourages a reflexive approach that more fully embraces the type of comprehensive self-study of community engagement envisioned by the Carnegie Foundation. By using Esri's ArcGIS StoryMaps to design a multilayered, interactive map, we embraced a powerful type of communication design in pursuit of spatial justice. The layers of our map of community engagement placed geographical inclusivity in a productive tension with geographical sustainability. On the one hand, our commitment to inclusivity revealed an unequal and perhaps inequitable distribution of our institution's community-engaged work at many different scales. The plots of our institution's community-engaged work proved denser and more concentrated in some geographic areas. In other geographic areas, the plots were less dense and, in some other areas still, nonexistent. Promoting geographic inclusivity, thus, seemed to highlight needs for redistribution or expansion of our institution's community-engaged work. On the other hand, our commitment to sustainability revealed clusters of our institution's community-engaged work that combined intense resource concentration, frequent engagement, and committed personnel in arrangements that seemed much more sustainable than other instances of our institution's community-engaged work that were missing one, two, or even all three of these components. As we considered ways that our institution

could strategically increase the sustainability of its community-engaged work, we were compelled to question the viability of work that was characterized by scarce resources, less frequent engagements, and over-committed leaders. From one perspective, increasing sustainability in the context of limited institutional resources seemed to encourage a selectivity that runs counter to our commitment to inclusivity. Thus, our multilayered map produced a multilayered tension between inclusivity and sustainability that we felt was reflexively generative. We follow Walton et al. (2019) in understanding this tension as one indicative of a positionality enabled by chorography—that is, “as a tool that opens space for connection to others” (p. 80).

To be sure, the generative tension that we experienced as we collected our data, designed our map, and mobilized reflexivity reinforces the stages of the place-based community engagement framework. Defined “as a long-term university-wide commitment to partner with local residents, organizations, and other leaders to focus equally on campus and community impact within a clearly defined geographic area,” the place-based community engagement framework spans three phases of exploring, developing, and sustaining (Yamamura & Koth, 2018, p. 21). Chorographic mapping, we argue, enhances the place-based community engagement framework. Chorography allows for an institution to explore existing geographies of community-engaged work, develop strategy based upon geographically informed data, and prioritize sustainability in a way that foregrounds spatial justice. Because of its emphasis on geographic location, the place-based community engagement framework seems to almost necessitate institutional use of a map to orient an institution to a particular place. Put differently, maps and mapmaking seem indispensable to institutional efforts aimed at identifying a particular geography within which to focus community-engaged work.

Beyond highlighting chorography's compatibility with the place-based community engagement framework, we argue that the multilayered mapping that is characteristic of chorography proves particularly effective in bringing institutional attention to spatial interstices of power, policy, positionality, and privilege that continually influence each instance of community-engaged work undertaken by institutions of higher education in the United States. Dynamic intersections of power, policy, positionality, and privilege orient community-university partnerships—sometimes toward mutuality, reciprocity, and relative success; other times toward misunderstanding, division, and relative failure—and our map makes manifest these spatial interstices. Our map navigates many power differentials—including those between the Carnegie Foundation and our home institution; those among our institution's administrators, faculty, staff, and students; those between our institution and our community partners; and, even those among our community partners across private, public, and nonprofit sectors. Similarly, our map traverses myriad policies that influence each plotted partnership. These policies emerge from our community partners, our institution, our government, and the Carnegie Foundation as forms, applications, waivers, definitions, and memoranda of understanding that direct community-engaged activity and mandate certain conduct between partners. As chorographers representing 2,848 discrete community engaged activities, we were further and frequently reminded of our positionality as university insiders who were quite familiar with the quality of some of the partnerships plotted on our map, but woefully unfamiliar with the quality of the majority of the

partnerships that we represented on the map. While we were able to speak to our own commitments to responsibly and equitably forging those partnerships with which we were personally involved, we were unable to speak to the quality of the majority of the plotted points on our map—a piece of communication that was used to communicate the story of our institution’s community-engaged work to our stakeholders. We remain acutely aware of this communication challenge.

