REFLECTIONS

Digital Mapping and Musicological Claims to Authority

Louis K. Epstein

Maps bring the distant near and make the foreign more familiar. They help organize people, ideas, events, infrastructure, and natural resources within our geographic and historical imaginaries. In these ways, maps are not so different from scores, archival texts, or indeed musicological writing itself. There is no question that maps—those we consume and those we produce—are of value to musicological inquiry. We can and should, however, question how we might use maps in our research and teaching, and how critically we should consume and produce maps. These are questions I have sought to answer in collaboration with dozens of undergraduate students at St. Olaf College.[1] We have spent more than a decade developing *The Musical Geography Project*, which explores the intersections of space, time, and sound through musicologically-oriented cartography. In this essay, I argue that maps offer promising ways to improve our teaching and our public outreach, but they present fundamental challenges when it comes to doing research and writing history. To illustrate this argument, I'll draw on my own and others' mapping projects to demonstrate the diverse musicological functions that digital maps can serve, and I'll encourage critical approaches to the claims to authority that musicological maps often make.

When I began teaching music history, I saw maps as an important pedagogical tool: by engaging with musicological maps, students could construct their own understanding of the relationships between space, place, and sound through playful exploration. That might take the form of merely "reading" maps that visualize music history, for instance by using this map to examine the transmission of early-twentieth-century French music across three continents through the tours of the Ballets Russes.

1 See https://musicalgeography.org/the-team/ for a non-exhaustive list of my student collaborators since 2015.

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Fig. 1 – Map of Ballets Russes performances, 1909–29. Compiled by Emily Hynes.

Musicologists typically characterize Stravinsky's *Rite of Spring* as a piece that changed the direction of twentieth-century music, but a map such as this one (*see* Fig. 1) can help students understand that the piece's reception history was more complicated and interesting than its legacy might suggest. For instance, students can use the map to determine whether Stravinsky's *Rite of Spring* was as influential and important to global audiences in the teens and 20s as it is to us today. If you access the interactive version of the map and click on a number of these points, you will quickly realize that *The Rite of Spring* was not the signature piece of the Ballets Russes that history books and scholarship make it out to be; they simply did not tour the piece.

Just as this map can help my students imagine themselves on a Ballets Russes tour, a map can also help them imagine themselves navigating a place like Paris on a particular evening in the past, choosing among concert options and learning about the tensions between the music that was new at the time—the music we disproportionately emphasize in our teaching and scholarship—and the more conservative concert culture that dominated at the time.

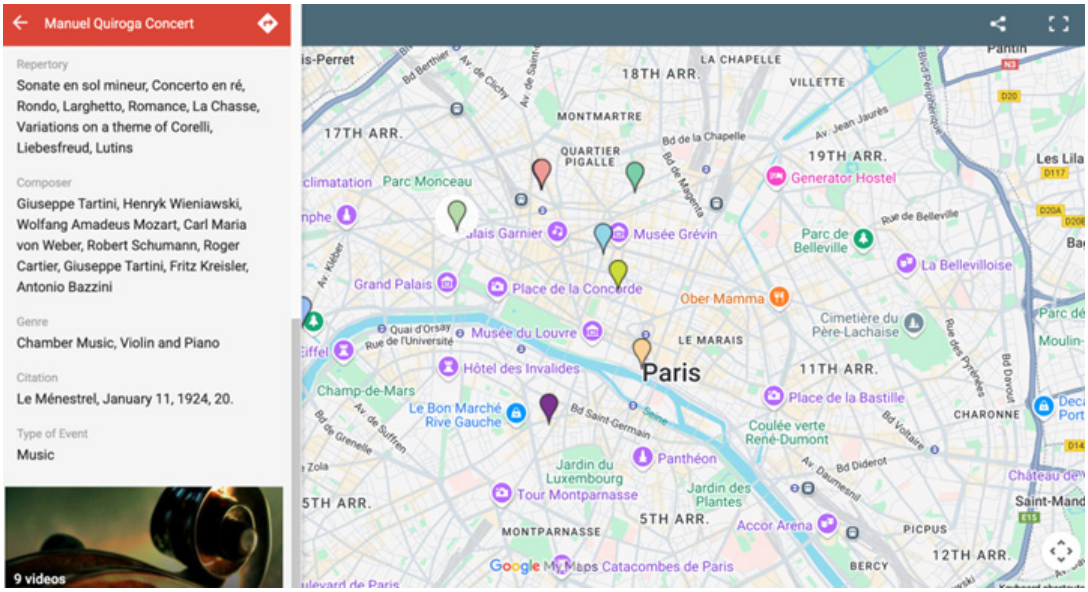

Fig. 2 – Map of concerts in Paris on January 12, 1924.

The information used to populate this map (*see* Fig. 2) is readily available in digitized historical newspapers, but the barrier to access that information remains steep for many: French language ability, knowledge of how early-twentieth-century Parisian newspapers were organized, resources to pay for a Retronews.fr subscription or navigate Gallica.fr, the digital repository of the Bibliothèque Nationale de France. I cannot ask all of my students to overcome these learning and resource curves. But having created the map, I can transport students back in time by asking them to navigate an intuitive Google Maps interface. Again, they can ask: are scholarly emphases on the frisson of musical novelty in 1920s Paris accurate, or distortions of the likely day-to-day experience of average Parisian concert-goers? In this case, students quickly discover that repertory by Tartini, Mozart, Beethoven, and Schumann was more common than repertory by Debussy, Ravel, Milhaud, Poulenc, or Satie. To the extent that maps represent what is real, then, they can serve as a valuable counterbalance to historiographical distortions that scholars often perpetuate through teaching, despite our best intentions to the contrary.

In this way, maps' ability to represent more data points simultaneously than are legible on a single page (or in a single spreadsheet) afford them a claim to authority that most humanistic scholarship and teaching cannot

match. Whereas an article or a book can at best provide mere fragments of the evidence a scholar relies on to make an argument, and whereas an article or a book at its worst reduces that evidence to an unrepresentative sample, an evidence-rich digital map can present a larger sample with greater depth and therefore a less selective vantage point on the story being told. Todd Presner, David Shepard and Yoh Kawano have theorized maps' depth-plus-breadth capacities in terms of "thick mapping," borrowing from Clifford Geertz's ethnographic "thick description."[2] Similarly, in *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*, Janet Murray argues that digital platforms allow scholars "to tell stories from multiple vantage points and to offer intersecting stories that form a dense and wide-spreading web."[3] In other words, maps that serve as reference sources and archival portals allow users to construct their own narratives, or to perform their own peer review of the conclusions that scholars claim the mapped materials support. Johanna Drucker has described such maps as "an interface that is meant to expose and support the activity of interpretation."[4]

One brand of authoritative pedagogical map, then, is one that visualizes the movement of a large—or at least truly representative—number of music and musicians across time and space. But it is worth pointing out that these maps do not necessarily *need* to be maps: they could just as easily be searchable databases or digital exhibits. Beyond convenience, an important advantage of representing historical information cartographically is the potential for readers to draw spatially-informed conclusions about history on their own. But such conclusions hardly come automatically. If we want maps to serve that purpose in teaching contexts, then students need to be taught how to read maps, just as they need to be taught how to read scholarship. Diana Sinton is a geographer who has written extensively on what she calls critical spatial thinking: the ability to read a map for what it can teach us about the relationship between space, place, human behavior, and/or natural phenomena.[5] In line with Sin-

2 See Todd Presner, David Shepard, and Yoh Kawano, *Hypercities: Thick Mapping in the Digital Humanities* (Cambridge, MA: Harvard University Press, 2014).

