

Aldridge in Action: Building a Visual Digital Interface

Anita Gonzalez

Several key volumes locate the digital humanities as a developing discipline, struggling to define itself as both a methodology for research and as an engagement with technology in the service of the humanities.¹ Patrik Svensson, in particular, positions digital humanities as occupying an in-between position that enables dynamism within the humanities so that “it can accommodate many interests and perspectives.”² This essay discusses how the development of a digital theatre-history tool became a process for animating multiple sectors of the university, and stimulating their interest in theatre history research. The project of visualizing the careers of underrepresented performers dynamically activated an interdisciplinary team of students, staff, and faculty members around construction of the digital tool. At the same time, the project, by emphasizing the visual in its interface, modeled how visual design can partner with technology to enhance user interaction on a digital screen. *19th Century Acts* began, in prototype, for visualizing the history and career of the African American actor Ira Aldridge. The tool has now expanded to include several nineteenth-century performers. I argue that the process of developing and assessing the digital theatre-history tool compelled the interdisciplinary team to grapple with three key questions about digital scholarship: How to accommodate visual expectations of millennial users? How to develop an infrastructure for digital projects? How to incorporate embodiment into archival documents? The following sections describe theoretical questions and practical challenges that arose during the process of constructing *19th Century Acts*, a project that helps “locate” digital humanities more generally in the discipline.

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¹Patrik Svensson, *Big Digital Humanities: Imagining a Meeting Place for the Humanities and the Digital* (Ann Arbor: University of Michigan Press, 2016); Matthew K. Gold, ed., *Debates in the Digital Humanities* (Minneapolis: University of Minnesota Press, 2012); and David M. Berry, ed., *Understanding Digital Humanities* (New York: Palgrave Macmillan, 2012).

²Svensson, *Big Digital Humanities*, 5.

Visualizing Aldridge

I began *19th Century Acts* with the hope of using digital resources to visualize African American historical performance with the richness of media resources available for contemporary performers. My intention was to create a dynamic and interactive way of learning about African American theatre history. This search for easily accessible visual information coincides with how Paul Conway explores instant gratification via the internet. He explains that “Google is a metaphor for the instant gratification expected in information search and retrieval today. For a new generation of users, Google represents anonymous access to information without human mediation.”³ Those of us engaged in classroom teaching face student researchers who adhere to Conway’s belief that “in the age of Google, nondigital content does not exist, and digital content with no impact is unlikely to survive.”⁴ Millennial users want to see and hear information in a mediated and digital way. Without a visual, digital stimulus, users may simply decide not to search for the information—a position my experience supports. When I search for a performer such as Beyoncé on the internet I am offered a plethora of visual images and interactive media that document this artist’s career (fig. 1). Online, I can see her movements, listen to her songs, and quickly locate the lyrics to her albums. Yet, digital media about pre-twentieth-century performance is not nearly as extensive. When I search for information about the nineteenth-century abolitionist and actor William Wells Brown, I find only dry documentaries and a performance monologue by an amateur actor (fig. 2). The *19th Century Acts* tool seeks to provide dynamic audio and visual imagery to users interested in theatre history in general, and performances of underrepresented artists in particular.

19th Century Acts focuses on Aldridge, an unusual nineteenth-century performer because of his race, the range of his travels, and his repertory. He began his career as a performer in the African Grove Theatre, a small entertainment garden located in what is now the West Village of New York City.⁵ When the garden folded he rejected his father’s ministry and traveled to England, where he forged a long and lucrative career as a touring performer. For a performer like Aldridge, racist narratives surround descriptions of the performance act. Sources from the nineteenth century refer to African American performers as “black minstrels,” “Ethiopian Delineators,”⁶ and other terms that make it difficult to assess what the performances really were and how they were received by audiences. Scant records mean that it is difficult to visualize how actors, working within socially limited representations, expressed their artistry.

³ Paul Conway, “Preservation in the Age of Google: Digitization, Digital Preservation, and Dilemmas,” *Library Quarterly* 80, no. 1 (2010): 61–79, quote on 63.

⁴ *Ibid.*, 64.

⁵ Marvin McAllister and Jonathan Dewberry both document the productions and practices of this Afro Caribbean theatre company founded by stewards. See McAllister, *White People Do Not Know How to Behave at Entertainments Designed for Ladies & Gentlemen of Colour: William Brown’s African & American Theater* (Chapel Hill: University of North Carolina Press, 2003); and Dewberry, “The African Grove Theatre and Company,” *Black American Literature Forum* 16, no. 4 (1982): 128–31.

⁶ The edited volume *Inside the Minstrel Mask* includes excerpts of sketches from black minstrel troupes. Eileen Southern, a contributor to the volume, writes about how the first black minstrel troupe was organized in 1867 as a response to early white minstrelsy. Her chapter locates the beginnings of blackface Ethiopian minstrelsy even earlier, in dance performances of the 1820s. See Southern, “The Georgia Minstrels: The Early Years,” in *Inside the Minstrel Mask: Readings in Nineteenth-Century Blackface Minstrelsy*, ed. Annemarie Bean, James V. Hatch, and Brooks McNamara (Hanover, NH: Wesleyan University Press, 1996), 163–78.

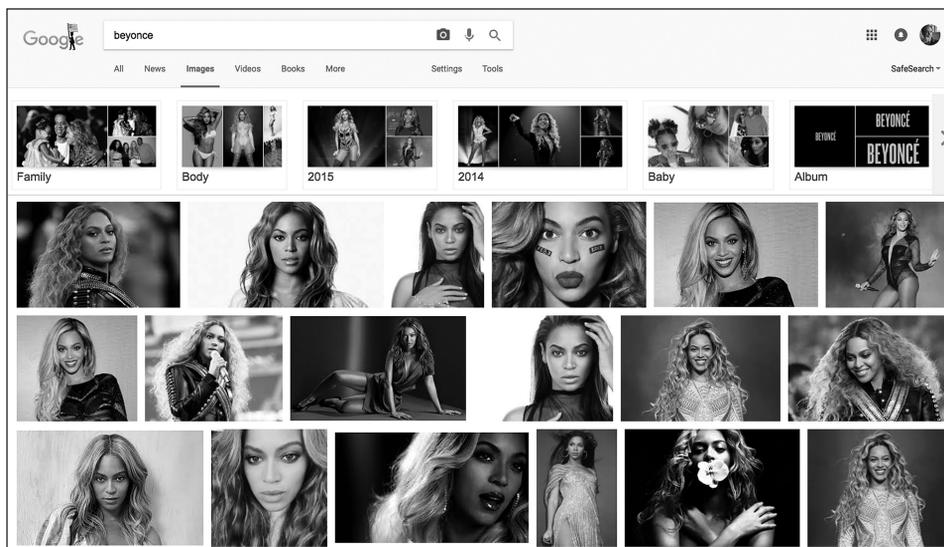


Figure 1. This frame is a screen shot of a search for the singer Beyoncé using the Google search engine. The display demonstrates how the internet can produce instant visualizations of a key word search.

