Assembly and Association: Mapping the Development of the Public Sphere in 19th Century Columbia County, NY

Christopher L. Meatto

The Graduate Center, City University of New York

How does access to this work benefit you? Let us know!

Follow this and additional works at: https://academicworks.cuny.edu/gc_etds

Part of the American Studies Commons, Digital Humanities Commons, and the United States History Commons

Recommended Citation

Meatto, Christopher L., "Assembly and Association: Mapping the Development of the Public Sphere in 19th Century Columbia County, NY" (2016). CUNY Academic Works.
https://academicworks.cuny.edu/gc_etds/1582

This Capstone Project is brought to you by CUNY Academic Works. It has been accepted for inclusion in All Dissertations, Theses, and Capstone Projects by an authorized administrator of CUNY Academic Works. For more information, please contact deposit@gc.cuny.edu.
ASSEMBLY AND ASSOCIATION: MAPPING THE DEVELOPMENT OF THE PUBLIC SPHERE IN 19TH CENTURY COLUMBIA COUNTY, NY

by

CHRISTOPHER LILLIS MEATTO

A master’s thesis submitted to the Graduate Faculty in Liberal Studies in partial fulfillment of the requirements for the degree of Master of Arts, The City University of New York

2016
Assembly and Association: Mapping the Development of the Public Sphere in 19th Century Columbia County, NY

by

Christopher Lillis Meatto

This manuscript has been read and accepted for the Graduate Faculty in Liberal Studies in satisfaction of the thesis requirement for the degree of Master of Arts.

Date

Advisor Name: Luke Waltzer

Thesis Advisor

Date

EO Name: Matthew Gold

Executive Officer

THE CITY UNIVERSITY OF NEW YORK
ABSTRACT

Assembly and Association: Mapping the Development of the Public Sphere in 19th Century
Columbia County, NY
https://clmals.commons.gc.cuny.edu/

by

Christopher Lillis Meatto

Advisor: Luke Waltzer

This project seeks to investigate the development of the Habermasian public sphere in Columbia County, NY, during the rapid expansion of railway transportation from the middle- to the late-19th century, by gathering and presenting information about the proliferation of railway stations and select public institutions between 1840 and 1900. In charting the spread of area libraries, newspapers, post offices, and churches during this period, this project utilizes and combines methodological approaches taken by a number of landmark recent studies in historical geography and digital history; in so doing, it prototypes the research and pedagogical value and promise of incorporating an array of practices within a single study. Ultimately, this project posits that a spatial understanding of the emergence, colocation, and interaction of these public institutions opens up new lines of inquiry into how residents of Columbia County, NY, experienced and influenced radical change during industrialization.
Between the years 1840 and 1900, the railroad system fundamentally transformed space and time in Columbia County, New York, such that county residents entirely reorganized their spiritual and communicative lives in adjustment. Just as it had “annihilated space and time” seemingly everywhere it went, here the development of the railroad system did much the same.\(^1\) As the Hudson River, Hudson and Boston, and New York and Harlem lines each successively expanded throughout the county, they brought with them ideas, technologies, customs, and people from afar, confirming what county residents had already begun to sense: that the world was coming to meet them in their corner of New York. The railways had a profound impact on the public institutions of the time, and as such, on the development of the public sphere, or the “social totality,” in Columbia County. This project begins the work of examining the “transformation of social relations, their condensation into new institutional arrangements, and the generation of new social, cultural, and political discourse around this changing environment” by examining where and when these institutions sprang up, and posits that a spatial understanding of their emergence, colocation, and interaction would open up new lines of inquiry into how and why New Yorkers organized and experienced these transformations.\(^2\)

In mapping area post offices, newspapers, libraries, and churches throughout the railroad era in Columbia County, this project, whose digital component can be found at https://clmals.commons.gc.cuny.edu/, combines methodologies taken up by several key scholars and groups at the forefront of historical geography and digital history. In particular, “The Geography of the Post” by Cameron Blevins; Lincoln Mullen’s work around mapping slavery and American religious history; the Library of Congress’s historical newspaper project,
“Chronicling America”; Stanford University’s Spatial History Project and, specifically, its suite of projects around the American railroad network and westward expansion, “Shaping the West”; the University of Nebraska-Lincoln’s “Railroads and the Making of Modern America”; Gregory P. Downs and Scott Nesbit’s “Mapping Occupation”; and Sonia Shah’s “Mapping Cholera” all contributed to the conception and approach of “Assembly and Association” as an historical investigation enhanced by its geographic focus. This study shares with these and other digital history projects a focus on establishing a technical environment and “framework…for people to experience, read, and follow an argument about a major historical problem,” while leaving space for such readers to arrive at their own interpretations about the material, thus taking part in the kind of interactive analyses and “collective work” that “[undergird] the production of historical knowledge.”