3 Janet Murray, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace* (Cambridge, MA: MIT Press, 2017), 102.

4 Johanna Drucker, *Graphesis: Visual Forms of Knowledge Production* (Cambridge, MA: Harvard University Press, 2014), 178–79.

5 Diana S. Sinton, "Critical Spatial Thinking," in *The International Encyclopedia of Geography: People, the Earth, Environment, and Technology*, ed. Douglas Richardson, Noel Castree, Michael F. Goodchild, Audrey Kobayashi, Weidong Liu, and Richard A. Marston (Hoboken, NJ: John Wiley & Sons, 2017).

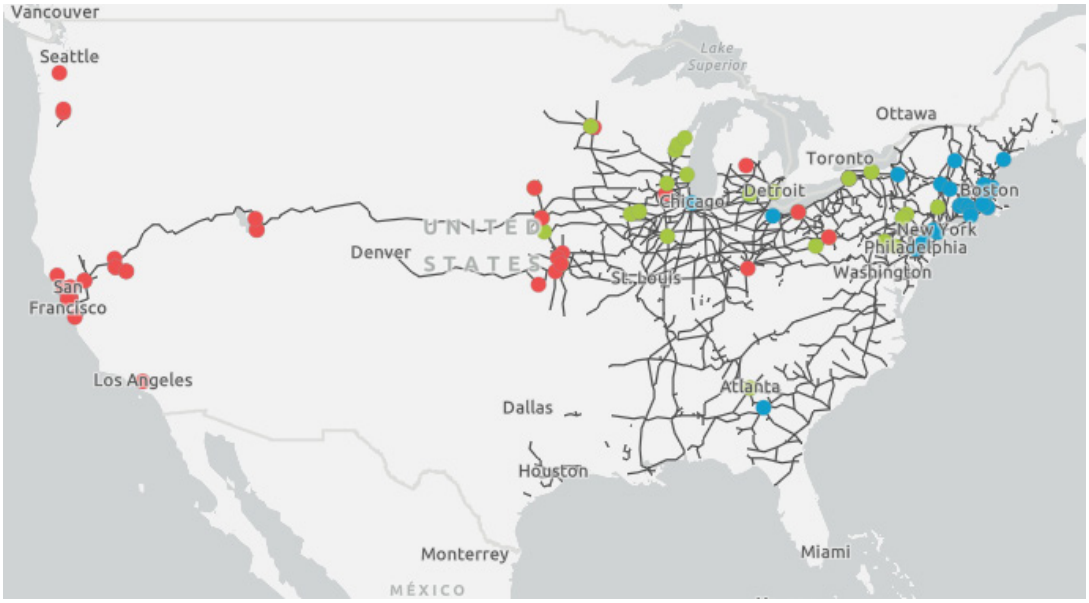

Fig 3 – Comparing minstrel troupe tours, 1865–79. Map prepared by Elsa Buck, Emma Byrd, Tess McCarty, Emma Rosen, and Jack Slavik, accessible at https://musicalgeography.org/map-gallery-3/.

ton's ideas, I introduce students to certain aspects of music history through maps that entrain spatial literacy. For example, when I teach my students about the popularity of blackface minstrelsy in the United States in the late nineteenth century, I want them to understand that minstrelsy was hardly the aberration we characterize it as today but rather the primary product of the American popular culture industry. And it was linked to other industries as well. So, I use several maps showing touring by minstrel companies to help students understand that it is not just *where* music happened that matters, but also *how* music gets from one place to another.

In this map (*see* Fig. 3), it is apparent that minstrel tours spread through the country along with the burgeoning railroad network; pre-1870 tours among these particular groups were limited to the East Coast, while the completion of the transcontinental railroad in 1870 opened the West Coast to minstrel troupes and made touring through the Midwest more profitable. This map and several others (below) show differences in touring patterns between companies featuring Black performers, on the left, and companies featuring white performers, on the right.

With guidance, students quickly perceive that minstrel companies were big business, and that white and Black-managed companies performed on

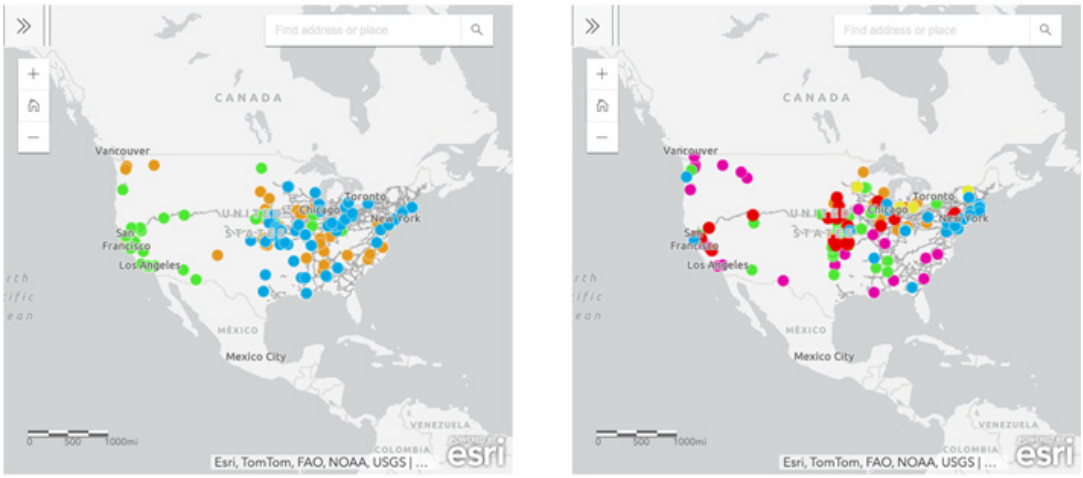

Fig. 4 – Comparison of black- and white-managed minstrel troupe touring, late nineteenth/early twentieth centuries. Maps prepared by Elsa Buck, Emma Byrd, Tess McCarty, Emma Rosen, and Jack Slavik, accessible at https://musicalgeography.org/map-gallery-3/.

slightly different circuits. By themselves, these maps (*see* Fig. 4) do not tell the story; students need to be walked through the ways spatial patterns enter into conversation with more traditional forms of historical evidence.