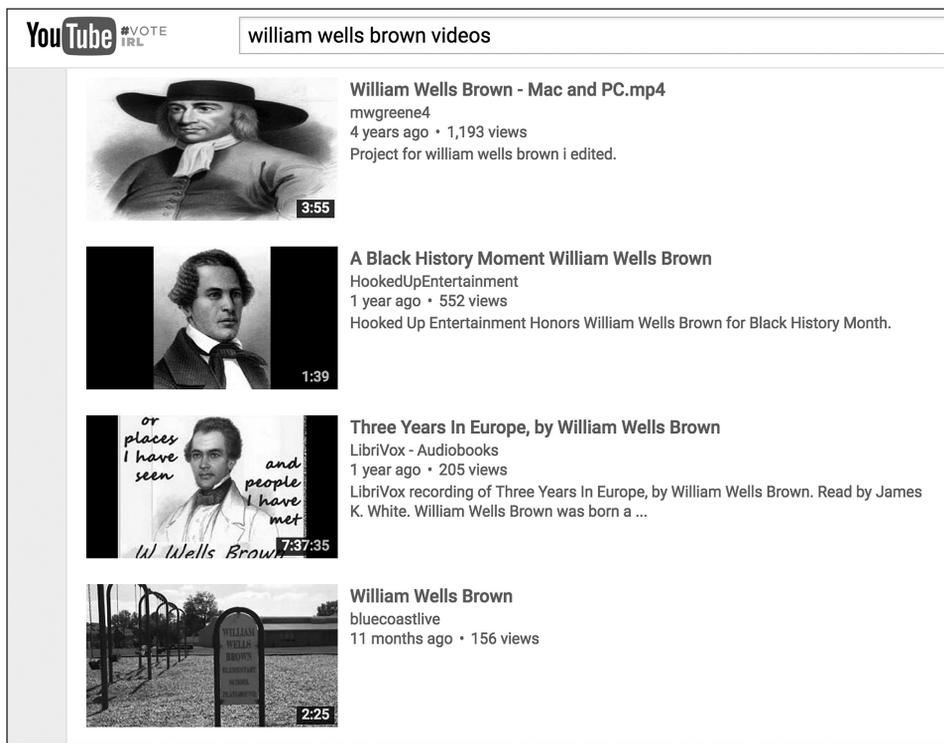


Figure 2. Visual images resulting from a search of an African American historical performer like William Wells Brown produces a limited set of visual resources.

Even though individuals of African descent, moving through international territories, were identified by many names, they stood out from other performers because of their darker skin. Whether they were from Africa or England or the United States, they were perceived by audiences as black bodies. Capturing a sense of embodiment through digital media offers an opportunity to rethink how a single African American body might depict diverse or alternative renditions of black performance. I use the word *black* here rather than *African American* because Aldridge, in his performance career, distanced himself from the Americas and was perceived as an African in diaspora. Indeed, he was often referred to as the “African Roscius,” after the Roman slave-turned-actor Quintus Roscius Gallus.⁷ Just as Brown was able to portray multiple characters in his abolitionist performances of the 1858 play *The Escape*,⁸ so too might other African descendent performers of the time period have used performance to challenge stereotypical presumptions about black potentialities. The very nature of nineteenth-century performance, with its revue-style shows that remixed snippets of performance, allowed non-white and women performers to juxtapose characters and situations in ways that humanized them, thus enabling them to push back against stereotypes about gender, race, and ethnicity.

Aldridge is very well-documented within the theatrical record, consequently a rapidly expanding selection of online materials about him is available for study and research. His performances span a broad spectrum of works, from Charles Dibdin’s 1768 comic opera *The Padlock*, to *Othello* and *Macbeth*, to his own play *The Black Doctor*. He played the role of the comic slave in *The Padlock*, using a West Indian dialect to perform physical sketches as Mungo. *Othello* allowed him to play a noble general, and *The Black Doctor*, a play he adapted from a French folktale, allowed him to play an educated mulatto hero with a tragic love for a white French heroine. Collectively, these artistic vehicles provided Aldridge with an opportunity to embody a variety of character types. His performing career was also exceptional because it spanned three continents (America, Europe, and Asia) and five decades (1821 until his death in 1867). When I developed the first prototype of *19th Century Acts*, I was interested in seeing how students and researchers might make use of a digital tool about Aldridge’s career, and how they might respond to his vast travels. What was needed was a laboratory for the creation of this idealized tool.

Questions of Infrastructure

Finding space, personnel, and time to design a digital tool is a challenge for many digital humanists. Educational institutions tend to support humanities faculty members who engage in book research, while systems for supporting collaborative humanities research are still under development.⁹ Just as classrooms are required for face-to-face

⁷ Bernth Lindfors reports that it was customary to hail a young talented actor as a Roscius during the early nineteenth century; see Lindfors, ““Mislike me not for my complexion . . .”: Ira Aldridge in *Whiteface*,” in *Ira Aldridge: The African Roscius*, ed. Bernth Lindfors (Rochester, NY: University of Rochester Press, 2007), 180–90.

⁸ William Wells Brown wrote *The Escape* as an abolitionist narrative. The play includes a variety of character types: a hypocritical minister, a cruel plantation owner, a cuckolded wife, a “sambo” type enslaved man, and a well-educated African American couple. At abolitionist meetings Brown would read all of his characters’ speeches in his play as a monologue to demonstrate his versatility, his intelligence, and ultimately his humanity.