We also recognize the privilege afforded to us, both as university employees and as mapmakers, to create this map. We used the power-laden practice of mapmaking and navigated existing institutional power structures to enact change. Indeed, the aim of chorography—to render landscape in a way that recovers social subjectivity and the relationship between space and community values—lends itself to our goal of increased spatial justice. Our use of chorography sought to advocate for improvements in our institution’s community-engaged work. By foregrounding the where of our institution’s community partnerships, chorography enables us to stress the geographic dimensions of power, policy, positionality, and privilege. By plotting past social and geographical spaces, chorography asks us to relocate and reorient toward redesigned future spaces. By visualizing relational dimensions of community-engaged work such as proximity and intensity, chorography encourages us to envision new, more equitable, and more just relations. And, by drawing upon the expertise of technical and professional communicators who demonstrate commitment to social justice work, chorography offers us an important methodology through which we might build partnerships that take action toward enacting these same relations.

REFERENCES

- Agboka, G. Y. (2014). Decolonial methodologies: Social justice perspectives in intercultural technical communication research. *Journal of Technical Writing and Communication*, 44(3), 297–327. <https://doi.org/10.2190/TW.44.3.e>
- Alford, C. (2016). Creating with the ‘universe of the undiscussed’: Hashtags, doxa, and choric invention. *Enculturation*, 23(1). <http://enculturation.net/creating-with-the-universe-of-the-undiscussed>
- Barney, T. (2009). Power lines: The rhetoric of maps as social change in the post–Cold War landscape. *Quarterly Journal of Speech*, 95(4), 412–434. <https://doi.org/10.1080/00335630903296176>
- Barney, T. (2013). “‘Gulag’—Slavery, Inc.”: The power of place and the rhetorical life of a Cold War map. *Rhetoric and Public Affairs*, 16(2), 317–354. <https://doi.org/10.14321/rhetpublaffa.16.2.0317>
- Barney, T. (2014). The Peters Projection and the latitude and longitude of recolonization. *Journal of International and Intercultural Communication*, 7(2), 103–126. <https://doi.org/10.1080/17513057.2014.898359>
- Barney, T. (2015). *Mapping the Cold War: Cartography and the framing of America’s international power*. University of North Carolina Press.
- Barney, T. (2016). The rhetorical lives of (Cold War) maps. In A. Benedek & A. Veszelszki (Eds.), *In the beginning was the image: The omnipresence of pictures* (pp. 83–90). Peter Lang.
- Barney, T. (2017). Cartographies of war and peace. In A. J. Kent & P. Vujakovic (Eds.), *The Routledge handbook of mapping and cartography* (pp. 173–184). Routledge.
- Barney, T. (2019a) Cartographer-in-chief: Maps in televisual addresses and the Cold War president as geographic educator. In S. J. Heidt & M. E. Stuckey (Eds.), *Reading the presidency: Advances in presidential rhetoric* (pp. 23–43). Peter Lang.
- Barney, T. (2019b). The sight and site of North Korea: Citizen cartography’s rhetoric of resolution in the satellite imagery of labor camps. *Quarterly Journal of Speech*, 105(1), 1–24. <https://doi.org/10.1080/00335630.2018.1553306>
- Barney, T. (2020). Colonial vestiges on the map: A rhetorical history of development cartography at the United Nations during post-war decolonization. *Journal for the History of Rhetoric*, 23(2), 173–198. <https://doi.org/10.5325/jhistrhetoric.23.2.0173>
- Barton, B. F., & Barton, M. S. (2004). Ideology and the map: Toward a postmodern visual design practice. In J. Johndan-Eilola & S. A. Selber (Eds.), *Central works in technical communication* (pp. 232–252). Oxford University Press. (Reprinted from *Professional communication: The social perspective*, pp. 49–78, by N. R. Blyler & C. Thralls, Eds., 1993, Sage.)
- Barton, B. F., & Barton, M. S. (1993). Modes of power in technical and professional visuals. *Journal of Business and Technical Communication*, 7(1), 138–162. <https://doi.org/10.1177/1050651993007001007>
- Butts, S., & Jones, M. (2021). Deep mapping for environmental communication design. *Communication Design Quarterly Review*, 9(1), 4–19. <https://doi.org/10.1145/3437000.3437001>
- Carlson, E. B. (2021). Visual participatory action research methods: Presenting nuanced co-created accounts of public problems. In R. Walton & G. Y. Agboka (Eds.), *Equipping technical communicators for social justice work* (pp. 98–115), University Press of Colorado. <https://doi.org/10.7330/9781646421084.c005>
- Carnegie Elective Classifications. (2022a). *Carnegie elective classifications*. <https://carnegieelectiveclassifications.org/>
- Carnegie Elective Classifications. (2022b). *CE resources from 2020 cycle and earlier*. <https://carnegieelectiveclassifications.org/resources-from-2020-cycle-and-earlier/>
- Carnegie Foundation for the Advancement of Teaching: Elective Community Engagement Classification. (2016). *Re-classification documentation framework: 2020 classification*. <https://drive.google.com/file/d/136uyi1yAO0JY3DUuZZtZq-Lt8npMtn-x/view>
- Casti, E. (2015). *Reflexive cartography: A new perspective in mapping*. Elsevier.