Teaching with maps feels natural and is hardly a new idea; musicologists have been teaching with maps for decades, going at least as far back as the *Atlas historique de la musique* by Paul Collaer and Albert Vander Linden.[6] But using maps as resources and tools for researchers presents some difficulties. To reiterate a deceptively simple point, maps do not make arguments on their own, and even with effort, plenty of musicological maps stand little chance of making any argument at all. Merely representing the locations of people, events, musical venues, or other geolocated musical materials does not necessarily lead to spatially-informed or historiographical conclusions. This proved to be the case when my students and I undertook an ambitious mapping project focused on the careers of the first thirty graduates of the Washington Conservatory of Music, the first conservatory founded by and for Black Americans. We explored a number of ways to visualize the information we gleaned from newspapers, census records, city directories, concert programs, and over twenty archives, but almost none of our visualizations did anything to advance our argument. We made maps of performances by graduates in

6 Paul Collaer and Albert Vander Linden, *Atlas historique de la musique* (Paris: Elsevier, 1960).

Washington, D.C. and nationally. We mapped the archive, looking at how far afield newspapers reported on Washington Conservatory graduates. And we mapped HBCUs (Historically Black Colleges and Universities) that competed with the Washington Conservatory for students.[7] These were all instructive exercises, at least pedagogically, but none of these maps led to any kind of meaningful spatial analysis, nor did they advance our argument. This is not to say that the research was fruitless; we ultimately published an article on what we learned along the way.[8] But our maps did not advance our research objectives so much as they served as a pretext for doing the research in the first place.

Happily, there are numerous examples of musicological maps that advance arguments and serve as research tools. As I have discussed elsewhere, Danielle Fosler Lussier's *Database of Cultural Presentations* offers one example of a spatially-oriented finding aid: it visualizes the destinations of hundreds of State Department-sponsored tours of United States-based musicians and ensembles between 1954 and 1980, and it gives users the option to navigate archival records through several search fields or by clicking blue markers placed one-to-a-country.[9] Created by the team compiling the *New Senfl Edition*, the mapping project *Senfl's World* provides another example, allowing users to access hundreds of archival records that help scholars piece together a biographical and cultural profile of the sixteenth-century Swiss Renaissance composer Ludwig Senfl.[10] A much older project, one that inspired some of my early work, offers one more instructive example: Emily Thompson's *Roaring Twenties* map serves as a resource complementing her 2002 book, *The Soundscape of Modernity: Architectural Acoustics and the Culture of Listening in America, 1900–1933*. The *Roaring Twenties* map visualizes and, in some cases, sonically represents noise complaints made between 1926 and 1933 in New York City.[11] *Senfl's World*, the *Database of Cultural Presentations*, and the *Roaring Twenties* maps all serve as archival portals that go beyond mere

7 You can find a digital exhibit on the Washington Conservatory and our maps at https://musicalgeography.org/project/washington-conservatory-alumni/ (accessed May 24, 2026).

8 Louis K. Epstein and Maeve Nagel-Frazel, "Beyond Exceptionalism: The Washington Conservatory of Music and the Education of Black Classical Musicians, 1903–1960," *Journal of the American Musicological Society* 77, no. 3 (Fall 2024): 623–73.

9 See Louis K. Epstein, "The Promise and Peril of Making Digital Maps Sing," *Journal of the American Musicological Society* 74, no. 1 (Spring 2024): 263–85.

10 *Senfl's World*, accessed July 14, 2025. https://senfls-world.humap.site/.

11 *The Roaring Twenties*, accessed July 14, 2025. http://nycitynoise.com.

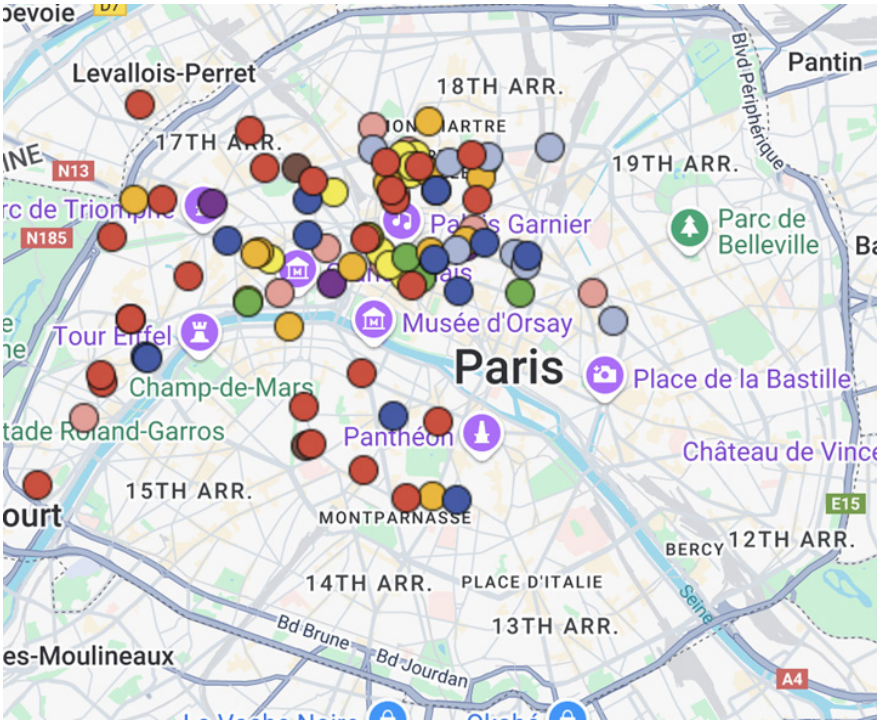

Fig. 5 – Musical venues in 1924 Paris by type, compiled by Phillip Claussen, Natalie Kopp, Katharina Bierman, and Breanna Olson, accessible at https://musicalgeography.org/project/venues-in-paris-and-worldwide-2/.

databases to help musicologists move towards a thick description of historical musical life. They are both reference sources and opportunities to immerse oneself in an archive through spatial imagination, adopting an affective approach to music history much like that of my students navigating an evening's worth of performances in 1924 Paris. These maps situate archival objects, sound and video clips within the map interface, thus offering students and scholars alike an experience that can bring to life even the driest of archival materials or the most esoteric of narratives.

So, maps can help us teach and can serve as reference sources and archival portals. But do maps move our research forward? In the cases I have just presented, we might argue they do not. I'm not sure that *Senfl's World* shows us anything about Senfl that we could not have learned by reading a biography of the composer. Similarly, Emily Thompson's map is meant as a whimsical companion to a book-length argument, not as a new way of thinking about the evidence the book summarized. In my experience,