⁹ My own institution, the University of Michigan, has recently established a Humanities Collaboratory to address this challenge (<https://sites.lsa.umich.edu/collaboratory/>). University libraries are also working to meet these needs.

interactions with students, so also are collaborative spaces with design and technical teams needed to support new digital humanities tools. As Svensson argues, “infrastructure can be seen both as an enabler, facilitating and supporting academic work, and as a relevant object of critical study. Indeed, infrastructure involves using imagination to connect conceptual ideas with material manifestations.”¹⁰

Part of the task of designing and implementing *19th Century Acts* was to develop an infrastructure to support the digital idea. It took imagination and perseverance to craft spaces and resources that would support the work. When I first began to investigate the idea of building the tool, I was unable to manifest the result I envisioned because, at that time, I was teaching at the State University of New York in New Paltz, a mid-sized, public liberal arts college, where there were few resources dedicated to creative uses of technologies. While my project garnered the support of two faculty members interested in collaborating, there was neither space nor time to move beyond generating conceptual ideas.¹¹ Once I moved to the University of Michigan, more infrastructural support was available for a digital project. Yet, even at a large research institution, accessing resources was a challenge. As Lisa Spiro writes in “Opening Up Digital Humanities Education”:

[W]ould-be digital humanists face the same problem: the lack of flexible opportunities to gain the knowledge and skills required for digital humanities researchers and professionals. As Geoffrey Rockwell argues, the digital humanities risk becoming too exclusive because “there are few formal ways that people can train.” In the past, many have entered the digital humanities by serving as informal apprentices on projects. But this approach is not scalable or equitable, since it essentially requires one to be in the right place at the right time.¹²

There was no apprenticeship training for my project; much of it was trial and error. Unlike some digital humanists, I was not interested in learning technologies or programming skills for my work; instead, I wanted to work with others well-trained in technologies. Perhaps the field is exclusive not, as Rockwell argues, because of lack of training opportunities, but rather because only larger institutions are able to invest in resources substantial enough to support collaborative teams with trained technologists. In my case I deferred the digital component of my research until there were available resources.

Even at the University of Michigan, creating infrastructure for a digital humanities project involved navigating several sets of resources. My project needs included teaching release time, technologists to assist with developing technical components, educational consultants for assessment and design, space for storing data, and meeting spaces for project planning. When describing the project, I frequently share an anecdote about calling a 4-HELP line hoping to connect with a person who could facilitate my access to these types of resources.¹³ I never believed that there would be an active response. Fortunately, someone did answer the call and, with their assistance, I was able to

¹⁰ Svensson, *Big Digital Humanities*, 131.

¹¹ I worked with computer scientist Chirakkal Easwaran and digital graphic designer Amy Papaelias for about eighteen months at the State University of New York at New Paltz. Collectively, we developed early screen designs and data schemata for the project.

¹² Lisa Spiro, “Opening Up Digital Humanities Education,” in *Digital Humanities Pedagogies: Practices, Principles and Politics*, ed. Brett D. Hirsch (Cambridge: Open Book Publishers, 2012), 332 (digital e-book).

¹³ 4-HELP is a University of Michigan telephone-support system that helps faculty members to connect with university technological resources.

network across university units and reach out to colleagues in information studies, publishing, educational assessment, and other fields. Once I connected with specialists I wrote applications for funding, and when I was selected for a grant opportunity, the project really began.

I received US\$25,000 from the Provost's Office for projects that might transform learning within the university. With the first set of resources I assembled a team that could help me build the interface. Justin Joque, a mapping visualization specialist within the University of Michigan's library system, agreed to collaborate. Howard Besser writes that "[d]igital libraries will be critical to future humanities scholarship,"¹⁴ and my experiences support this perspective. Justin proved to be an avid and knowledgeable collaborator who was willing to supervise a team of technologists. His position as a library employee made him a core reference point for all of the project participants. Collectively, we discussed ways and means of hiring personnel and agreed to begin with three paid, graduate information studies students and one undergraduate history student.

The *19th Century Acts* digital tool initiated the establishment of a Digital Project Studio at the university (<https://digitalprojectstudio.wordpress.com/about-2/>). Justin saw this project as an opportunity to create an infrastructure to support faculty interest in digital humanities projects, with an emphasis on the visual. In reality the studio is merely a room in the library, but as a library staff member he was able to populate it with workers who could provide technical expertise for funded faculty projects. Now, supported by the University of Michigan Library, the studio offers expertise for a wide range of visualization-related activities and projects, including consulting and instruction. Its primary service, however, is to provide access to programmers: graduate students interested in, and available for, paid work on digital projects.

This was the basis of a team that could help me create a visually interesting and interactive interface that could track the life, travels, performances, cultural context, and repertoire of Aldridge through *19th Century Acts*. The display would include geospatial mapping of Aldridge's journeys, historical documents, network schemata, and video recordings of nineteenth-century gestures that document performance styles. The project would also engage students and media staff in reconstructing theatrical acts, researching historical images, developing and programming visual interfaces, formatting databases, and integrating contemporary reference sources about Aldridge's work. The Digital Project Studio helped to refine and clarify this broad idea. Eventually, a graduate student named Clara McClennon, skilled in both interactive graphic design, visual art, and computer programming, was identified to lead the early design group. Together, we decided that the tool should be nonlinear and replicate the visual interactivity of an Instagram website or Pinterest page.

Digital humanities tools are driven by data, and for this tool we needed historical, as well as geospatial and image data. While the computer programmers worked to animate maps and construct visualizations, I worked with an undergraduate history student, Katy Robinson, on organizing spreadsheets with geocodes and pertinent historical data. She developed a set of informative text we called "interesting historical

¹⁴ Howard Besser, "The Past, Present, and Future of Digital Libraries," in *A Companion to Digital Humanities*, ed. Susan Schriebman, Ray Seimens, and John Unsworth (Oxford: Blackwell Publishing Ltd, 2004), 557.

information” about Aldridge, consisting of statements that described activities and events relevant to nineteenth-century performance in general. (See figure 3: “A comical depiction of audiences contending for a seat as wealthy patrons look on from their reserved boxes before a performance, published in *Theatrical Pleasures*.”) What we called “interesting information” could also be recorded as vocals or paired with images previously captioned with written text for an additional layer of context. This means, for example, that a user can click on an image—say a photograph of a theatre—and hear audio information about audience members who attended the show even as the written caption displays information about the construction of the venue.

As I unearthed data about the artists, it became apparent that one of the most intriguing facets of Aldridge’s career would be his relationships with other performers. When working with computer scientists, all content is reduced to data. While format—media, text, image—is somewhat important, the data are what are manipulated to create the look and feel of the user interface. One goal of the project was to visualize associative relationships, but the data showed me “who, what, where, and when,” not “why” or “how.” To some extent the “why” and “how” were to be deduced by the user, but how effective would that be? I realized that it would be easier to draw meaning from the tool if the user could see Aldridge in relationship with other performers of the time period. How might his journeys and roles intersect with other nineteenth-century actors? Aldridge was a star performer, but not a solo act.

