

Final White Paper

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Title: The Philadelphia Playbills Project

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Philadelphia Playbills Project White Paper

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Summary

The Philadelphia Playbills Project has just completed its first year of work thanks to the support of a Level II Digital Humanities Advancement Grant from the National Endowment for the Humanities. The project was based at the Kislak Center for Special Collections, Rare Books and Manuscripts at the University of Pennsylvania.

The Philadelphia Playbills Project (PPP) takes historic playbills from the archives of Penn Libraries' collections at the Kislak Center for Special Collections, Rare Books and Manuscripts, and turns them into data everyone can use to learn about the history of performance in America's oldest theaters. The project is supported by a National Endowment for the Humanities (NEH) Digital Humanities Advancement Grant with collaboration from the New York Public Library (NYPL). The sample set of 700 digitized playbills on the project document the history of works performed in Philadelphia theaters from across the 19th century. Performances encompass a range, from adaptations of *Uncle Tom's Cabin* to an evening advertised as a combination of Mozart's *Marriage of Figaro* and the appearance of a "Living Elephant." These playbills also document the people who performed these plays, such as Edwin Booth, brother of Lincoln's assassin (though a loyal supporter of Lincoln himself), or Laura Keane, the first woman to become an influential theater manager in New York and Philadelphia, who was performing the night of that assassination and held the dying Lincoln in her arms.

The work of the first year of the project included performing two approaches to transcribing information from this sample set of playbills, producing two sets of data, and hosting a capstone conference on Theater History in the digital age. The first approach to transcription was the launch of an initial test phase for a crowdsourcing effort on Zooniverse, where anyone interested in helping transcribe the history on these playbills is invited to participate. The initial phase of this crowdsourcing consisted of a small, targeted test group of participants, and the crowdsourcing platform will continue to be active for the coming year as interest has begun to build from instructors, scholars, and local historians.

While the crowdsourcing efforts are starting up, over the last year dedicated project assistants for the PPP have produced structured transcriptions of the actors, performances, dates, ticket prices and more for the entire beginning sample set of 700 playbills. This transcription work was then converted to a dataset that can become the foundation for future analysis and the development of methodologies for generating such data in the future on a larger scale with other playbill collections in the future. Unique identifying links called Uniform Resource Identifiers (URIs) have been added to this transcribed data to create data in a Linked Open Data format (JSON-LD), which will allow it to more easily be shared, re-used, and connect with other projects and resources in the future. The project has similarly enhanced metadata for images in the Furness Theatrical Image Collection at Penn Libraries, which include digitized images of engravings and photographs of actors, props used

in theatrical performances, and other theatrical ephemera and memorabilia. Both the data for the playbill transcriptions and for the Furness Theatrical Image Collection are now publically available for download in JSON-LD format on github.

Originally a third method of experimenting with Optical Character Recognition (OCR) to extract data from these playbill documents was planned for the project. This work was not performed in the final project due to necessary delays due to major illness on the part of the project leader. It also had become an unnecessary part of the project because, by the time the (PPP) started, the same experiments had been performed by Penn colleagues Michael Gamer and Scott Enderle on a separate set of playbills. Their outcomes suggest that, while OCR techniques are emerging that could be helpful, it still will only produce a reading of all the text on the playbill as one piece, not the sort of structured data that crowdsourcing or paid transcription can produce. Their findings were presented at the capstone conference for the PPP and can be viewed in the conference video available on YouTube.

The Capstone Conference for the Philadelphia Playbills Project, “Digital and Archival Approaches to Theater History,” took place January 17th and 18th at the Kislak Center at the University of Pennsylvania. The conference included an interdisciplinary set of speakers presenting on current approaches to Theater History research, library work, and digital projects. The conference also included a pop up exhibit of materials from the Furness Shakespeare Collection at Penn Libraries. The event created a venue for scholars and librarians to learn about current work on Theater History from the perspective of both material sources and digital projects based on them, to engage in conversation about current best practices, and lay the foundation for future conversation and collaboration.

For more detail on these project outcomes see “Findings and Deliverables” below.

Project History

The Challenges

Philadelphia is the current site of the Walnut Street Theater, the oldest continuously operating theater in the United States, and the former site of the Chestnut Street Theater, the nation’s oldest commercial theater. The history of the actors that performed in these theaters and the shows they performed is an integral part of the history of entertainment and culture in the United States, however no large scale resource currently exists to support the study of the history of performance in Philadelphia. Important resources for uncovering that history are the playbills and programs used by theaters from the 18th through the 20th centuries to advertise current and upcoming performances. Such playbills were printed in large numbers, and thousands of playbills survive in theatrical collections in major research libraries around the country. Like many such ephemeral items, these materials often go undiscovered and unused by researchers due to the fact that they exist in such large numbers but contain dense amounts of printed information about

people, performances, theaters, dates, ticket prices and, in some cases, advertisements. The large quantity of printed information on theatrical playbills present challenges, both to libraries attempting to find ways to provide discovery and access to these items, and to researchers who are either unaware of these resources or are limited to what they can learn by physically browsing through many boxes of playbill materials in the archives. The information on the playbills also becomes much more valuable within the context of other archival materials when researchers can make connections between the listing of a performance and images of the actors, surviving costumes, set designs, theater reviews, and more to begin to piece together a picture of a past production and its social context. However, connecting the thousands of performances listed on these playbills with theatrical ephemera, newspapers, early editions of plays, and other materials scattered across the archives is another challenging task.

What has, in the past been a stumbling block for researchers is now be an exciting opportunity for digital humanities research. The large amounts of performance information on these playbills and the potential for that information to connect in exciting and meaningful ways with other archival materials make them unusually rich potential sources for producing large scale, structured data, and for taking advantage of current developments in linked data formats to connect that data with a host of other resources. The Philadelphia Playbills project has now laid the foundations for this work by testing methodologies for producing a set of linked data from this sample-set of playbill image and advancing the goals of making new information about the history of people and performances in America's oldest theaters publically available and advancing techniques for curating historical theatrical data in preparation for future, larger scale collaboration.

The Material

In the era before film, the theater was the major entertainment media, and as such theatrical entertainments both reflect the values, politics, and attitudes of their time and were themselves influential on the culture of the era. Thus the people and performances documented in the sample set of 700 Philadelphia theater playbills that will be the focus of this project are of interest not just to theater historians, but to researchers interested in social, political, literary, design and even economic histories. Some actors whose performances are documented on these playbills have famous political connections such as Edwin Booth, brother of Lincoln's assassin (though a loyal supporter of Lincoln himself), or Laura Keane, the first woman to become an influential theater manager in New York and Philadelphia, who was performing the night of that assassination and held the dying Lincoln in her arms. The careers of others chart the formation of a distinctly American theater and American culture, from Shakespearean Edwin Forrest, whose rivalry with British actor William Charles Macready over whose nation produced the best *Hamlet* sparked the deadly Astor Place riot in New York in 1849, to the Drew and Barrymore families whose cultural legacy survives through the 20th and 21st century Hollywood performances of their descendants, most recently Drew Barrymore.