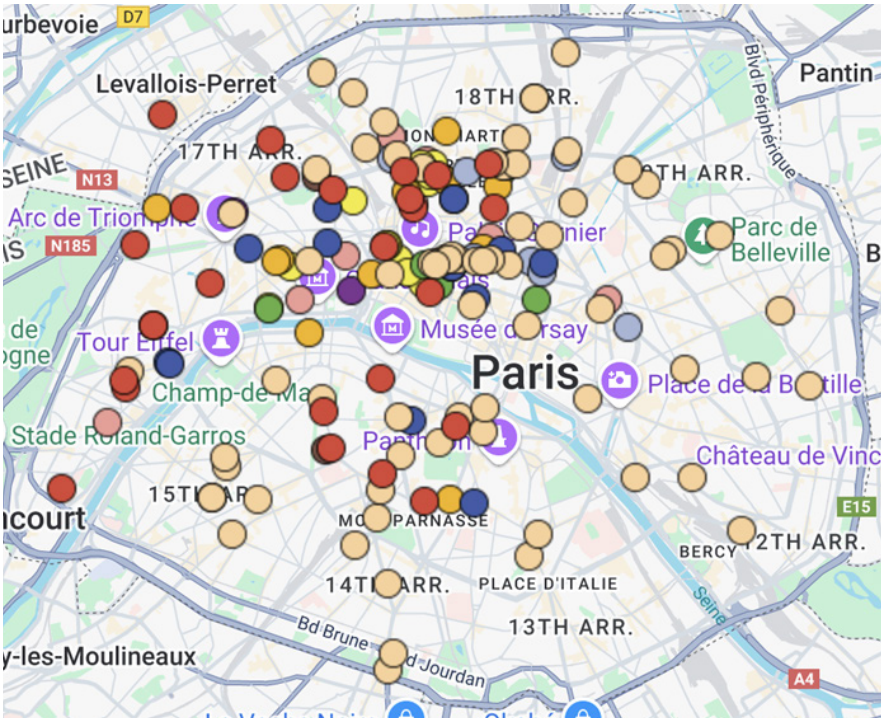

Fig. 6 – Musical venues in 1924 Paris by type, including cinemas, compiled by Phillip Claussen, Natalie Kopp, Katharina Bierman, and Breanna Olson, accessible at https://musicalgeography.org/project/venues-in-paris-and-worldwide-2/.

maps that rely on spatial logics to advance scholarly research are relatively rare. One exceptional example is this map (*see* Fig. 5) of Parisian musical venues in 1924.

In a general sense, the presence of venues in the central and western thirds of the city is unsurprising: historians have long known that these were the parts of the city where important premieres took place, where artists and musicians congregated. More interesting here are the absences. Were there really no music venues in the eastern third of the city? Or is it possible that because eastern Paris was the home of immigrant and poorer communities, archives have not preserved detailed records of those communities' music-making? If we approach musical life in Paris more inclusively, we can identify at least one major category of venue in the eastern third of Paris in 1924: the anything-but-silent cinema (*see* Fig. 6).

As you can see, cinemas spread evenly throughout the city, demonstrating film's remarkably democratic reach across class and ethnic lines. Still,

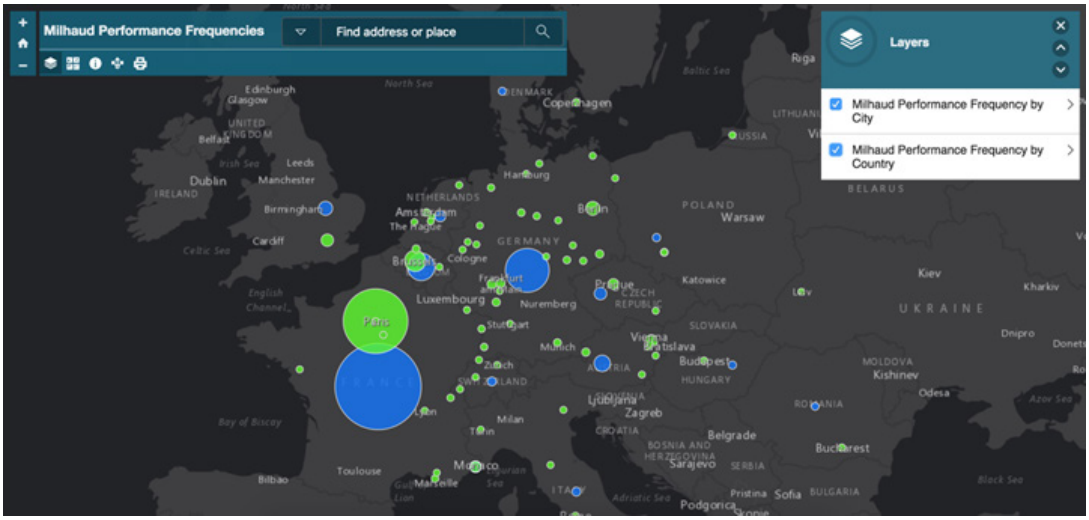

Fig. 7 – Performances of Darius Milhaud's music, 1922–33, by frequency. Compiled by Siriana Lundgren, Elizabeth Lacy, Anna Perkins, and Juliette Emmanuel, accessible at https://stolaf.maps.arcgis.com/apps/View/index.html?appid=a7c8ba1aae344d47bb1b2f3b41d00da9.

there remains an open question about what music Parisians living in the city's east made; this is a question that could inspire a great multi-lingual research study that draws on Italian, Arabic, Chinese, and Yiddish-language newspapers to understand the full range of musical performances in 1920s Paris.

A similar scenario unfolded when my students and I spent a summer researching the reception of the French composer Darius Milhaud. We determined that between 1922 and 1933, Milhaud's music was performed almost as much in Germany as it was in France. We did not need a map to tell us that—a count within a spreadsheet was just as effective—and the map we made (*see* Fig. 7) further confirmed that concert culture in Germany was more decentralized than in France, another fact we already knew.

When we mapped periodicals that reported on performances of Milhaud's music, however, a spatial pattern emerged that might have been less apparent within a spreadsheet: French sources, in blue, reported on performances of Milhaud's music in central and Western Europe. But German-language sources covered a much broader geography and suggested that traditional accounts of Milhaud's reception that focus disproportionately on French- and English-language sources are missing a key part of his career.

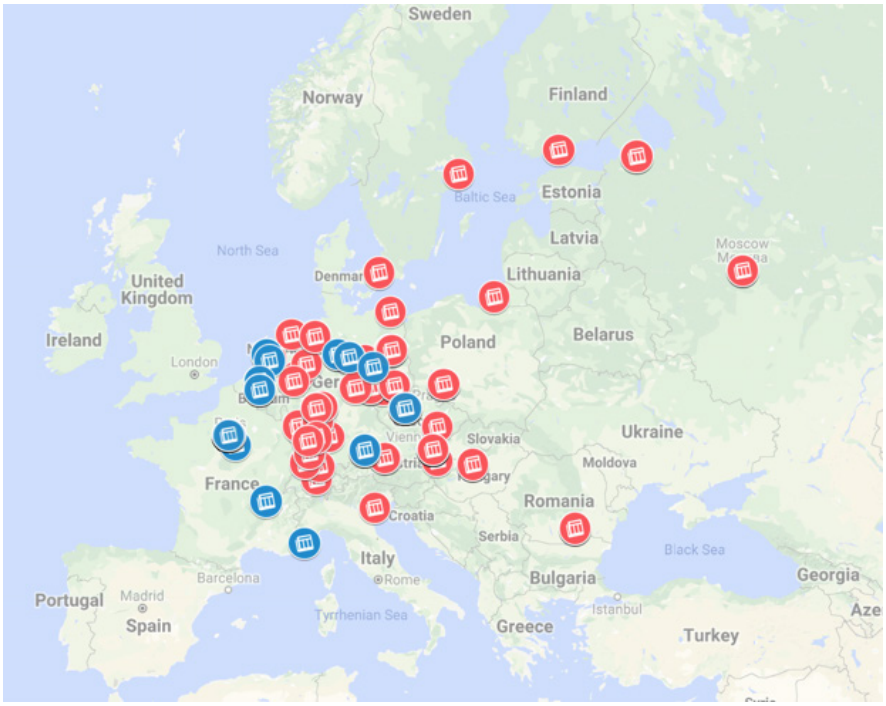

Fig. 8 – Milhaud's performances mentioned in the musical press, 1922–33. Compiled by Siriana Lundgren, Elizabeth Lacy, Anna Perkins, and Juliette Emmanuel.