I applied for another grant, this time from the university’s Digital Education and Innovation Center, a unit that partners with faculty to research and support new modes of curricular and learning innovation. Its consulting team categorized the tool as a historical biography product that could “scale up” by incorporating additional historical figures. From their perspective, adding additional performers would broaden the geographic reach of the tool and allow users to begin to see networks and intersections across nineteenth-century performers. Since Aldridge performed primarily in Europe, we wanted to include performers who worked in the United States. Justin also suggested that we reenter the data and organize them using Django technology,¹⁵ a data-storage system that creates easy dialogues between data and displays. Its practical application meant that students or researchers who were not computer programmers would be able to enter new data into the program at the same time as programmers worked on improving the visualization and displays. When the two systems were connected, we would have new data about new actors displayed within the newly designed front end.

After consultation with faculty members who might be interested in using the tool in their courses, we decided to incorporate the American actor Edwin Booth and the opera singer Jenny Lind into the tool. A late addition to the tool was the limited dataset about a nineteenth-century Jewish performer named Jacob Adler, who was a research topic of one of my graduate assistants.

User Interface: Surfing and Clicking

The desire to navigate within the tool in an interesting way became a core concern of the development team. Keeping a clear focus on visual dynamism was a challenge. Claire Warwick writes that “it is clear that some of the most exciting new develop-

¹⁵ See <https://www.djangopackages.com/> and <https://digitalprojectstudio.wordpress.com/2016/01/29/customizing-applications-in-django/>.

Audience

A comical depiction of audiences contending for a seat as wealthy patrons look on from their reserved boxes before a performance, published in *Theatrical Pleasures*.

Source: *Used with permission from the University of Bristol Theatre Collection.*

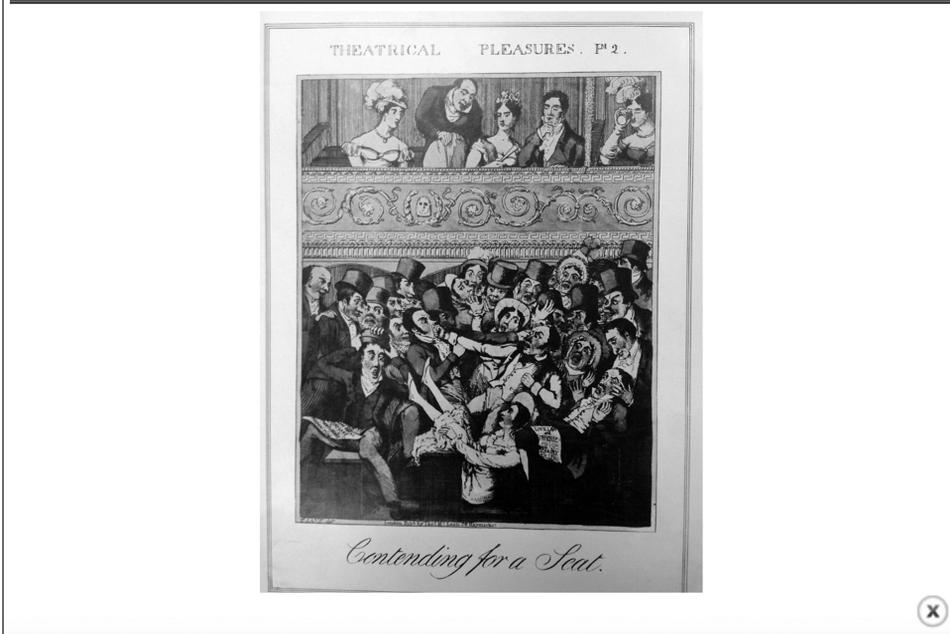


Figure 3. When a photograph appears in the “Context” section of *19th Century Acts*, it can include text that provides “interesting historical information” to complement the image.

ments in the humanities computing area seem to be looking towards the visual as a way of helping us to interpret the textual. It appears that we are moving beyond not printed books and print-based scholarship, but the naïve belief that they can easily be replaced by digital resources.”¹⁶ Yet, many digital research tools replicate the format and structure of a book. As our project developed and the team expanded, some of the computer programmers working on *19th Century Acts* would, out of habit and experience, program a visual look that replicated an encyclopedia. Clara repeatedly emphasized the need to find new graphic looks and designs for dynamic user engagement.

In education settings I find that students engage with the web in an associative way, where they absorb knowledge by considering several screens and then assess relationships and possibilities across the materials. In discussions, students respond to questions about theatrical productions by opening multiple screens and consulting multiple sources at the same time; they search for answers using Google, YouTube, Instagram, and other technologies that keep them engaged. Once they see the sources, they begin to make connections across the various media and construct arguments,

¹⁶ Claire Warwick, “Print Scholarship and Digital Resources,” in *A Companion to Digital Humanities*, ed. Susan Schriebman, Ray Seimens, and John Unsworth (Oxford: Blackwell Publishers Ltd, 2004), 366–82, quote on 379.

based on the multiple datasets they view on the screens. When digital teaching tools replicate print books by presenting a photo image coupled with an explanatory text, it encourages the passive reception of knowledge. In contrast, creating links among images that mix and remix allows students to rapidly visualize new associations across sources and construct knowledge. The *19th Century Acts* team sought to make this type of associative-learning process an integral part of the tool. The project team, led by Clara, decided that one way to increase visual appeal and interactivity would be to design the tool with multiple entry portals. Like an immersive theatre performance, there would be divergent pathways for navigating through the tool.

The home page presents five images that are also live links designed to entice the user to explore options (fig. 4). The upper-left-hand-corner navigation button is available throughout the site and can be accessed from every page. McClennon designed the button to replicate typography of the nineteenth century (fig. 5). The “Mapping” section replicates the mapping and timelines feature of digital tools where dropped pins open information boxes. The presentation of content is venue-based; once a user selects a location, more data become accessible. Within each information box, viewers can select different performances and learn more about roles and characters related to the mapped performance venue. This Mapping section of the tool is similar to what a commercial tool like Storymaps (<https://storymaps.arcgis.com/en/>) offers; it encourages users to think about where and how theatre happened within a particular time span. Activating a slider at the top of the frame can narrow or widen the window of inquiry by limiting the dates of the display. In its current rendition, the tool includes datasets about Lind, known as the “Swedish Nightingale,” Booth, and a small dataset of information about Adler, a performer who worked in Ukraine and other parts of Eastern Europe toward the end of the nineteenth century. This section of the tool offers the most data about performances within a geospatial display.