- Chiseri-Strater, Elizabeth. (1996). Turning in on ourselves: Positionality, subjectivity, and reflexivity in case study and ethnographic research. In P. Mortensen & G. E. Kirsch (Eds.), *Ethics and representation in qualitative studies of literacy* (pp. 115–133). National Council of Teachers of English.
- City of Kalamazoo. (2017). *Master plan: Imagine Kalamazoo 2025*. <http://www.imaginekalamazoo.com/plans/>
- Clary-Lemon, J., Mueller, D., & Pantelides, K. (2022). *Try this: Research methods for writers*. University Press of Colorado. <https://doi.org/10.37514/PRA-B.2022.1442>
- Del Casino, Jr., V. J., & Hanna, S. P. (2006). Beyond the ‘binaries’: A methodological intervention for interrogating maps as representational practices. *ACME: An International Journal for Critical Geographies*, 4(1), 34–56.
- Denil, M. (2003). Cartographic design: Rhetoric and persuasion. *Cartographic Perspectives*, 45, 8–67. <https://doi.org/10.14714/CP45.498>
- Driscoll, A. (2008). Carnegie’s community-engagement classification: Intentions and insights. *Change: The Magazine of Higher Learning*, 40(1), 38–41. <https://doi.org/10.3200/CHNG.40.1.38-41>
- Eckel, P., Hill, B., & Green, M. (1998). *On change: En route to transformation*. American Council on Education.
- Esri: ArcGIS StoryMaps. (2022). *What is ArcGIS StoryMaps?* <https://doc.arcgis.com/en/arcgis-storymaps/get-started/what-is-arcgis-storymaps.htm>
- Getto, G., & Moore, C. (2017). Mapping personas: Designing UX relationships for an online coastal atlas. *Computers and Composition*, 43(1), 15–34. <https://doi.org/10.1016/j.compcom.2016.11.008>
- Gogan, B., & Harrison, J. (2018, September 14). *Shared gold: Mapping of community engagement* [Poster presentation]. Western Michigan University 2018 Fall Convocation, Kalamazoo, MI, United States. https://scholarworks.wmich.edu/acad_leadership/78
- Gonzales, L. & Simmons, W. M. (2018, March 13–14) *Moving beyond the buzzword of civic engagement* [Plenary address]. 2018 Association of Teachers of Technical Writing Conference, Kansas City, KS, United States.
- Gryl, I. (2012). Reflexivity and geomedia – Going beyond domain-specific competence development. *GI_Forum*, 182–192.
- Haas, A. M., & Eble, M. F. (2018). Introduction: The social justice turn. In A. M. Haas & M. F. Eble (Eds.), *Key theoretical frameworks: Teaching technical communication in the twenty-first century* (pp. 3–19). University Press of Colorado. <https://doi.org/10.7330/9781607327585.c000>
- Harley, J. B. (2001). *The new nature of maps: Essays in the history of cartography*. Johns Hopkins University.
- HDRReAM: Health Data Research, Analysis and Mapping Center. (2016). *HDRReAM online data mapper*. <https://wmich.edu/hdream/gis-server/index.html>