Much like the map of venues in 1924 Paris, this map (*see* Fig. 8) tells us just as much about the archive as it does about how music history unfolded. Crucially, it inspires new research questions: what performances did Russian- or Spanish-language sources report on? Why were German periodicals much more likely to cover international events than French periodicals? And what does German interest in Milhaud's music tell us about his reception history in and out of France?[12]

One more example of a student-generated map that moves an argument forward is this visualization of classical music performances reported in the Washington *Bee*, a Black-owned newspaper active in early-twentieth-century Washington, D.C.[13] Unlike our maps of performances by Washington

12 I posed one answer to this last question in an article that emerged from this mapping research. See Louis K. Epstein, "The German Connection: Darius Milhaud's Unusual Path to Official Recognition in France," *Journal of Musicology* 37, no. 1 (Winter 2020): 94–121.

13 A contribution featuring this research is forthcoming: Maeve Nagel-Frazel and Louis Epstein, "In 1911: Mapping Black Classical Music in Washington, D.C.," in *Musical Capital:*

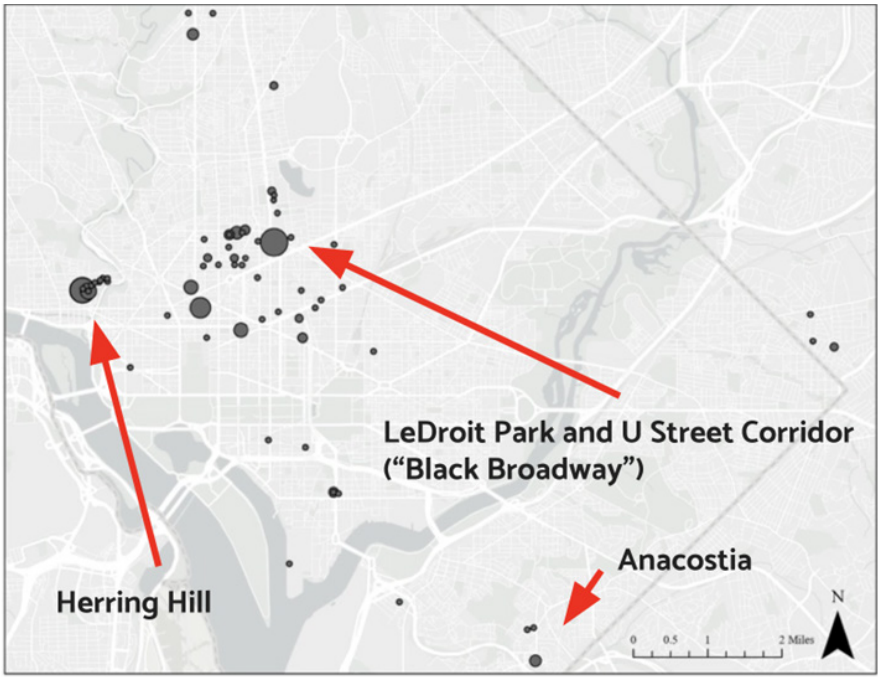

Fig. 9 – Black classical music performances mentioned in the *Washington Bee* in 1911, compiled by Maeve Nagel-Frazel.

Conservatory graduates, this map highlights the musical vibrancy of several historically important Black neighborhoods in Washington, D.C., including the all-but-forgotten neighborhood called Herring Hill at the foot of the present-day Dumbarton Oaks estate. It came as no surprise that so many performances took place along U Street, which has long been known as "Black Broadway" for its density of performance venues, including the famed Howard Theater. But seeing this cluster in Herring Hill helped us understand something about the human geography of Washington, D.C. that neither musicological narratives nor historical maps have shown.

Our mapping of the Washington *Bee*'s reporting (*see* Fig. 9) is exceptional in revealing something we might not have known otherwise. Most maps do the opposite. Because we often map the data we have, which is a known problem within digital humanities scholarship as a whole, many maps merely reinforce received wisdom in a way that is somewhat contrary

Sound and Power in Washington, D.C., ed. Emily Abrams Ansari, Daniel Boomhower, and Michael Uy (forthcoming).

Fig. 10 – Seven influential polyphonic composers of the fifteenth and sixteenth centuries. Compiled by William Beimers and Jacob West, accessible at https://musicalgeography.org/project/polyphonic-composers-of-the-the-15th-and-16th-centuries/.

to the scholarly endeavor: not only do they not teach us anything new, but they put a scientistic, authoritative sheen on historical narratives that might otherwise be ripe for revision.[14] For example, I had two students update a 1960 Paul Collaer and Albert Vander Linden map of the movements of Renaissance composers in Western Europe (*see* Fig. 10).

The students deepened Collaer's and Vander Linden's research by drawing on more recent sources. And in transforming a print map into an interactive map, they were able to activate an affective experience of what might otherwise by an overwhelming amount of information of little interest to most students. But what they visualized in the map largely confirms that musicians circulated from north to south in search of work, bringing Flemish polyphonic compositional styles to Rome and Spain. The map was lim-

14 For other critiques of the fallacies of authority associated with maps, see Mark Monmonier, *How to Lie with Maps*, 3rd ed. (Chicago: University of Chicago Press, 2018); Bethany Nowviskie, "How to Play with Maps," in *Cultural Mapping and the Digital Sphere: Place and Space*, ed. Ruth Panofsky and Kathleen Kellett (Edmonton, AB: University of Alberta Press, 2015), 107–27.

ited in scope and in imagination: we only mapped the seven best-known composers of the era, the very composers whose biographies first established the traditional geographical narrative that we seemingly confirmed. Mapping a different group of composers, focusing on the comings and goings of all musicians to and from a particular city, or otherwise shifting the frame of study might have led to a different conclusion, one that helps us nuance the historical record rather than merely recapitulating it.

This last example points to what I think may be the ultimate value of mapping for musicology. I have slowly come to appreciate maps for their capacity to serve as visual representations that challenge hegemonic understandings of music history. Maps usually seem to represent the world *as it is*, although as geographers are typically quick to point out, two-dimensional representations of a three-dimensional world are always going to distort reality. If maps are going to distort, let's be self-conscious about which distortions we present. This is where Edward Tufte comes in handy: his visualization theories are geared towards finding visual ways to make arguments, rather than assuming that visualizations such as maps merely present data in an objective way. Among other things, Tufte celebrates maps that became famous for showing what other maps did not. Drawing from Tufte and others, I would argue that rather than visualizing received wisdom or even the archive, the perceived authority of maps can be exploited to the benefit of historiographical subalterns. Here I refer to a phenomenon that the geographer Nancy Peluso has dubbed "countermapping," a pillar of the broader subfield of critical Geographic Information Systems, or GIS.[15] Countermapping appropriates the perceived authority of cartography to represent what has long gone unrepresented or to upend conventional thinking about how geography *should* be represented. Indigenous studies helped birth countermapping, and it is appropriate that an iconic example of the technique is *Native Land Digital* (*see* Fig. 11), which replaces conventional political boundaries with overlapping, brightly colored, curved shapes that approximate the homelands of indigenous peoples all over the world.