The gateway labeled “People” (fig. 6) provides images of actors in their daily dress, actors costumed for their roles, and actors onstage. As the user scrolls through the images and makes selections from the top bar, there is no real sense of order. Each image opens a box, and within each box there is brief, descriptive text. When an image is clicked the zoom function enables the details of the photos to become visible. For me, using this tool is like walking through a photo gallery and peering at images of actors caught in action (fig. 7); it gives me a sense of the “liveness” of the absent bodies of the actors. “Sights and Sounds” provides contextual information about nineteenth-century performance (figs. 8a–b). It is one of the most vibrant visual sections, offering glimpses of playbills and programs, as well as images about audience members attending and reacting to the theatre. Some of the images in this section contain “talking text” (fig. 9). Illustrations of rhetorical gestures that familiarize users with acting styles prevalent during the century invite those who click to embody the performative world of the actors.

The “Video” section of the site connects to a YouTube channel where students and researchers can find examples of scripts and scores that talk. The team decided to animate two-dimensional archival documents in this section of the tool by incorporating audio overlays, which would make it possible for a short snippet of material to appear in many different sections of the site, adding to the random feeling of navigation within the interface. For example, in one two-minute video clip, the user hears a pianist playing nineteenth-century sheet music while a singer performs the material.

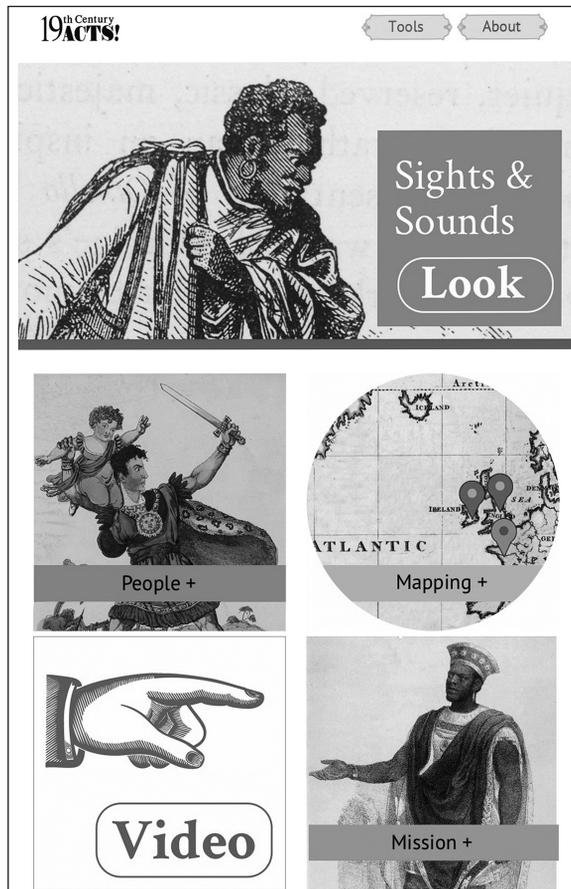


Figure 4. The homepage of the site offers five portals for entering the tool. The portals are also accessible through the dropdown menu at the top of the screen labeled "Tools."

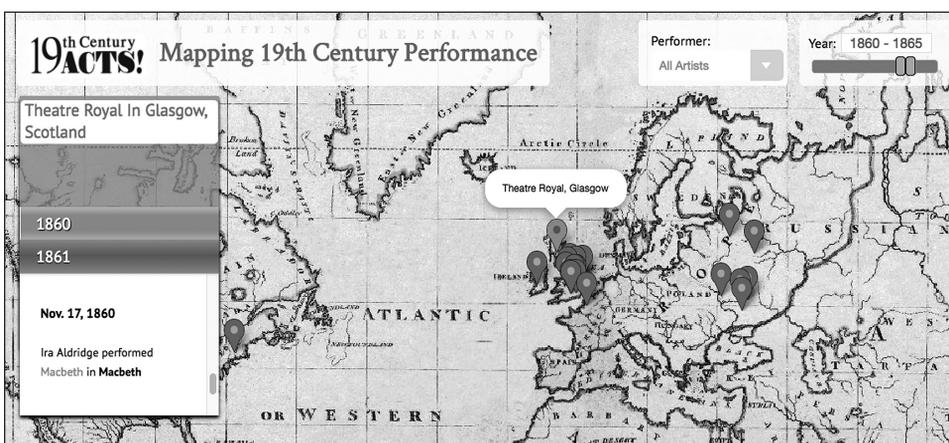


Figure 5. The "Mapping" section includes a dropdown button at the upper-right-hand corner of the screen that enables users to select an artist they would like to view in the map layout. They can also narrow the dates of their search via a slider.