- Hurley, E. V. (2018). Spatial orientations: Cultivating critical spatial perspectives in technical communication pedagogy. In A. M. Haas & M. F. Eble (Eds.), *Key theoretical frameworks: Teaching technical communication in the twenty-first century* (pp. 93–113). University Press of Colorado. <https://doi.org/10.7330/9781607327585.c004>
- Independent Sector. (2018). *Value of volunteer time*. <https://independentsector.org/resource/value-of-volunteer-time/>
- Indiana University Center for Postsecondary Research. (2021). *The Carnegie Classification of Institutions of Higher Education*. <https://carnegieclassifications.iu.edu/>
- Johnson, M. A., Simmons, W. M., & Sullivan, P. (2017). *Lean technical communication: Toward sustainable program innovation*. Routledge. <https://doi.org/10.4324/9781315538174>
- Jones, N. M. (2014). Methods and meanings: Reflections on reflexivity and flexibility in an intercultural ethnographic study of an activist organization. *Journal of Rhetoric, Professional Communication, and Globalization*, 5(1), 2. <https://docs.lib.purdue.edu/rpcg/vol5/iss1/2>
- Jones, N. N., Moore, K. R., & Walton, R. (2016). Disrupting the past to disrupt the future: An antenarrative of technical communication. *Technical Communication Quarterly*, 25(4), 211–229. <https://doi.org/10.1080/10572252.2016.1224655>
- Jones, N. N., & Walton, R. (2018). Using narratives to foster critical thinking about diversity and social justice. In A. M. Haas & M. F. Eble (Eds.), *Key theoretical frameworks: Teaching technical communication in the twenty-first century* (pp. 241–267). University Press of Colorado. <https://doi.org/10.7330/9781607327585.c010>
- Jung, J. K. (2018). Mapping communities: Geographic and interdisciplinary community-based learning and research. *The Professional Geographer*, 70(2), 311–318. <https://doi.org/10.1080/00330124.2017.1366787>
- Kostelnick, C. (2007). The visual rhetoric of data displays: The conundrum of clarity. *IEEE Transactions on Professional Communication*, 50(4), 280–294. <https://doi.org/10.1109/TPC.2007.908725>
- Kumar, R. (2014). *Research methodology: A step-by-step guide for beginners* (4th ed). SAGE.
- Kymäläinen, P., & Lehtinen, A. A. (2010). *Chora* in current geographical thought: Places of co-design and re-membering. *Geografiska Annaler: Series B, Human Geography*, 92(3), 251–261.
- Lehner, M., Pokraka, J., & Gryl, I. (2019). From ‘the map’ to an internalized concept. Developing a method of deconstruction as practice for reflexive cartography. *GI_Forum*, 7(2), 194–205. https://doi.org/10.1553/giscience2019_02_s194
- Lucaites, J. L., & Hariman, R. (2001). Visual rhetoric, photojournalism, and democratic public culture. *Rhetoric Review*, 20(1/2), 37–42.
- Malkowski, J. A., & Klenke, C. M. (2020). Rhetorical cartographic story maps as public work. *Review of Communication*, 20(2), 178–187. <https://doi.org/10.1080/153>