The titles of the performances these people appeared in provide insight into what sort of entertainments fed the 19th century American imagination. Playbills provide context for the reception of Shakespeare on American shores, as in the case of the bill that advertises the tragedy *Othello* followed by the “new Petite Comedy *Freaks and Follies*”, and they chart the performance of adaptations of American literature in productions of Harriet Beecher Stowe’s *Uncle Tom’s Cabin*, Washington Irving’s *Rip Van Winkle*, or James Fenimore Cooper’s *The Spy*. They also reveal many titles that have now become obscure, from melodramas to tales of exploration and adventure. In many cases the roots of early theater in circus performance becomes apparent, as in the case of the bill that advertises a performance of Mozart’s opera the *Marriage of Figaro* and the appearance of a “Living Elephant!” in the same night. Playbills are also the source for other kinds of information. They provide the prices people would have paid to spend an evening of such eclectic entertainment. Some multi-page programs include advertisements for goods—from pianos, to peanuts to corsets—providing insights into the economic lives of American theater goers. The dates of performances record what plays were performed for special occasions or national holidays. All these other details provide context for understanding both performances and the audiences who attended them.

By linking the people, performances and other data on playbills with other resources, we can gain a richer understanding of both the performances themselves, and the ways these performances intersected with other social spheres. Within Penn Libraries’ collections the 2,744 digital images from the Furness Theatrical image collection provide images of actors and productions from the same era as the playbills. The PPP has also converted existing metadata for these images to Linked Open Data as an in-house test case for the potential to link performance data with these kinds of ephemeral theatrical materials. Together these two data sets now have the potential to, for example, link data about performances by the actor Edwin Booth found on the playbills with engravings and photographs of Booth in various acting roles, the dagger he used in a production of *Macbeth*, and the real human skull used as prop in productions of *Hamlet* at the Walnut Street theater, with the name of Booth and 6 other prominent actors who used it written on the top. Extending this to connections with linked data sets outside of Penn in future would grow this grouping to include resources such as additional theatrical images outside Penn’s collections on resources such as the Digital Public Library of America, as well as 19th century editions of the plays Booth acted in on OCLC, and more. (See Appendix A for some sample images of materials included on the project).

The Field

The Philadelphia Playbills Project joins many other recent initiatives working to make millions of records of historical performances around the world digitally available. Internationally, the *Theatrescapes. Mapping Global Theatre Histories* database at Maximilians University in Munich¹ provides a large scale project focused

¹ <http://www.theatrescapes.theaterwissenschaft.uni-muenchen.de/index.html>Ludwig

on using performance data as the basis for studying the global nature of theater history, and the intersections between the theater and global social, economic and political history in the period from 1850-1930. The British Library has recently released digitized images of 264 volumes of English, Irish and Scottish playbills from 1600-1902 along with ocr scans of the texts², providing a large scale initial data set for the study of British theater history. The AusStage Project has crowdsourced information about both historic and contemporary Australian live theater productions, has produced a detailed data model for performance data that is emerging as a standard for theatrical data curation, and is beginning to develop linked data capabilities for the project.

Within the United States both the Brooklyn Academy of Music (BAM) and Lincoln Center in New York have created databases of the history of performances in these venues. The African American Theater History Project at the University of Minnesota is a project focused on the last 400 years of African American theater performance that is making advances in providing a search box to locate and aggregate resources pertinent to African American theater history in already openly available data sets at libraries and cultural heritage institutions around the country.³ The Ensemble Project based at the New York Public and the Ensemble @Yale project have developed software targeted on crowdsourcing transcriptions from playbills.

By focusing on Philadelphia performance history, the PPP contributes a focus on the currently neglected history of America's oldest theaters in one of the essential stops for theater companies throughout the nation's history. Combined with projects currently in development for New York collections, the African American Theater History Project, and others, the Philadelphia data will be an essential component for any future large scale efforts to chart the history of the American theater. In the process of making this data available, the PPP both builds on and advances methodologies in the field of digital theater studies.

The Institution

The University of Pennsylvania has a history of producing projects for large scale performance history data, making it a natural home for the PPP. In the mid twentieth century Penn professor A. H. Scouten was a leading editor for the eleven volume *The London Stage: 1660-1800*, a resource listing as many known theatrical productions with their casts and other pertinent details gleaned from available playbills and newspapers for post-restoration London theater through the start of the 19th century. The current project emerged in part as a response to the question of what this monumental undertaking might look like in the digital age. Spearheaded by Kislak Center staff member Laura Aydelotte the project emerged from conversations with 19th century theater historian and Penn faculty member, Michael Gamer, who is gathering 19th century performance data for his current research, as well as the interests of Shakespeare scholar Zachary Lesser in what the

² <https://data.bl.uk/playbills/>

³ <https://www.lib.umn.edu/about/digitalgivens/>

materials in Penn's Furness Shakespeare Library can tell us about the performance of Shakespeare in 19th century Philadelphia.

These research questions resulted in two preliminary actions that formed the basis for the PPP. The first was a collaboration between Gamer and Penn Libraries Digital Humanities Specialist Scott Enderle to experiment with different data models for representing performance data. The second was the cataloging and digitization of the set of 700 Philadelphia playbills that have been used as the test set for the PPP. Part of cataloging work also includes establishing subject headings and links to authority records for people and work, which contributed some initial information for adding unique identifiers in the work of producing the Linked Open Data set. For items like playbills, with many names and performances listed, there is not sufficient work time for catalogers to do much of the research intensive work of identifying individuals named on the playbills. However, the cataloging work did produce links to authorities for the theaters, and for about 100 commonly occurring play titles and a similar number of headlining actors that appeared on many of the playbills that can become a starting point for the work of connecting entities in the PPP to authorities when creating linked data for the project. This work also provided a useful initial assessment by metadata experts regarding the number of entities listed on the playbills likely to have authority records as well as the amount of time estimated to do the work of linking entities to existing authorities that ultimately became a part of the work of the PPP.

Findings and Deliverables

Initial Crowdsourcing Test

The PPP completed a startup period for the crowdsourcing portion of the project on the Zooniverse platform from August 2018 to January 2019. Though the participation in the crowdsourcing during the project was very low (fewer than 50 participants), it proved a useful period for receiving feedback that could improve future crowdsourcing efforts for this or similar projects. Targeted test sessions of the crowdsourcing platform at Penn and the Folger Shakespeare Library provided both critical feedback for improvements and helped establish interested user groups in those communities. Project collaborator Doug Reside from the NYPL also provided valuable feedback based on NYPL's past "Ensemble" crowdsourcing project.