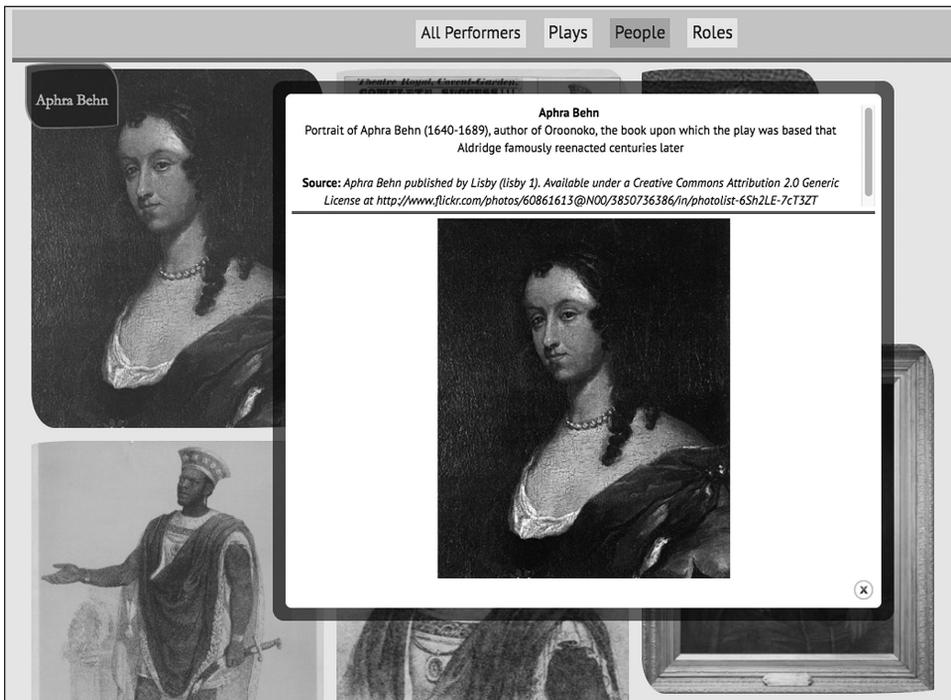
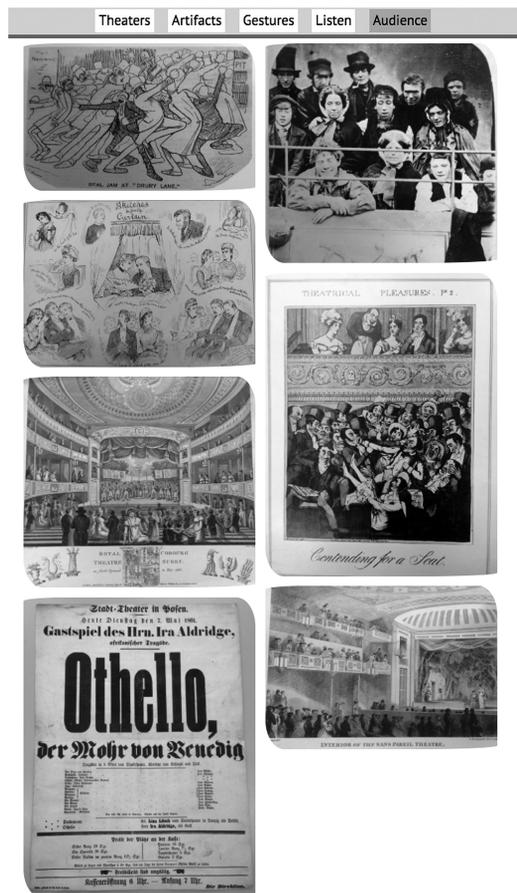


Figure 6. Within the “People” tool, the user can select from the menu either scenes and lithographs from plays, images of actors in daily dress, or images of actors dressed for their roles.



Figure 7. The “Roles” section of the “People” tool depicts actors in trademark character poses from their most popular roles.



Figures 8a–b. The “Audience” section of “Sights and Sounds” provides visuals of audience members interacting within the theatrical space.

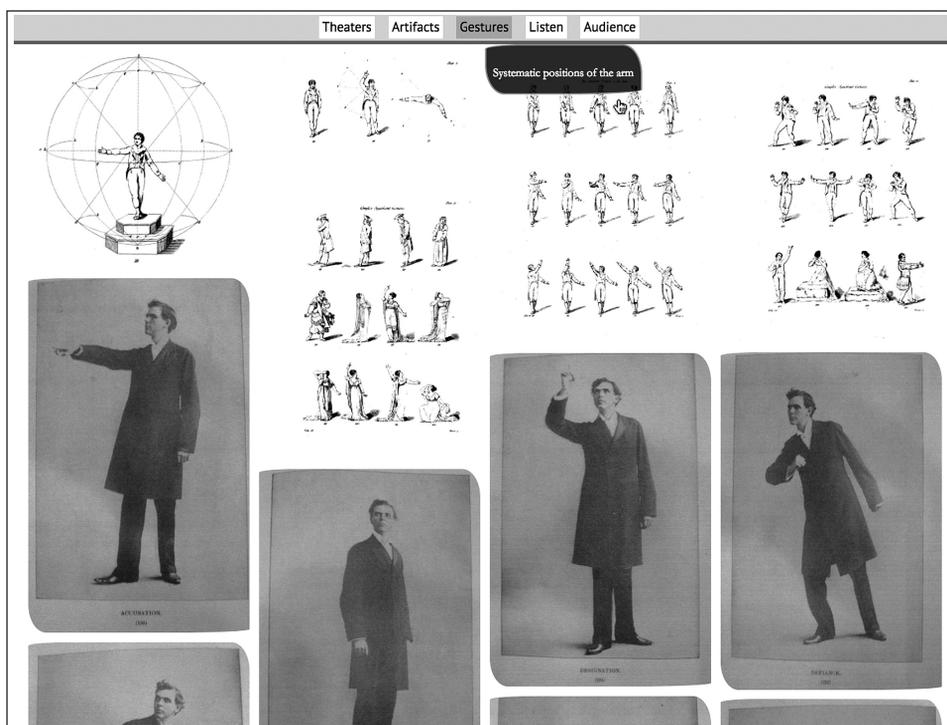


Figure 9. The section on “Gestures” is useful to actors interested in recreating rhetorical performance styles typical of the nineteenth century.

The accompanying visual image is a moving section of sheet music that corresponds with the singing (fig. 10). Users unable to read music can hear the song that the original actor performed represented through the voice of a living actor. Other video clips feature talking playscripts or animated images of audiences and theatres. There are also images with vocalized descriptions of events and practices of the nineteenth century (fig. 11). Musical theatre students from the University of Michigan recorded the voice-overs and song segments that appear on the channel. Collectively, the short reconstructions enable an aural and visual experience of two-dimensional objects.

Ownership and Open Source

Archival images were a key component of the visualization goals of the project. In an ideal world the team would have downloaded and recycled any and all images about the nineteenth century available on the web, concentrating on images related to Aldridge, Lind, Booth, and Adler. Unfortunately for this project, not all web-based images are in the public domain. Archives maintain ownership rights over images housed within their collections; they support preservation activities by charging usage fees for representations of performance and its residual artifacts. While print scholars consider paying for archival images rudimentary in the world of publication, images proliferate on the digital internet, so general public users presume that they will be able to see—to visualize—all materials associated with their search. Entering privately owned archival images into an open-source tool was somewhat problematic, because users