This study was also inspired by the work of Anne Kelly Knowles, Tim Cole, Al Giordano, and the other scholars who contributed to the “Geographies of the Holocaust” project, which uses spatial analysis to offer new insights and raise further questions about this dark period; the result is a group of case studies and visualizations that shed light on the role space played in the experiences of the victims and the decision-making of the perpetrators.

“Geographies of the Holocaust” illuminates our understanding of an otherwise well-studied period and thus makes a forceful argument for the value of applying methods from the field of geography to enhance historical studies. In this vein, “Assembly and Association” argues that the history of the development of Columbia County’s public sphere in the 19th century, as evidenced through the growth of the select public institutions listed above, is fundamentally spatial.

To begin with, there was a lively newspaper business in 19th century Columbia County, indicating that there was a highly literate audience that was hungry for news, as well as a thriving advertising market. Each of the 68 newspapers published during this time came from a town or
city situated along a rail line; Hudson, Chatham, and Kinderhook, important commercial centers and railway junctures each, published between 59 and 62 of these 68 titles, indicating that news traveled in straight lines along railways and telegraph lines. Similarly, libraries built during this period went up in towns with rail stations. This suggests that the free and democratic ideals underpinning public libraries were associated with the railways just as much as the commercial newspaper business. The space opened up by the railroads was seen as conducive to both the free exchange and scholarly pursuit of ideas and the competitive sale of printed information. In the end, county residents received a great deal of their news and textual information from sites inescapably tied to the railways.

Conversely, Columbia County tended to build post offices in the spaces between railroad lines and stations, along extant roads that connected towns, villages, and cities in ways that the rails did not. Even though the post here witnessed a significant increase in the number of post office buildings during the railroad era—82 of the 127 raised between 1786 and 1900 were built after 1840—many were positioned so as to transcend the communication pathways afforded by the railroad system. Thus residents read, wrote, produced and received texts, and otherwise
engaged in communicative acts in a variety of ways, either along or across railway and telegraph lines, that nonetheless were mediated by these new technologies.

Finally, religious statistics about the number and kind of church that dominated the spiritual landscape of 19th century Columbia County, that of the Methodists, points once more to the influence of the railways. Mirroring larger national trends, the Methodist church expanded at a rate that far outpaced rival faiths during this period: taking into account data from the 1850, 1860, 1870, and 1890 United States Censuses, when the government recorded such religious information, the number of Methodist churches in the county went from 19 in 1850, to 34 in 1860, 35 in 1870, and 39 in 1890. Likewise, the number of parishioners that all Methodist churches taken together could accommodate swelled across these censuses from 6,375 in 1850, to 7,760 in 1850, and 12,000 in 1870, before dropping slightly in the 1890 census to 11,285. The total value of Methodist church property in the county rose as well, from $26,480 in 1850 up to $201,200 by 1890. Methodist dominance in Columbia County must be understood in terms of the psycho-spiritual effects that the railroad and, by extension, modern technology had on the people and the landscape. As the railways brought the outside world into Columbia County,
collapsing time and space, this both threatened the moral order that pious Christians struggled to affirm while simultaneously offering an ever-expanding realm of potential converts. Methodism, with its public rituals of revival meetings and conversions, inclusiveness, and sentimental brand of Christianity, was positioned to address these changes perfectly by dividing the world into two spheres: that which must be protected within the Methodist household or community, and that which called out for spiritual rescue and conversion. This “dialectic of evangelical identity,” as A. Gregory Schneider terms it, is a unique byproduct of and solution to the social and cultural changes ushered in along the railways, and helped contribute to Methodism’s rise during this period.  

This thesis, which exists mainly in digital form at https://clmals.commons.gc.cuny.edu/, shows that in 19th century Columbia County, New York, space was a significant factor in the development of the public sphere via its public institutions. With the expansion of the railroad system came a reordering of space and place, which had a decisive impact on how county residents organized their spiritual and communicative lives and the makeup and vision of the various publics with which residents interacted.
End Notes


ACKNOWLEDGEMENTS

Thank you to my advisor, Luke Waltzer, for all of the guidance, support, reading lists, keen editorial and historical eye, and technical advice. Your work at the juncture of history, teaching, and digital methods is inspiring and urgent, and certainly factored into this study. I’m a better student and teacher for all of our conversations.

Thanks as well to Matthew Gold and Stephen Brier, whose work at the vanguard of Digital Humanities praxis and pedagogy framed my graduate studies at The Graduate Center; Amanda Hickman, for helping me and my Digital HUAC partners develop our project; Benjamin Hett, for two outstanding courses on Modern European and German History and much suggested reading; David Gordon, for help in the early rounds of conceiving of this project; and to Stephen Klein of The Graduate Center Library, for working with me to develop a preservation strategy for the digital portion of this work.