In the initial tests the crowdsourcing platform was set up to be at once as simple and as comprehensive as possible. This meant asking for transcriptions for all the fields that are a part of the data model for the project, which was largely based on the Ausstage data model. Feedback from project collaborators and test groups suggested that, for future projects interested in scaling up to include larger numbers of playbills an approach that targets a few key fields, such as theater, performance title(s), and one or two lead actors might make it possible to receive even larger scale "starter" records to provide core information. Since the majority of playbills in library collections are uncataloged, and individual cataloging for each playbill is too time consuming to be possible on a larger scale, this could be

especially useful for providing much needed information about playbills used in future projects. A variation of this feedback also suggests an initial step that allows crowdsourcing contributors to add a few key pieces of information very quickly, and a second step that would allow users to fill out more detailed information, such as the names of all the actors in the cast for a performance. Other user feedback included specific feedback for how to make the instructions and steps smoother and easier to use in future iterations of the project. These suggestions for improved workflow will be incorporated into the project as it goes forward in the immediate future.

The Json data produced by this initial Zooniverse test also provides an in house test set for potential future work converting crowdsourced data into a more formal dataset. With the initial set of examples, it is possible to begin experimenting with approaches to processing and cleaning up the JSON files produced by Zooniverse, including activities such as reconciling multiple transcriptions of the same playbill, and taking into account incomplete transcriptions produced.

This also served as an initial promotional period for the crowdsourcing, and generated sufficient interest from instructors interested in incorporating it into future classes, librarians, scholars, and local people with interest in Philadelphia history, that Penn intends to keep the playbills crowdsourcing project up on Zooniverse for the coming academic year due to a clear potential for the crowdsourcing effort to scale up in terms of number of users engaged.

Transcription

Transcriptions of the entire set of 700 playbills by part time project assistants across the course of 8 months. This proved to be the most reliable and efficient way to produce the transcriptions and became the basis for the final dataset. Project assistants, Samantha Pious, Alicia Lochard, and Daniel Mackey all contributed to this effort. They entered transcriptions into fields on sets of excel sheets that corresponded to the data model developed for the project. This data model was based on the AusStage data model⁴ with a few additions to accommodate historical features particular to the 19th century playbills used for the PPP.

These assistants also added URIs from VIAF for people and some plays to the data for linked data purposes (see below). As a part of this task, the team also produced a set of structured notes, including key information, including birth and death dates, aliases, and links to existing online resources for names of people who do not have VIAF IDs, but can be historically identified. This document will be useful as the basis of both future research and digital identifying work for many less well documented historical figures, including a large number of women.

Both this transcription and identification work yielded a rich amount of information about Philadelphia theater history in this era. One major challenge of early playbills is in identifying the people listed in the cast, who are often simply billed as “Miss Durang” or “Mr. Jefferson,” particularly when multiple members of the same theatrical family may share the same name. The research required to add

⁴ <https://www.ausstage.edu.au/pages/learn/about/data-models.html>

the URIs for the linked data capability led to the creation of a document with notes about each of the people on the playbills that any historical information could be found about, even if they did not have a URI already in VIAF. This means that the project not only creates the capability to link together resources and information about famous actors of the era, like Edwin Booth (brother of Lincoln's assassin, John Wilkes Booth, but a supporter of Lincoln himself), but also shines light on some less well known figures, like Lewis Morrison, the half black, half Jewish actor, famous for his role in Faust.

Linked Data

The PPP has produced two data sets in a Linked Open Data format (LOD), specifically JSON-LD. One of these datasets was produced from playbills transcribed by the project, and the other was produced from existing metadata for the Furness Theatrical Image collection. LOD is an approach to data that requires adding Uniform Resource Identifiers (URIs), which is a kind of Permanent URL that has been agreed on as the authority for identifying a particular person, place, or work. The PPP started by adding URIs from the Virtual International Authority File (VIAF), which is a significant source for such identifying links. On the playbills project, this means determining whether there is an existing identifier for names of people mentioned on the playbills, including actors, playwrights and theater staff, as well as identifiers for theaters on the playbills.

The reason for using these URIs is to disambiguate a particular person in the data. Women, whose names change with marriage, who are especially challenging to identify. For example, Cornelia Frances Thomas Burke Jefferson, is billed as "Miss Thomas," "Mrs. Burke," and "Mrs. Jefferson. Or, across time, there may be multiple "Mr. Wallack" billings on a playbill, so it is necessary to differentiate between the father, son and brother of that name. Once these links are added it is now possible for a machine to differentiate between people by the same name, or connect that multiple names belong to the same person. This means that it is easier to connect the playbills data with other data that include the same URIs, so that actors on the playbills can be connected with other information about them.

The challenge of documenting what was possible to know about these people not only enables the data to be more easily shared and re-used, but contributes to the work of unraveling the identities of people in Philadelphia's theatrical past. It also indicates where future historical and digital work may need to be aware of gaps in who is already documented and recognized in forms like VIAF IDs, and who is not. The documentation for this project creates a start for this kind of work for Philadelphia theater history.

These URI's were added to both the playbill transcriptions and the metadata for the Furness Theatrical Image Collection. This means that the two JSON-LD datasets can now be used together to model connections across data sets. For example, URIs added to the mentions of Edwin Booth across playbills in the transcription dataset can be matched with URI's added to the image collection for images of an engraving of Booth and the skull used in Philadelphia productions of

Hamlet signed by Booth and other actors. In this way the data can bring together resources across collections.

This same principle of connecting resources across these two experimental datasets can, in future work be used to more easily connect data on the project with data elsewhere, from other Theater History projects, to Wikipedia. Together these datasets create the basis for future work that will allow us to more easily see connections between the names of people on the playbills and other archival material or information about them elsewhere. In this way the project advances both approaches to creating transcriptions of playbills, and ways of meaningfully connecting the playbills to other relevant materials in the archives, contributing new ways of tackling challenges for research and discovery in the theater history field.

Conference

The conference “Digital and Archival Approaches to Theater History” took place at the Kislak Center at the University of Pennsylvania January 17-18, 2019. The event was open to the public, welcoming scholars, librarians, and members of the local Philadelphia community with interests in theater and local history. The conference included a presentation on the first year of work for the Philadelphia Playbills Project as well as speakers from both local Philadelphia institutions, and both public and private universities and arts organizations from around the country. The conference fostered conversation across many facets of library and scholarly worlds about challenges to working with theater history materials, the approach of both digital and more traditional archival projects to this work, and ways in which we can collaborate to grow and improve future work in fields including history, literature, theater, LGBTQ studies, library science and more. One notable feature about the presentations at the conference was that they offered many practical suggestions and observations for how to build on existing work in Theater History and learn from both the mistakes and successes of current and ongoing projects. The Philadelphia Playbills Project fits into this broader conversation, helping to advance technical approaches to support a spectrum of ongoing work for understanding the complex cultural networks that comprise theatrical performances.