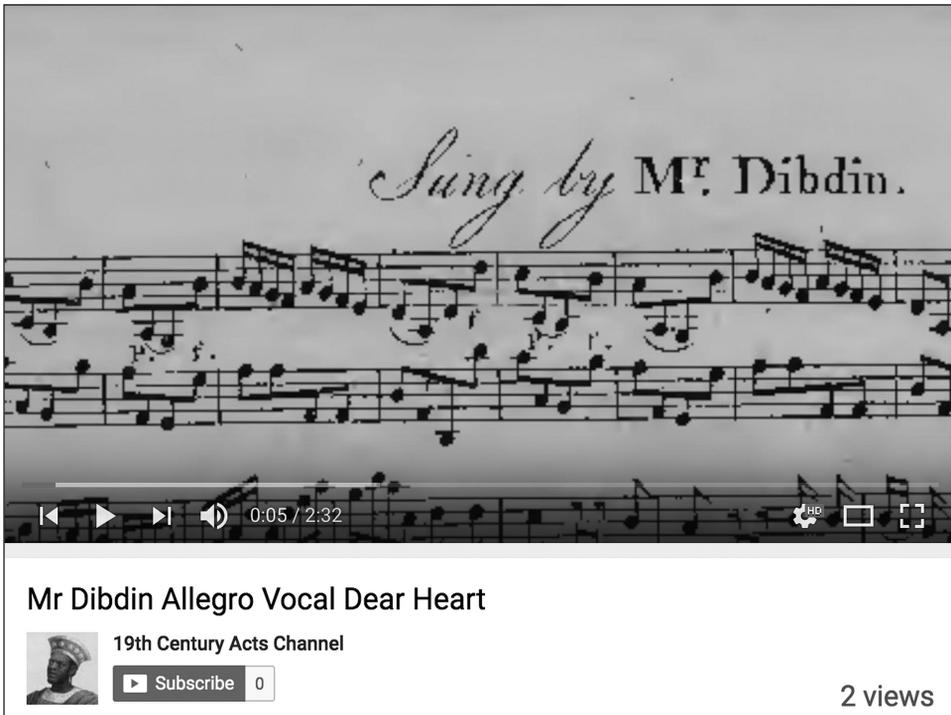


Figure 10. The “Reconstructions” section of the site connects users to a YouTube channel, where they can listen to recordings of songs while viewing images of moving sheet music associated with the melodies.

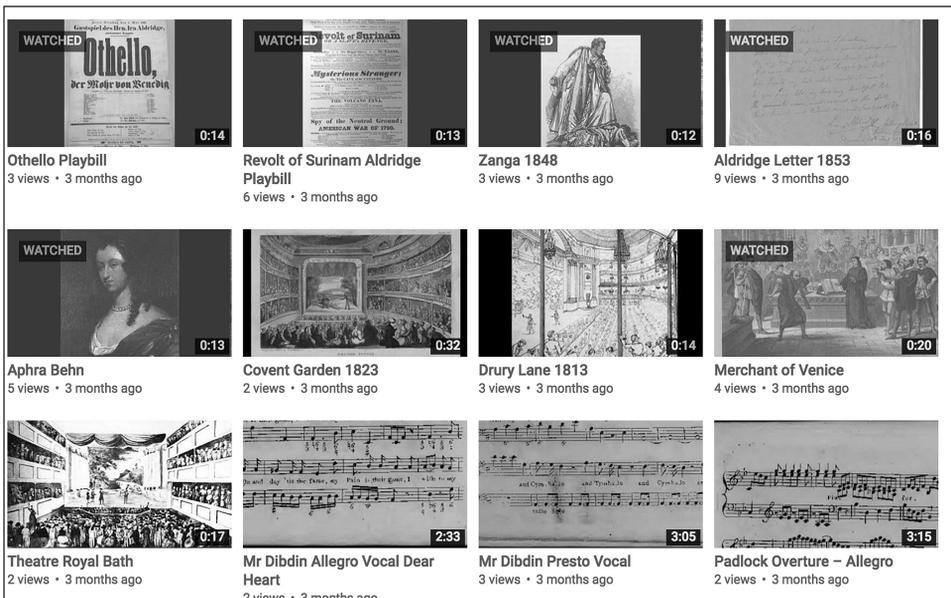


Figure 11. There are a variety of animated images on the YouTube channel, with additional information about nineteenth-century theatrical practices recorded as voice-overs.

needed passwords to view materials. Consequently, Robinson searched diligently for materials from the Creative Commons or were available on publicly accessible digital libraries. But ultimately the most compelling images, and the visuals most applicable to Aldridge, had to be purchased. The Bristol Theatre Collection allowed us to access twenty-five images from the Mander and Mitchenson Collection after paying a large usage fee. These images were recorded on a cell phone and made available for use (in perpetuity) exclusively within the digital tool. In the future, digital “ownership” of archival documents may not persist. Several collections are experimenting with free access to their materials. The New York Public Library recently released 180,000 of its high-res, public-domain digital images, making them available for sharing and reuse (<http://www.nypl.org/research/collections/digital-collections/public-domain>). Fortunately, this means that many more visual sources can be available for incorporation into digital tools. This works for a major institution like the New York Public Library, but how will smaller archives survive if they release their holdings gratis? This tension between the need for financial resources and the obligation to make collections public is an ongoing discussion within archival communities.

At the same time, organizations like the Internet Archive (<https://archive.org/index.php>) undertake the massive task of universal access to all knowledge, including government datasets and old versions of all internet websites. The archive, led by Brewster Kahle and now only ten years old, houses over 160 billion web pages. Digital tools can help to make sense of large datasets like those housed by the Internet Archive. I believe that in the future, the role of the educator and scholar may be more akin to the role of a curator, managing the fire hose of data available to the general public through focused engagement with a finite set of informative data.

User Response

The first set of users to respond to the original *19th Century Acts* tool were undergraduate students who worked on reconstructions, recording snippets of performance in the video studio for integration into the tool. Student actors studied the repertory of Aldridge and then selected short scenes to enact, either vocally or physically. They prepared for the reconstructions by studying Henry Siddons’s gestures and then applying them to sections of Aldridge’s repertory. We concentrated on text from *The Black Doctor* and *The Padlock*, because they represented contrasting performance styles—one melodramatic and one comic. Recording reconstructions on video allowed us to share mediated embodied performance as data through the digital interface. Of course, there are contestable presumptions within this approach to reiterating theatre history; the reconstructions sat side by side with what we think of as “hard” evidence of documents and images. Clearly, imaginary theatrical reenactments are creative constructions of what could have been. However, as Henry Bial and Scott Magelssen argue in *Theatre Historiography*, “[a] new generation of would-be scholars, raised on the shifting sands of the Internet and global media culture, reads history from a fundamentally different perspective than prior generations. The hard-won understanding that history is not and cannot be an impartial record of facts and events is, for such students, a commonplace.”¹⁷ Even though the undergraduate students benefited from this first exercise, learning more about the inconclusive nature of history, the team ultimately decided to remove these first student reconstructions from the tool.