Native Land Digital thus contradicts the many historical maps that show "empty" territory as a justification for colonization by revealing that those

15 Nancy Peluso, "Whose Woods are These? Counter-Mapping Forest Territories in Kalimantan, Indonesia," *Antipode* 27, no 4 (1995): 383–406. See also Nadine Schuurman and Geraldine Pratt, "Care of the Subject: Feminism and Critiques of GIS," *Gender, Place and Culture: A Journal of Feminist Geography* 9 (2002): 291–99.

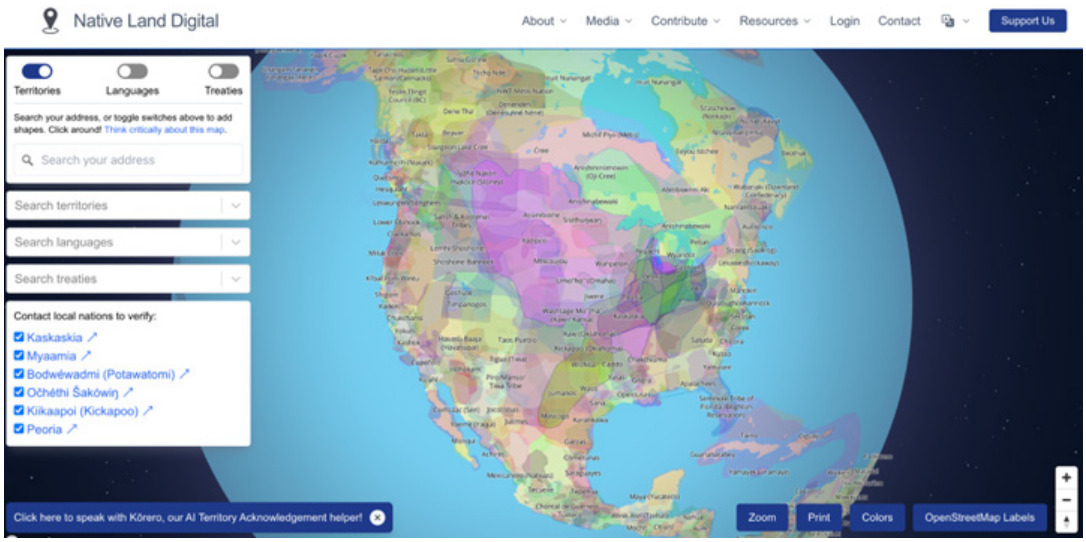

Fig. 11 – Screenshot of *Native Land Digital*, accessible at https://native-land.ca/.

territories were always already occupied. The map's creators recognized that, for many viewers, presence on a map has political significance; to reify people, natural resources, or music by "putting them on the map," so to speak, is to exert power. My students and I have been increasingly drawn to countermapping over the past few years as a response to the ways we uncritically reinforced hegemonic narratives of music history in our earliest maps. For instance, we've built on the *Native Land Digital* map to explore how mapping can help repatriate Native American songs and other forms of cultural expression that were collected by ethnomusicologists in the early 20th century.[16]

Along similar lines, our maps of tours by Black minstrel troupes; the tours of the Fisk Jubilee singers; Francis Johnson, a Black bandleader in early-nineteenth-century America and the leader of the first American band to perform for the Queen of England; and of the life and legacy of composer, singer, and arranger Harry T. Burleigh—all of these are countermaps that push back against traditional narratives that place Black Americans and

16 See, for example, *Native American Song Collection* (https://musicalgeography.org/project/native-american-song-collection/), *Indigenous Song Collection of Frances Densmore* (https://musicalgeography.org/project/indigenous-song-collection-of-frances-densmore/), and *Teaching Indigenous Cultural Expressions* (https://musicalgeography.org/project/teaching-indigenous-cultural-expressions/).

their music primarily in the southern half of the country. Demographically, of course, census data shows that through the 1920s, the vast majority of Black Americans lived in the American South. But by countermapping the activities of Black musicians in the north and abroad, we can challenge two common, overly simplistic narratives that are ubiquitous in music histories: that the music of Black Americans is coterminous with Southern, rural, folk culture; and that Black Americans haven't always already been a part of art music cultures in the US and Europe.

Maps have great potential to deepen and expand the scope of musicological research, but they also pose significant risks. The skeptic in me argues that maps are simply too good at misrepresenting, and that those who read and make maps are too likely to kneel to their authority. If my skeptical side is right, it may be difficult to justify making mapping central to musicological research. At the same time, if we look outside of musicology for guidance, and specifically if we're willing to learn from our geographer colleagues, we can make use of maps and mapping in all the ways I've described without relinquishing our own authority as scholars. As Todd Presner, David Shepard, and Yoh Kawano point out in *Hypercities*,

> Mapping is a verb and bespeaks an on-going process of picturing, narrating, symbolizing, contesting, re-picturing, re-narrating, re-symbolizing, erasing, and re-inscribing a set of relations … Maps are visual arguments and stories; they make claims and harbor ideals, hopes, desires, biases, prejudices, and violences. They are always relational, in dialogue or in contact with someone or something. They may or may not attempt to reference, reflect, or represent an "external reality" (however one defines that), but they are fundamentally propositions, suffused with world-views, structuring epistemologies, and ways of seeing.[17]

In other words, if every map could be published with a warning label—"Intentional Misrepresentation of Reality for the sake of Inquiry"—we might begin to treat maps in a safer way, as more conditional than authoritative. Bethany Nowviskie has similarly argued that "we should not focus on maps as finished visualizations, as products of analysis; rather, we ought to consider mapping a hermeneutic activity, a process or methodology." Playing on the title of Mark Monmonier's *How to Lie with Maps*, she continues, "We must understand the making of maps and images as iterative and

17 Presner, Shepard, and Kawano, *Hypercities: Thick Mapping in the Digital Humanities*, 15.

speculative … we can license ourselves to lie—experimentally, playfully, procedurally, and productively."[18] Nowviskie's conception takes the pressure off of mapping as leading towards an authoritative product and instead unleashes the potential for mapping to change how a musicologist might approach their task.