Presentations

Video of the conference proceedings is available on YouTube:

https://www.youtube.com/watch?v=73tA_whspss

Presentations included:

Keynote Talk:

- Sarah Werner, independent scholar, “Digital Ephemera of Theater History”
In the introductory presentation for the conference Werner discussed various kinds of ephemera, describing her own experience working with both the material ephemera of the theater, from playbills to ticket stubs, and the digital ephemera produced by DH projects. She introduced questions about how we approach

creating meaningful digital work and how we can practically sustain it.

- Paul Ulrich, Society for Theater History Berlin,
“Theatre Almanacs and Journals as Sources for Documenting German Theatre in the 19th Century”

Ulrich discussed his ongoing bibliographic work using theater almanacs and journals to create an impressive record of German language performances, not only in Germany but across the history of Philadelphia.

- Helice Koffler, The Schubert Archive
“The People Behind the Records: Launching the Early Employees Project”

Koffler’s presentation discussed the initial work of the Early Employees Project, which focuses on early 20th century employees of the Schubert theater, with a specific focus on notable LGBTQ of the theater staff.

- Doug Reside, New York Public Library

Reside’s presentation provided an overview of recent Digital Humanities projects focused on theater history. The presentation emphasized a long view of the challenges to such projects, including inconsistent funding and difficulties coordinating work across multiple separate projects. He emphasize the importance of continued formal conversations and collaboration in order to ensure common standards and mutual support across projects and institutions.

- Matthew Wittmann, Houghton Library, Harvard
“Thirteen Ways of Looking at a Playbill”

Wittmann provided an overview of highlights from the playbill collection at the Houghton Library and perspectives and insights as curator of a major theater collection as to how theatrical ephemera like playbills can function as cultural artifacts, historical documents, artistic expressions and more.

- Karin Suni, Free Library of Philadelphia
“From Card Catalog to Digital Database: The Philadelphia Play Index Project”

Suni presented an overview of the Free Library of Philadelphia’s extensive theater collections, and a proposed project for converting index cards documenting Philadelphia performances into a searchable digital form.

- Michael Gamer and Scott Enderle, English Department and Penn Libraries, University of Pennsylvania

Gamer and Enderle presented their own playbills project focused on experimentation with OCR work on 19th century British playbills. The OCR work produced text which, despite some errors, has already proved useful for being able to search for actor names, trends in works being produced, and more.

- Sarah Hovde, Folger Shakespeare Library
“How to catalog 100,000 playbills”

Hovde presented her work on the first part of cataloging the playbills in the Folger Shakespeare Library Collection. This included both the success of producing records for thousands of playbills and the challenges of needing more time than originally expected to complete this ongoing task.

- Laura Aydelotte, Kislak Center, University of Pennsylvania
“The Philadelphia Playbills Project Year One”

Aydelotte presented on the first year of work for the Philadelphia Playbills Project, providing an overview of the project and announcing the completion of an openly available dataset of transcribed data from the sample set of 700 playbills in Penn’s collection.

Exhibit

During the two days of the conference Dr. Aydelotte presented a pop-up exhibit, containing 36 items from the Furness Shakespeare Library Collection, including playbills, props, engravings, photographs, theater posters, and more. The exhibit was the focus of one of the conference sessions, in which Dr. Aydelotte gave a brief presentation on the objects in the exhibit and a discussion followed about the representation of such material theater material from past performances in future digital projects and resources. (See Appendix B for images from the Exhibit)

Dissemination and Sustainability

The work of the project has been disseminated in a number of ways.

- Online the data has been made available on GitHub for use by DH specialists.
- The data will also be stored in the Penn Libraries digital repository, additionally ensuring its future security.
- The project website/blog provides information about both the scholarly and technical work of the project:
<https://wordpress.com/view/philadelphiaplaybills.com>
- The project has been promoted on social media, including twitter, Facebook and Instagram. Within the campus community, an article about the project appeared in Penn Today: <https://penntoday.upenn.edu/news/philly-playbills>
- The capstone conference for the project was open to the public and included a presentation on the work of the Philadelphia Playbills Project alongside presentations about the approach of both digital and more traditional work from multiple institutions.
- Video of the conference has been posted online so that the conversation can be made available more widely.
- Travel to partner institutions, including Harvard, NYPL, and the Folger, provided opportunities to promote the project on the ground to scholars, librarians, and interested members of the public within the communities

attached to these institutions, and to foster conversation, input for the project, and collaborative future plans with colleagues.

- In addition to the capstone conference and presentations at partner institutions, Dr. Aydelotte also promoted the project's work with talks both locally and at national conference venues, including the Shakespeare Association of America and the Philobiblon Club of Philadelphia.
- PDr. Laura Aydelotte has been invited to contribute an article to *Theatre Survey* about the project, projected to be published in late 2019 or early 2020.

Future Potential

Following the initiation of crowdsourcing activities, the completion of the two datasets in JSON-LD format and the capstone conference conversation, the Philadelphia Playbills Project is in a position to move forward in multiple ways:

- 1) The crowdsourcing work that has been started on zooniverse will continue to be active for the coming year. As participation grows and greater amounts of crowdsourced data is available in future, it can become the basis for beginning to incorporate publically produced data into future published transcription data for playbill collections at Penn and elsewhere.
- 2) The Linked Open Data produced by the project for both the transcriptions of the playbills and the Furness Theatrical Image Collection, can now be analyzed and used by both project members and anyone else working in either the Theater History or working with Linked Data sets of their own. Some basic analysis can be performed simply by searching the data or extracting statistics, such as the number of actors billed across the playbills, or trends in ticket prices across time. Future development goals will include the creation of a triple store (the equivalent of a database for Linked Data) and a SPARQL endpoint, which will allow the data to connect with other Linked Data sets and be easily searched and used by researchers and digital practitioners from anywhere.
- 3) The work completed thus far on the playbills project has helped provide a workflow and build on emerging standards in the field of Theater History so that this kind of transcription work and data production can be scaled up to start addressing the thousands of playbills currently sitting in libraries around the country uncataloged and unrecorded. The capstone conference and visits to partner institutions in the course of the project has laid the groundwork for future collaborations. This will include collaboration across existing theater projects, including connecting the Philadelphia Playbills Project with other Theater History resources online, and potential future collaboration to grow the work of the Playbills project to include Playbills from other collections in Philadelphia and beyond.

Appendix A: Materials

Below are some examples of a few of the Playbills the project is focused on, as well as selected images from the Furness Theatrical Image collection that demonstrate the kinds of other theater resources the data on the playbills can be linked to.