¹⁷Henry Bial and Scott Magelssen, eds., “Introduction,” in *Theater Historiography: Critical Interventions* (Ann Arbor: University of Michigan Press, 2010), 2.

There was, however, one positive use of the original set of performance reconstructions. At the end of the first period of digital development I presented the project at the American Society for Theatre Research (ASTR) conference in 2013, and the Alliance for the Arts in Research Universities (A2RU) in 2014.¹⁸ Following the A2RU presentation, University of Michigan opera director Robert Swedberg asked me to assist him in staging Handel's opera, *Julius Caesar in Egypt*. He was impressed with the student reconstructions of the repertory that were then a part of the tool and thought it would be a good way to train opera students in rhetorical gestures. For him, seeing the embodiment of emotive ideas in the website videos inspired thoughts about how broad acting styles might translate as a training tool for university performers. All thirty members of the opera cast learned gestures from the website, and incorporated aspects of these gestures into their operatic roles. This production use of the digital website was a surprising application of the material, but a more useful assessment of the relevance of the website occurred during the second phase of the project. A primary goal of the second phase of project funding was to assess how the tool might be used within a variety of educational and research settings.

The Digital Education and Innovation Center¹⁹ assisted with designing analytics and a formal assessment plan that would include analytics, focus groups, user interviews, and developer journals. Analytics continue to track user exploration within the interface, while assessment-plan activities included interviews, focus groups, public presentation with audience response, and student research papers. Each of the assessment activities was designed to understand how research and learning could be achieved through nonlinear digital exploration. Interviews with faculty members asked how the tool might best be used to support classroom learning. Focus groups with graduate student researchers were used to assess how they navigated through the tool, and which segments produced the most research questions. These student responses were then folded into the design of the tool.²⁰

¹⁸ At the ASTR conference, I presented the draft tool as a part of the Digital Methodologies seminar group. The A2RU conference was a presentation for those interested in combining arts and humanities scholarship. The Alliance for the Arts in Research Universities (A2RU) is a partnership of over thirty institutions committed to ensuring the greatest possible institutional support for the full spectrum of arts and arts-integrative research, curricula, programs, and creative practice for the benefit of all students and faculty at research universities and the communities they serve. See <http://a2ru.org/>.

¹⁹ The DEI or Digital Education and Innovation section of the university recently changed its name and acronym to Academic Innovation, or AI; see <http://ai.umich.edu/>.

²⁰ One student summarized her use of the tool as follows: "The 19th-century digital tools site provides multiple entry points in which to enter and understand the performance careers of Ira Aldridge, Edwin Booth, and Jenny Lind. The digital mapping tool allows the user to understand the performance timeline of these artists. By selecting a date range, this tool allows you to visually grasp where artists performed, what roles they played, and the context of those productions. I'm particularly drawn to moments when the mapping tool expands my knowledge of a play or suggests the ways an artist was crafting their performance identity. I felt myself often going back and forth between the mapping tool and the 'Sound and Sights' page. I ended up opening several tabs on my computer so that I could more easily move back and forth between content. I think this site could bridge content more fluidly by linking components of the site together. For instance, if the description of Aldridge's role as Othello on the mapping tool linked to the artifacts, theatre, or roles page . . . the user could make deeper and more direct connections between the content within this site. At this point of content development, Ira Aldridge is at the center of this site. It would be great if similar content could be expanded for Edwin Booth and Jenny Lind. I also think it would be helpful to have profile pages of these artists with basic biographical information. I believe having this context would allow the user to better grasp who these performers were and how their lives intersected with a broader performance history."

The graduate students also worked with me to develop a public talk that would ask participants theoretical questions about historiography and visualization. We began the session with each student presenting physical artifacts or visuals relevant to their own research projects. Then we asked each person who attended the talk a series of questions. The first question was how a digital technology might animate an ephemeral historical event using visualization techniques. Next, we asked how technology might be used to recover histories of women and minority performers, and finally, we asked about how to visualize the relationship of artifacts to live performance. Because the interdisciplinary audience was familiar with a variety of research methodologies, we received ideas that ranged from a suggestion that the computer users follow instructional videos to perform dances, to a description of how we could create a virtual-reality chamber to recuperate a particular historical moment. These perspectives were documented and archived as part of the assessment portfolio.

The last assessment activity was to have students, both graduate and undergraduate, write a set of research papers using only information gleaned from *19th Century Acts*. The papers were detailed descriptions of the performance careers of Aldridge, Booth, and Lind. Because most of the hard data of each artist's career were contained within the mapping tool, students tended to write about travels and performances, focusing on types of roles. They often used visual artifacts and their accompanying descriptions as evidence in support of arguments about an artist's agency or career choices. In almost all cases, biography became less important; instead, the students highlighted the activities and performances of the artists included in the tool.

Reflections

Constructing a new digital humanities tool has shifted my approach to theatre research and scholarship, confirming my belief that a focus on visualization can enhance how we imagine the theatrical past. The visual is especially important if we are to recover histories of underrepresented performers whose literary texts may be absent from the archive. Maybe the tool is not so much about the nineteenth century as it is about disparate acts of the underrepresented, a visual aid for discovering performance practices and migrations of those not recognized in legitimized theatre history. The scrapes and scraps of evidence, which are minimal for minority actors, need to be recirculated, rearranged on the page in order to render the image visible. Through the process of constructing *19th Century Acts*, the team explored ways of manipulating visual frames to accommodate expectations of millennial users. My attempts to locate infrastructure, particularly computer programmers, led to the establishment of a Digital Projects Studio that could service multiple sectors of the university, and the assessment process, which included graduate students and university-wide researchers, validated the usefulness of embodying the archive to make history legible for learners.

Even after four years of working on this project, I still enjoy interacting with the interface; each time, I discover a new way of clicking and surfing through the materials. Sometimes I pause over a single image, such as the broadside of a performance or a detailed gesture of an audience member in a theatre. And I want to know how the people in the frame or the events listed on the broadside connect with one another. Whenever I talk about the intent and structure of the *19th Century Acts* tool, I find myself changing the narrative, adapting the presentation to my temporary audience. In other words, the tool somehow allows the narrative to shift and evolve, like an oral storyteller sharing histories with each individual user. Like a good theatrical production, the project exists at the edges of "what if" made manifest through the mechanism of the "click."