- McKenzie, T., Trussell, A., Holton, V., Guilford, S., & DeShazo, J. (2016). *Smashing silos: Community engagement maps – a VIVO extension* [Poster presentation]. VIVO 2016 Conference, Denver, CO, United States.
- Peña, L. (2018a). *StoryMaps comparison sheet*. Unpublished internal documentation. Shared Gold Implementation Committee, Western Michigan University.
- Peña, L. (2018b). *StoryMaps recommendation*. Unpublished internal memorandum. Shared Gold Implementation Committee, Western Michigan University.
- Peña, L. (2018c). *Western Michigan University story map*. Unpublished standard operation procedure. Shared Gold Implementation Committee, Western Michigan University.
- Pillow, W. (2003). Confession, catharsis, or cure? Rethinking the uses of reflexivity as methodological power in qualitative research. *International Journal of Qualitative Studies in Education*, 16(2), 175–196. <https://doi.org/10.1080/0951839032000060635>
- Propen, A. D. (2005). Critical GPS: Toward a new politics of location. *ACME: An International Journal for Critical Geographies*, 4(1), 131–144.
- Propen, A. D. (2007). Visual communication and the map: How maps as visual objects convey meaning in specific contexts. *Technical Communication Quarterly*, 16(2), 233–254. <https://doi.org/10.1080/10572250709336561>
- Propen, A. D. (2011). Cartographic representation and the construction of lived worlds: Understanding cartographic practice as embodied knowledge. In M. Dodge, R. Kitchin, & C. Perkins (Eds.), *Rethinking maps: New frontiers in cartographic theory* (pp. 131–148). Routledge.
- Propen, A. D. (2012). *Locating visual-material rhetorics: The map, the mill, and the GPS*. Parlor.
- Rice, J. (2007). *The rhetoric of cool: Composition studies and new media*. Southern Illinois University.
- Rice, J. (2012). *Digital Detroit: Rhetoric and space in the age of the network*. Southern Illinois University.
- Rickert, T. (2007). Toward the *chōra*: Kristeva, Derrida, and Ulmer on emplaced invention. *Philosophy & Rhetoric*, 40(3), 251–273.
- Rickert, T. (2013). *Ambient rhetoric: The attunements of rhetorical being*. University of Pittsburgh.
- Saltmarsh, J., & Johnson, M. (2020). Campus classification, identity, and change: The elective Carnegie classification for community engagement. *Journal of Higher Education Outreach and Engagement*, 24(3), 105–114.
- Saltmarsh, J., & Johnson, M. B. (Eds.). (2018). *The Elective Carnegie community engagement classification: Constructing a successful application for first-time and re-classification applicants*. Stylus.
- Soja, E. (2010). *Seeking spatial justice*. University of Minnesota Press. <https://doi.org/10.5749/minnesota/9780816666676.001.0001>
- Stephens, S. H., & Richards, D. P. (2020). Story mapping and sea level rise: Listening to global risks at street level. *Communication Design Quarterly Review*, 8(1), 5–18. <https://doi.org/10.1145/3375134.3375135>
- Ulmer, G. L. (2008). The chora collaborations. *Rhizomes: Cultural Studies in Emerging Knowledge*, 18(1). <http://www.rhizomes.net/issue18/ulmer/index.html>
- Walton, R., Moore, K. R., & Jones, N. N. (2019). *Technical communication after the social justice turn: Building coalitions for action*. Routledge.
- Welch, M. (2016). *Engaging higher education: Purpose, platforms and programs for community engagement*. Stylus.
- Welhausen, C. A. (2015). Power and authority in disease maps: Visualizing medical cartography through yellow fever mapping. *Journal of Business and Technical Communication*, 29(3), 257–283. <https://doi.org/10.1177/1050651915573942>
- Welhausen, C. A. (2017). At your own risk: user-contributed flu maps, participatory surveillance, and an emergent DIY risk assessment ethic. *Communication Design Quarterly Review*, 5(2), 51–61. <https://doi.org/10.1145/3131201.3131206>
- Western Michigan University. (2015). *The gold standard 2020*. <https://wmich.edu/strategic/our-past-gold-standard-2020>
- Yamamura, E. K., & Koth, K. (2018). *Place-based community engagement in higher education: A strategy to transform universities and communities*. Stylus.
- Yamamura, E. K., & Koth, K. (2019). Leadership practices for place-based community engagement initiatives. *Journal of Higher Education Outreach and Engagement*, 23(1), 181–196.

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