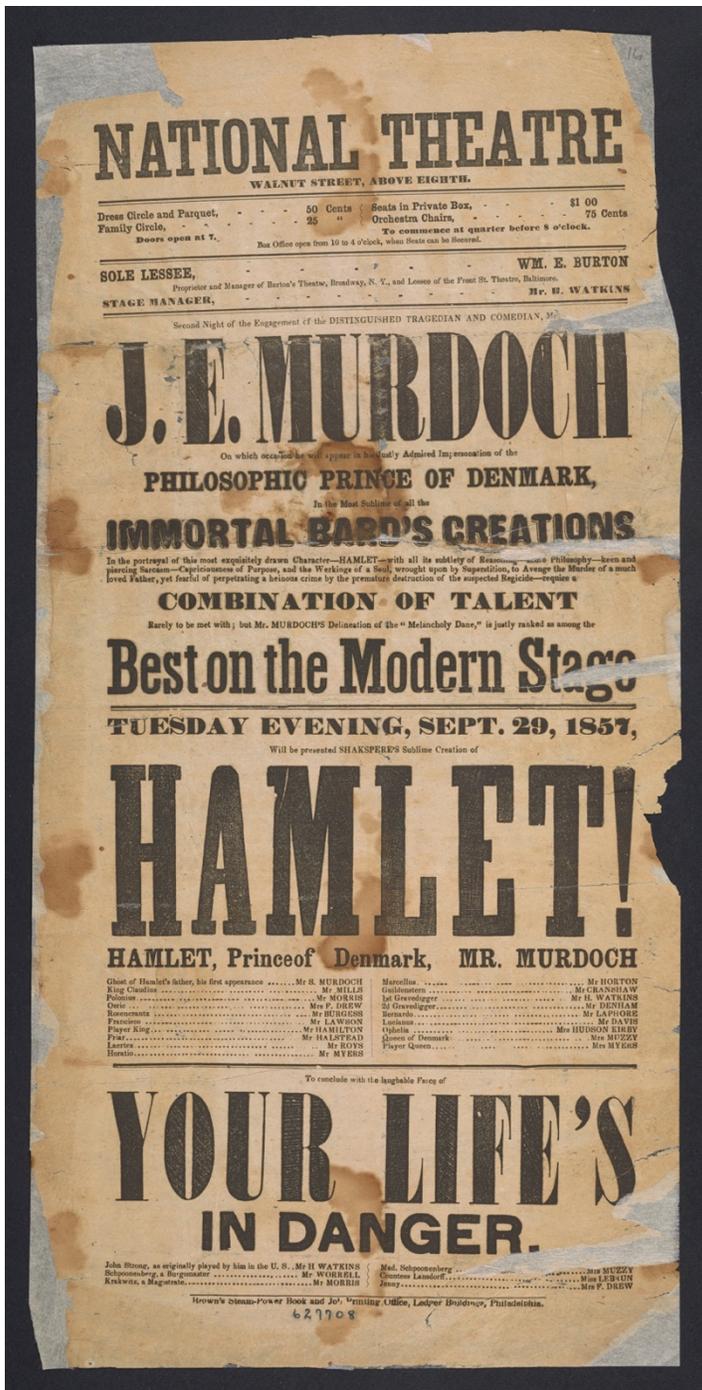


Figure 1 An interesting (and amusing) juxtaposition of performances: Shakespeare's *Hamlet* and the "Laughable Farce of" *Your Life's in Danger*. It also shows that playbills are often in bad shape, another reason to preserve the data they hold.

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THEATRE.

The Public are respectfully informed, that the Managers have engaged the appearance of

A Living Elephant.

Friday Evening, March 22, 1822,
Will be presented the admired Comedy of the

Follies of a Day;

Or, the Marriage of Figaro.

Being the Sequel to the Barber of Seville.

Written by Beaumarchais, and translated by Mr. Holcroft, author of the Road to Ruin, &c.

Count Almaviva, Mr. WOOD.	Carlos, Mr. MARTIN.
Figaro, Mr. JEFFERSON.	Mareto, Mr. MURRAY.
Basil, Mr. HATHWELL.	Countess Almaviva, Mrs. JEFFERSON.
Antonio the Gardener, Mr. BLISSETT.	Susan, Mrs. DARLEY.
Page, Mrs. WOOD.	Agnes, Miss HATHWELL.
Juan, Mr. PARKER.	Marcelina, Mrs. BLOXTON.

After which the favourite grand Musical Romance, called the

FORTY THIEVES.

In the course of which will appear

A LIVING ELEPHANT,

(The largest Animal of the kind ever exhibited in America) superbly caparisoned, with Riders, &c. in the Asiatic Style.

Cassim Baba, the rich brother, Mr. HATHWELL.	Ali Baba, a wood-cutter, Mr. JEFFERSON.
Ganem, his son, Mr. DARLEY.	Abdallah, 1st Captain, Mr. JOHNSTON.
Masarae, 2d Captain, Mr. H. WALLACK.	Orchobrand, Genius of the Forest, Mr. GREENE.
Mustapha, the Cook, Mr. BLISSETT.	Leaders of the Caravan, Mr. J. JEFFERSON.
Singing Robbers, Messrs. FRANCIS, JOHNSTON, PARKER, MURRAY, MARTIN, &c. &c.	
Ardandic, Fairy of the Lake, Mrs. JEFFERSON.	Zaide, wife of Cassim Baba, Mrs. FRANCIS.
Cogia, Mrs. LEFOLLE.	Zelie, Mrs. GREENE.
	Morgiana, Mrs. DARLEY.
	Gossamer, Mrs. H. WALLACK.
	Nymphs, Mrs. BLOXTON, Misses Hathwell, Mrs. Murray, &c. &c.
	Guards of the Caravan, &c. &c.

PRINCIPAL SCENES—ACT FIRST, SCENE FIRST.

THE FANCY GROTTTO.

This brilliant Scene exhibits a beautiful View of the Silver Lake, surrounded by splendid Rocks and Groves of rich Fruit, &c. *Chorus*, "Fairy of the Glassy Lake." *The Fairy* appears, attended by her *Nymphs, Sylphs*, &c. drawn by little white swans. Her *Chariot* is a large *Sea Shell, Coral Weeds*, &c.

Scene 2d, A Beautiful Veranda,

Belonging to the Mansion of Cassim Baba.

Scene 5th, A WILD FOREST, with the Robbers Cave—
The interior is defended by a brazen Charmed Gate. *Chorus*, "Like the Wind driven Sand."

Scene 7th, The MOUNTAINS The Caravan is attacked and defeated by the ROBBERS, &c.

Act 2d, The Abode of Orchobrand, a Gloomy Cave. The Genius is discovered on his throne of *Serpents*, surrounded by Rapine, Envy, Murder, Famine, &c.

Scene 2d, A street in Bagdad. Scene 3d, another street.

Scene 4th, Another View of the Veranda and Court.
The Jars are discovered—the *Distraction of the Thieves* by Morgiana, &c.

Scene 5th, A splendid Apartment of Ali Baba's.

LAST SCENE.

Crystal Palace.