Mapping may most productively serve as a heuristic—a tool that facilitates musicological work, but neither a methodology nor an end in itself.[19] Prioritizing place and space means devoting more attention to units of study that are not always central to musicological research, units like performance venues and neighborhoods, travel routes and natural resources. Mapping makes me more attentive to the mundane and to ephemera, to the affective, experiential knowledge of people who lived and moved in the spaces I study. Dance historians Harmony Bench and Kate Elswit encapsulate the affective power of mapping when they write, "analyzing movement in historical and cross-cultural contexts challenges digital humanities to grapple with the phenomenon of live bodies, which are not fixed in print or image, but carry, borrow, and share techniques, styles, theories of corporeality and composition, gestures, and ways of being as they travel."[20] Media-rich, so-called "deep" or "thick" maps that disaggregate data and provide new access points to archival materials thus have the potential to make history and historical agents come alive, and in the process open historical interpretation to new practitioners who may or may not be scholars. Bringing history alive goes hand in hand with Anne Kelly Knowles's argument that maps are a "mode of presentation [that] appeals to the imagination," as well as Bethany Nowviskie's notion of maps as playspace.[21] Too often musicologists ignore music's inherent ephemerality, its sense of *play*, and the mundane pathways of its circulation through society. Our research thus stands to benefit from more widespread use of geographic information

18 Nowviskie, "How to Play with Maps," 114.

19 I am grateful to Mark Everist for suggesting this framing. Others have argued that mapping is, in fact, a distinctive method. See for example Barbara Piatti, "Literary Cartography: Mapping as Method," in *Literature and Cartography: Theories, Histories, Genres*, ed. Anders Engberg-Pedersen (Cambridge, MA: MIT Press, 2017), 45–72.

20 Harmony Bench and Kate Elswit, "Mapping Movement on the Move: Dance Touring and Digital Methods," *Theatre Journal* 68, no. 4 (December 2016): 583.

21 Anne Kelly Knowles, "GIS and History," in *Placing History: How Maps, Spatial Data, and GIS Are Changing Historical Scholarship*, ed. Anne Kelly Knowles (Redlands, CA: ESRI Press, 2008), 7.

systems (GIS), because digital mapping can help us break out of some of the entrenched habits of our discipline.

Of course, as humanists, we have much to offer geographers and GIS in return, especially in response to the many flaws of GIS. Digital humanists and critical GIS scholars have widely catalogued these flaws; a good summary can be found in Jack Gieseking's "Where Are We? The Method of Mapping with GIS in Digital Humanities," which notes that GIS was developed by the military-industrial complex and huge corporations, then adapted by natural and social scientists to visualize and analyze huge data sets.[22] GIS was never intended for use by humanists and in so many ways does not respond to humanists' needs. More than twenty years after the advent of the subfields of qualitative and critical GIS, the most popular out-of-the-box mapping platforms such as Carto, ArcGIS, and Google Maps still do not embed media smoothly or attractively; they abjure ambiguity and uncertainty; and they tend to break down when they encounter data sets that include complete sentences or diacritics inherent to most languages other than English. I work in twentieth-century history; happily, most out-of-the-box mapping platforms use projections that roughly correspond to how my research subjects understood the world, although I still complain about the frustrating maintenance of the Mercator projection as the default. But my medievalist colleagues rightfully note that GIS rules out the possibility of systematically visualizing data that corresponds to a non-Euclidean or pre-Cartesian cartography. When musicologists or humanists try to shoehorn their research into the GIS box, we run the risk of rendering our research rigid and prescribed, rather than leaving it flexible and ludic. Under the spell of digital maps, a constant risk (to which I too have fallen prey) is that we take our data set—a list of spatially-tagged performances or venues or touring destinations—and we ask, "What can this data do for us?" rather than asking a research question that starts with "Where did music happen, and which aspects of music can be better understood by examining spatial data?" Other common and not unreasonable concerns among non-digitally inclined musicologists include the possibility that we will learn to use a new technology only for it to become obsolete, or that we will not be able to learn the technology because it requires too much specialization, or that learning the technology will change us from

22 Jen Jack Gieseking, "Where Are We? The Method of Mapping with GIS in Digital Humanities," *American Quarterly* 70, no. 3 (September 2018): 641–48.

humanists—people interested in the stories of individual humans and interested in human cultural practice—into social scientists who have forgotten the power of individuals' stories and musicking to reveal deeper truths about humanity. Add to this the likelihood that digital projects will not be maintained or accessible over the long term—that print publications will outlast digital products—and there are many reasons not to undertake the creation of digital maps as a substantive scholarly or pedagogical output.

I acknowledge all of these challenges as significant. But in the traditional humanist and musicological complaints about GIS I also see potential for reconfiguration and renewal—for musicological concerns to inform the development of GIS. Geographer Matthew Wilson has observed that so-called qualitative GIS foregrounds the positionality of the researcher, a quality similarly central to ethnographic methods within musicology, and I relish the possibility of a GIS that more transparently reveals the agenda or the positionality of the researcher.[23] Even more radical is the possibility that a more musicological GIS might embrace the ambiguity and limited relativism of humanities disciplines while retaining the claim to authority present in the map's representation of space. Humanities scholarship is full of productive mistakes: speculations or even statements of fact that provoke responses closer to the truth, wrong turns that lead to right ones. Could we regularize visualizations of uncertainty or conditional fact—if point A is correctly placed then point B is not—and thus accept the messiness of time, place, history, and humanity? Can we visualize trajectories or presences on the basis of our confidence in their likelihood, rather than representing all our evidence uniformly? For instance, the following map (*see* Fig. 12) uses translucent markers to indicate where H.T. Burleigh's songs are not listed on Marian Anderson's concert programs, but were likely performed as encores.

Similarly, Harmony Bench and Kate Elswit have used lines of different thickness and solidity to illustrate how members of the dance troupe Ballet Caravan associated tour stops with different destinations.[24] In do-

23 Matthew W. Wilson, "Towards a Genealogy of Qualitative GIS," in *Qualitative GIS: A Mixed Methods Approach*, ed. Meghan Cope and Sarah Elwood (London: SAGE Publications, 2009), 156–70.

24 See *Moving Bodies, Moving Culture*, accessed July 16, 2025. https://www.kateelswit.org/moving-bodies-moving-culture.leafletmap/#2/32.1/-15.5. The map is discussed in greater detail in Bench and Elswit, "Mapping Movement on the Move: Dance Touring and Digital Methods," 594.