With the **SILVER LAKE**, &c.
Cupids, Sylphs, &c. in beautiful Boats.

A Pus Seal by Mrs. H. Wallack.

On Saturday, *The Devil's Bridge*—*Count Belino* by Mr. Philipps.

In preparation, a new splendid Opera (never acted in America) called **THE RUSSIAN IMPOSTOR**; performing Smolensko; with new Scenery, Dresses and Decorations.

Places in the Boxes may be taken of Mr. Johnston, at the Box Office, from 10 until 2; and on days of performance from 10 until 4 o'clock.

Cheques not transferable. Proper officers are appointed who will rigidly enforce decorum.

BOX, ONE HOLLAR—PIT, SEVENTY-FIVE CENTS—GALLERY, FIFTY CENTS.

The doors will be opened at a quarter before 6 o'clock, and the curtain will rise at a quarter before 7.

Figure 2 This playbill shows the range of types of entertainments that often filled the 19th century stage, ranging from a performance of Mozart to "A Living Elephant!" A Living Elephant!

WALNUT STREET THEATRE.

PHILADELPHIA, NOVEMBER 18, 1869.

Thanksgiving Day

GRAND MATINEE

When will be produced the Great Dramatization of Mrs. H. B. Stowe's world-famed Novel,

UNCLE TOM'S CABIN

IN SIX ACTS AND TABLEAUX.

The intense power and exquisite pathos of which have secured for it a success unequalled in American dramatic annals, and invested it in the popular regard, with Perennial Beauty and Freshness.

Doors open at 1 1/2 o'clock. Commence at 2.

Thursday, November 18th, 1869,

The Performance will commence with

Proverture—**Uncle Tom**.....Hassler
After which the Great Drama, in 6 Acts, entitled

UNCLE TOM'S CABIN:

Or, LIFE AMONG THE LOWLY.

Uncle Tom.....	W. H. Bailey
George Harris.....	James Taylor
Simon Legree.....	Lewis Morrison
Phineas Fletcher.....	Chas. Walcott
Gumption Cute.....	Owen Fawcett
Mr. St. Clair.....	Willis H. Page
Calix.....	W. H. Jones
Samson Perry.....	W. L. Street
Sawyer Marks.....	C. H. Bradshaw
Mr. Shelby.....	W. Lomas
Harry, Eliza's child.....	Miss Mary
Mr. Wilson.....	F. Stull
Sambo.....	P. J. Wade
George Shelby.....	J. C. Johnsen
Eliza.....	Miss Rose Wood
Topsy.....	Miss Annie Graham
Calix, with Song.....	Mrs Chas. Walcott
Eliza St. Clair, with Song.....	Little Nellie
Marie St. Clair.....	Miss Lizzie Gilbert
Aunt Ophelia.....	Mrs W. A. Chapman
Aunt Chloe.....	Mrs J. P. Brelsford
Emeline.....	Miss Mary Barr

Synopsis of Principal Incidents.

ACT I—George and Eliza; the Slave's wrong; the determination to throw off the yoke; Eliza's child about to be sold from her; she flies with her little boy; the pursuit; the encounter; Phineas Fletcher, the noble-hearted Kentuckian, resolves to assist her; she is tracked by her pursuers; escapes across the river on a cake of floating ice.

ACT II—The home of the St. Clair's; Little Eva and Uncle Tom; Aunt Ophelia; "Oh, how shiftless;" Topsy, the gal that never was born; Topsy and Aunt Ophelia can't agree; George Harris lying in disguise; meets a friend indeed; Topsy and Eva.

ACT III—St. Clair and Tom; the faithful slave; Ophelia and Topsy again; Topsy incorrigible; Eva's scripture lesson; Eva pleads with her papa for Uncle Tom's freedom; death of Eva.

ACT IV—Gumption Cute and his speculations; peculiar business; the troubled soul and the humorist; Ophelia and her new charge; death of St. Clair.

ACT V—The Deacon and Aunt Ophelia; the disinterested suitor; Legree and his property; the flinty

heart; Tom in dark places; the Deacon's devotion; Topsy butting the Yankee; Plantation Life.
Grand Walk-Around—Sugar House Jig,
by Mast. Julian Reed.

ACT VI—Uncle Tom and Cassy; no comfort but in Heaven; George Shelby's return; Legree and Cassy; a fearful retrospection; the sacred soul; Gumption Cute after another "spree;" Legree and Uncle Tom; the fatal blow; death of Legree and Uncle Tom; Grand Illuminated Tableau. Eva in Heaven!

During the Afternoon the Orchestra, under the direction of SIMON HASSLER, will perform the following Programme:

Galop—"Minnie".....	Hassler
Waltzes—"Atlantic City".....	Kerssen
Violin Solo—"Sweet spirit, hear my prayer".....	Wallace
Quadrille—"After Tattoo".....	Offenbach
Operatic Selection—"Les Huguenots".....	Meyerbeer

NOTICE.

Free Admissions are necessarily entirely suspended (with the exception of the special representatives of the Press) during Mr. Edwin Forrest's nights.

THANKSGIVING NIGHT,

Shakspeare's Tragedy of
MACBETH.

Macbeth..... Mr. Edwin Forrest

FRIDAY.

Bulwer's Historical Play in 5 Acts, of
RICHELIEU.

Richelieu..... Mr. Edwin Forrest

In order to accommodate Families, a

MATINEE will BE GIVEN on SATURDAY

Doors open at 1 1/2 o'clock. Commence at 2

When will be performed the Thrilling Drama, in 3 Acts, of

WAITING FOR THE VERDICT!

And the Laughable Farce of
LITTLE TODDLKINS.

SATURDAY NIGHT, will be presented Boucicault's Great Drama, in 5 Acts, of **THE**

Octoroon, or Life in Louisiana

To conclude with the Drama of

ROBERT MACAIRE.

Business Manager & Treasurer, Mr. T. J. Hemphill
Stage Manager..... Mr. W. A. Chapman
Musical Director..... Mr. Simon Hassler

The Box Office opens at 9 o'clock, A. M., when Chairs may be secured till 4 P. M., and 9 till 10 P. M., during the Season.

SCALE OF PRICES.

Family Circle.....	25 Cents
Dress Circle.....	50 "
Secured Chairs in Dress Circle.....	75 "
Orchestra Circle.....	75 "
Secured Chairs in Orchestra Circle.....	\$1 00
Orchestra Chairs.....	1 00
Orchestra Boxes.....	6 00
Private Boxes.....	8 00

Doors open at 7 o'clock. Performance to commence at quarter of 8 o'clock, precisely.

Chairs Secured Six Days in Advance.

Figure 3 Playbills show what people performed on significant days, such as holidays. In this case a performance of *Uncle Tom's Cabin* on Thanksgiving Day, just a few years after the end of the Civil War.

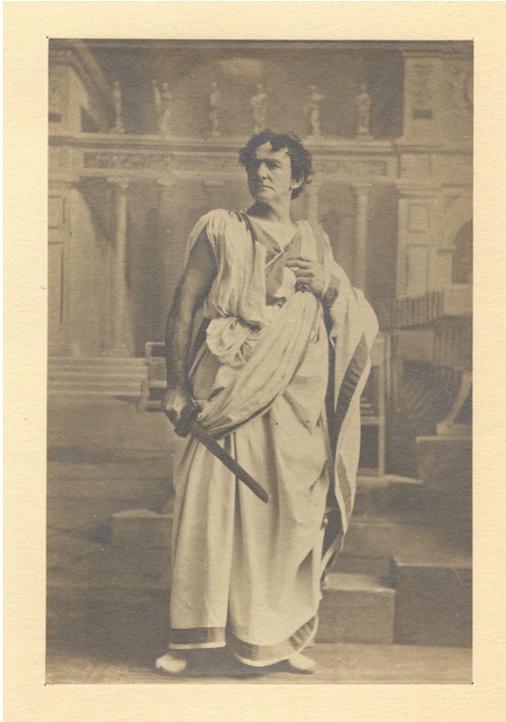


Figure 5 Photograph of actor Edwin Booth as Julius Caesar



Figure 4 Dagger used by Edwin Booth (left) in a Philadelphia production of Macbeth

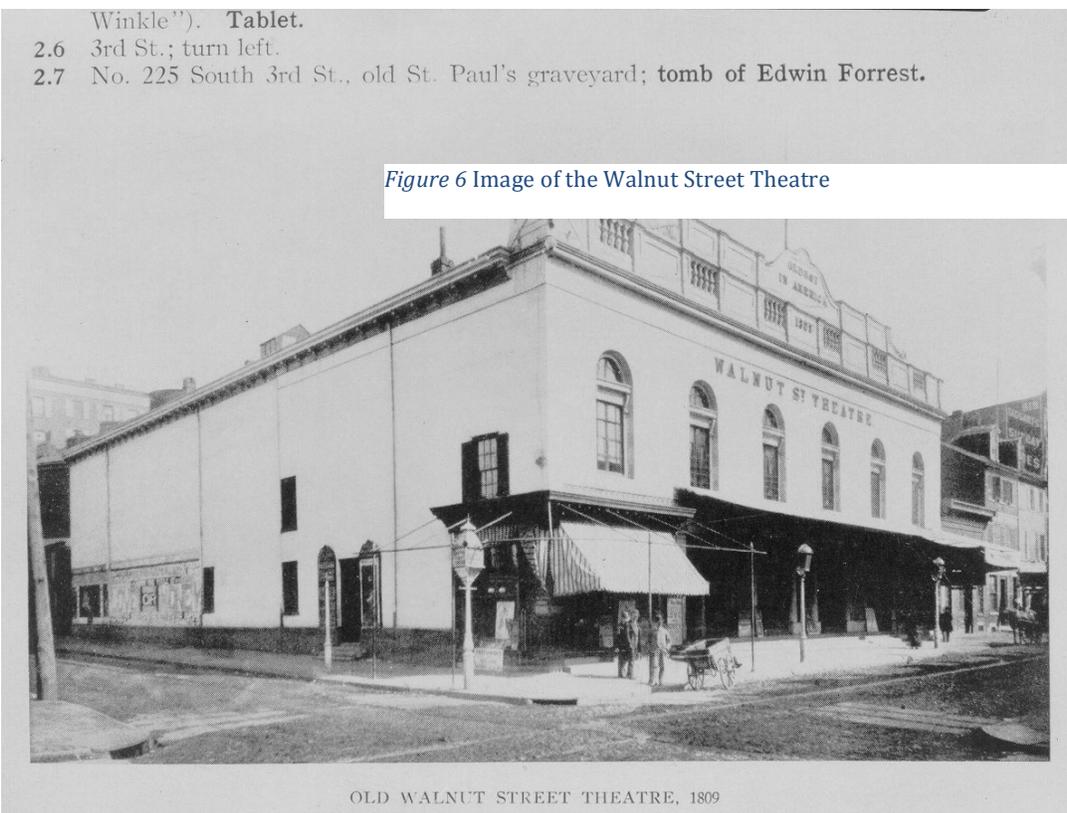




Figure 8 Actor Edwin Forrest as Hamlet. See the skull he acted with below.



Figure 7 Actress and theater manager Laura Keane as Portia.



Figure 9 The real human skull used as a prop in productions of *Hamlet* at Philadelphia's Walnut Street Theatre. The names of famous actors who used it, including Edwin Forrest (see next page) are written on the top of the skull.