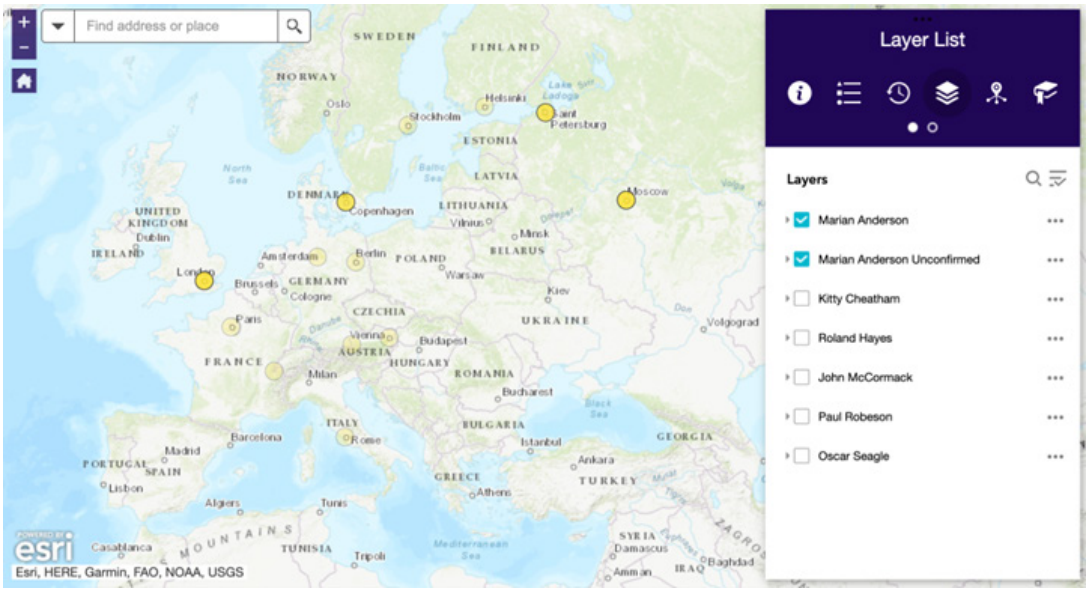

Fig. 12 – Map of performances of music by H.T. Burleigh organized by performer, accessible at https://musicalgeography.org/map-gallery-2/.

ing so, Bench and Elswit map thoughts and ideas as much as physical presence, offering a successful marriage of humanistic inquiry with the visualization potential of GIS without sacrificing their research questions.

We need to use these and other techniques to develop a more musicological GIS that humanizes data despite the uniformity demanded by tools designed to aggregate, cluster, and count. When mapping indigenous song practices of the distant past, for example (*see* Fig. 13), we can deeply research and ethically represent the individuals who transmitted the music we're studying, rendering maps as tools to relate individual biography to prosopography or cohort study.

And whenever possible, we should sonify as we visualize, harnessing music specifically and sound more broadly to compose a counterpoint to the tyranny of the visual. The aural markers of space and place have enormous potential to resist this tyranny and engage a broad audience in our research and teaching. There are a few examples of custom GIS applications that already apply these ideas on a broad scale, including StreetMusicMap, Radioooo, and Radio.Garden.[25]

25 Another custom musicological GIS worth consulting as much for its ethical failings

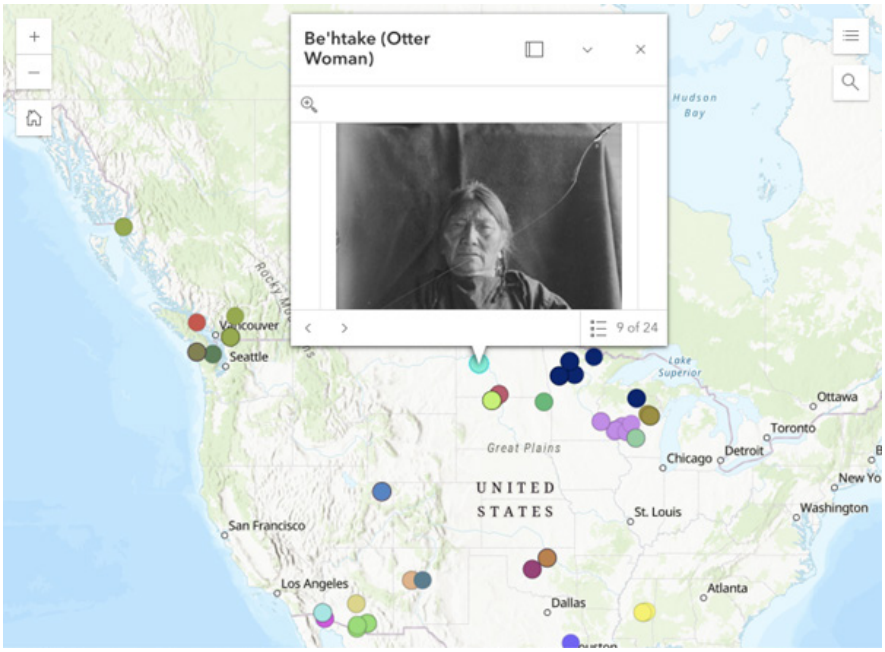

Fig. 13 – Map of Frances Densmore's indigenous sources, by Sophie Kushner, accessible at https://musicalgeography.org/indigenous-educator-resources/.

To conclude, I would encourage us all to grapple self-critically with the rhetorical power of cartographic representation. In whatever form they take, we need to apply critical pressure to our own maps' claims to authority. We need to implement scholarly norms—counterargument, careful and transparent documentation, peer-review—around this new form of scholarly publication, always acknowledging the in-process nature of the work, and always seeking to grapple with the traditional privileges, hierarchies, and orthodoxies that maps can too easily reinforce. To make and consume maps well is to act ethically, because maps are a tool for wielding and representing power. If a map is an archival portal or a teaching tool rather than a visualization of a scholarly argument, we need to say so. If our work visualizes or sonifies what is a discrete, selective, and/or incomplete archive, we need to say so. Admitting the incompleteness of our work only makes it more credible, more authoritative, and more scholarly.

as for its impressive technical features is *The Global Jukebox*, which I reviewed in Epstein, "The Promise and Peril of Making Digital Maps Sing," 278-282. Alan Lomax, Michael Del Rio, Anna L. Wood, et al, *The Global Jukebox*, accessed July 16, 2025. https://theglobaljukebox.org/.

Despite the challenges described above, there is no question in my mind that musicologists should keep mapping, particularly as new digital tools become available. But we should cherish our humanistic epistemologies and skill sets, we should keep music at the center of our work, and we should resist shifting our goals to accommodate the affordances of what is ultimately just one more tool in our toolbox. We should make digital maps that uphold our musicological claim to authority by emphasizing mapping as a process. We should engage in mapping as play and heuristic. Above all, we should advance musicological mapping as a critical tool for revising and re-presenting how we see and hear music history.

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Abstract

Maps offer musicologists promising ways to improve teaching and public outreach, while presenting fundamental challenges when it comes to doing musicological research and writing music history. Drawing on a range of student-generated and professionally produced mapping projects, this article demonstrates the diverse musicological functions that digital maps can serve, from pedagogical tools and archival portals to instruments of historiographic correction.

Musicologists can productively leverage evidence-rich digital maps to present a larger sample with greater depth and therefore a more comprehensive vantage point on the story being told—a capacity theorized by Todd Presner and collaborators as "thick mapping." Yet maps do not make arguments on their own. Too often musicologists map the data they have, putting a scientistic, authoritative sheen on historical narratives that might otherwise be ripe for revision. Countermapping—appropriating the perceived authority of cartography to represent what has long gone unrepresented—provides one kind of corrective, as do emerging techniques for visualizing uncertainty and humanizing data.

Ultimately, humanists in general and musicologists in particular should embrace mapping as a heuristic: a tool that facilitates musicological work, but neither a methodology nor an end in itself. With an eye towards questioning the authority that maps purport to wield, musicologists can engage in mapping as process, play, and a tool for revising and re-presenting how we see and hear music history while keeping music, and humanistic epistemology, at the center of our work.

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