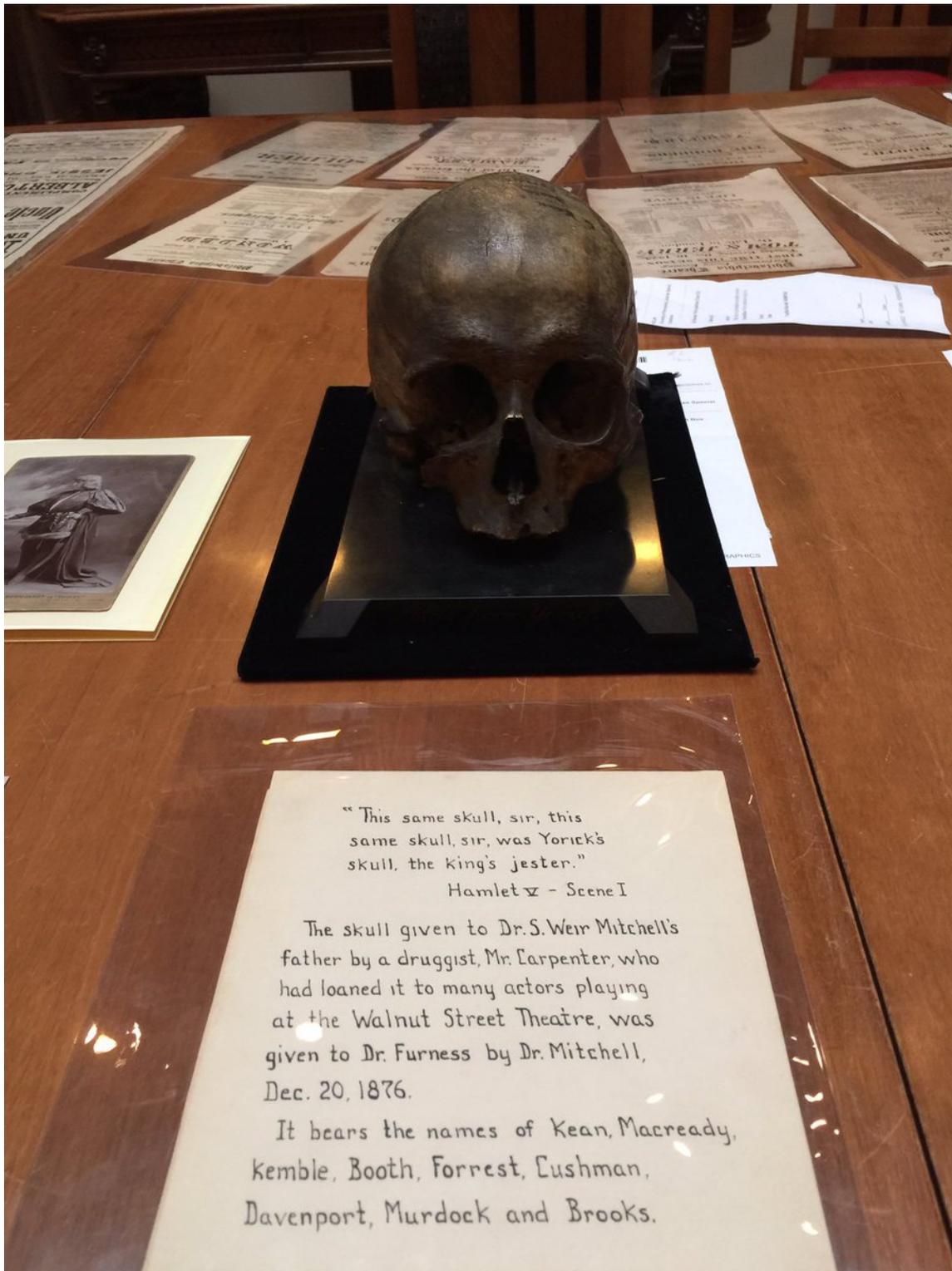
Appendix B: Exhibit

Pop Up exhibit January 17-18, 2019

In this document are some selected images from the pop up exhibit that was up during the two day capstone conference for the Philadelphia Playbills Project. The exhibit formed the basis of a session of the conference dedicated to a presentation of the objects by project director, Laura Aydelotte and discussion of the representation of physical objects like these in a digital environment.

1) A collection of playbills, posters, images, and props, including the human skull that was used in Philadelphia theater productions of *Hamlet* in the 19th century and signed by notable actors of that age.





"This same skull, sir, this
same skull, sir, was Yorick's
skull, the King's jester."

Hamlet α - Scene I

The skull given to Dr. S. Weir Mitchell's
father by a druggist, Mr. Carpenter, who
had loaned it to many actors playing
at the Walnut Street Theatre, was
given to Dr. Furness by Dr. Mitchell,
Dec. 20, 1876.

It bears the names of Kean, Macready,
Kemble, Booth, Forrest, Cushman,
Davenport, Murdock and Brooks.

II. Items on display including gloves once thought to have belonged to Shakespeare (in the large glass case), a playbill of a production of Shakespeare's *Much Ado Nothing*, with the costume gloves used in a Philadelphia production of that play behind them, a tiny pair of gloves (possibly used by a child actress), and a handkerchief that belonged to actress Fanny Kemble.

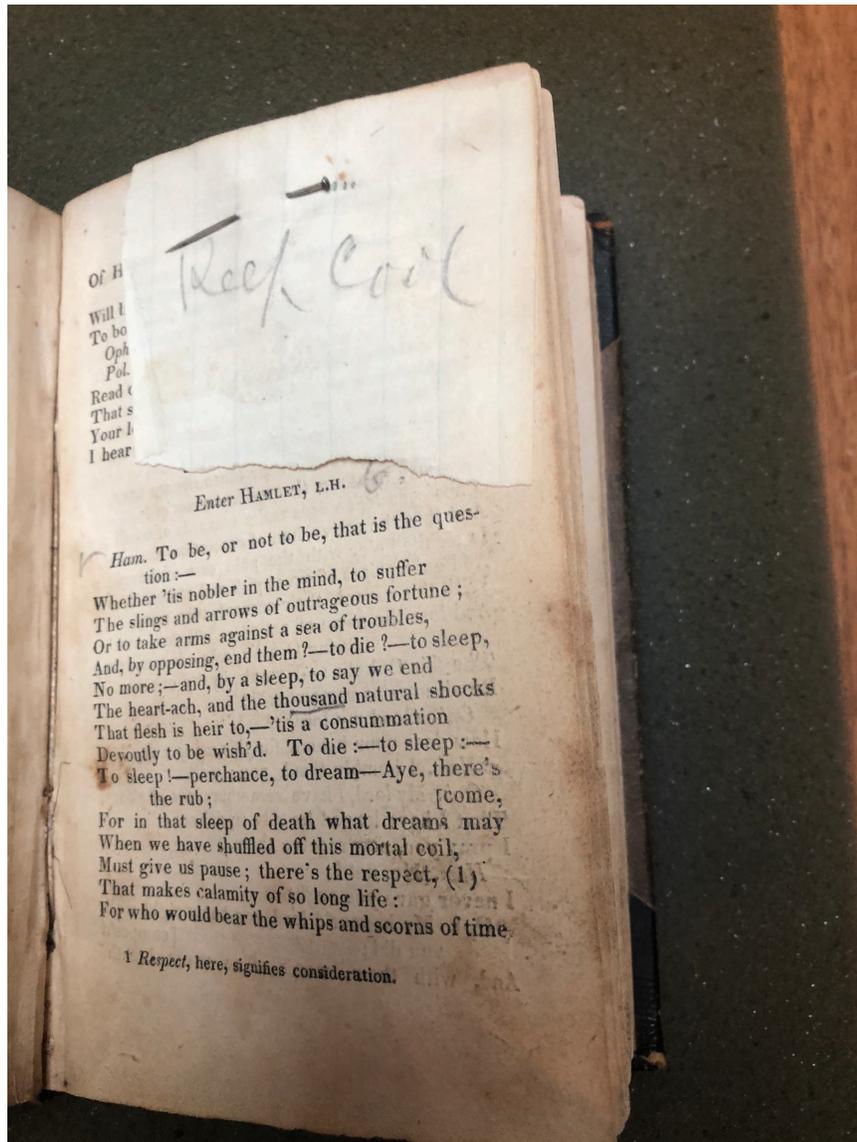


III. The remains of actor Edwin Forrest's burned copy of the First Folio of William Shakespeare's complete works, Penn's copy of an intact First Folio, Edwin Forrest's library catalog, recording the book as one of the actor's cherished collections, and a selection of his diaries.





IV. Actor J.E. Murdoch's prompt book for *Hamlet*, in which he has used a pin to insert the note "Keep Cool" just before the famous "To be, or not to be" soliloquy in the text.



V. Assortment of items on display, including the dagger used by Edwin Booth in a production of *Macbeth*, a crown used in a production of *King Lear*, and a theater poster for actor Lewis Morrison's notable production of *Faust*.