And a final thank you to the all of the history teachers with whom I have had the good fortune to study. You all taught me how to think and trained me to be a curious and active citizen and learner, and a reflective teacher.
# TABLE OF CONTENTS

Title Page.................................................................i

Copyright Page..........................................................ii

Approval Page............................................................iii

Abstract........................................................................iv

Preface........................................................................v

Acknowledgements.........................................................xi

List of Figures...............................................................xiii

White Paper.................................................................1
  • Overview of Project..................................................1
  • Graduate Studies.....................................................2
  • Data.........................................................................8
  • Methods....................................................................15
  • Next Steps..............................................................19

Works Cited.....................................................................24
LIST OF FIGURES

Figure 1: Carto Map of Columbia County Newspapers and Railroads, 1792-1900……………vii
Figure 2: Carto Map of Columbia County Post Offices and Railroads, 1786-1900……………viii
Figure 3: Photograph of a page from Minutes of the Annual Conferences of the Methodist

   Episcopal Church, Vol. 3 1839-1845…………………………………………….9
Figure 4: Screenshot of a page from the "American Congregational Yearbook For The Year

   1854"…………………………………………………………………………………10
Figure 5: Screenshot of a Leaflet.js “spiderified” map………………………………………………17
Figure 6: Carto Map of 19th Century Columbia County Newspapers, Railroads, and

   Libraries……………………………………………………………………………..18
Figure 7: Carto Map of 19th Century Columbia County Newspapers………………………….19
Overview

This project highlights historical questions pertaining to the development of the public sphere in Columbia County, NY, during the 19th century by mapping various contemporary data related to social organization and communication: libraries, newspapers, rail lines, and post offices. These questions are inherently geographic and spatial insofar as the development of railroad lines throughout Columbia County inevitably resulted in county residents experiencing an “annihilation of space and time” similar to other Americans during the era of industrialization. But what did these changes look like? What do the development and proliferation of these institutions tell us about how the public lives of these New Yorkers changed during this period? What were the effects of new modes of transportation and commerce?

This project began as a way to explore techniques for raising historical questions about the development of the public sphere during the 19th century in Columbia County, NY, by mapping and interrogating geographic data. “Assembly and Association” takes its title from Jürgen Habermas’s articulation of the public sphere as a space where individuals meet and promote their ideas in a manner of discourse that is inherently public and communal.

Graduate Studies

The methods and topics explored in this study reflect academic and professional interests I have cultivated over the course of my graduate studies at CUNY, first in the History M.A. program at Hunter College, and then in the Digital Humanities track of The Graduate Center’s M.A. in Liberal Studies (MALS). At Hunter, I studied European and 20th century German
History with Benjamin Hett; American Jewish History with Eli Faber; and American political and Constitutional history with Angelo Angelis. Each course built on research in political and intellectual history I began at the undergraduate level, deepening my understanding of how political culture, religious and ideological movements, and economics drove the development of society and public spaces—all of which factor greatly into “Assembly and Association.” In addition, my graduate work at CUNY complemented my first master’s degree in Library and Information Science and my careers as an archivist and history teacher, as I continue to follow my scholarly interests in historical research and pedagogy, especially through the use of digital methods and tools.

Professor Hett’s courses reinforced my grasp of meta-theoretical issues around the study and practice of history itself, as we delved into the historiography surrounding topics in European history. For example, my final paper for his course on Modern European History took up the Historikerstreit, or “the historian’s struggle,” in which German historians from the political left and right debated the representation of the Holocaust and whether or not it occupies a unique place in German and world history and memory. Such an investigation afforded me the space to engage with historical praxis, a topic I would take up later in the CUNY Graduate Center’s Digital Humanities courses. In a subsequent class with Professor Hett, I returned to the concept of “uniqueness” in German history by examining the rationalization of the Holocaust by its technocratic architects, leveraging digital resources and archives such as the Nuremberg Trials Project and Yad Vashem Digital Collections, among many others. Both classes led me to continue studying history and memory, a topic I now teach to my upper school students, and to begin researching the intersection of historical and cultural memory with digital history and pedagogy. In many ways, this was a continuation of my training and experience as an archivist,
and I became eager to combine my interest in preserving source materials and rendering them discoverable for research with my own historical research and teaching. Through this research, I cultivated a deep interest in how digital history foregrounds participatory, interpretive work from specialists and non-specialists alike, fostering a transparent and networked learning environment—an interest that would eventually inspire me to transfer from Hunter’s History M.A. program into The Graduate Center’s Digital Humanities track in the MALS program.

Before that, however, I studied history with Professor Faber and Professor Angelis, and began to research topics that would feature prominently in “Assembly and Association”: the role of religion in shaping American identity and public spaces; the politics and economics of early American development; and the peopling of the American landscape during the 18th and 19th centuries. My final paper for Professor Faber’s course investigated assimilation versus preservation in the American Jewish community, and in particular looked at issues of separateness in social and public spaces between America’s Jewish and non-Jewish communities. For Professor Angelis’s term paper, I revisited historical memory again, this time focusing on various interpretations of the Second Amendment; this paper argued that to truly understand what its authors intended, the Second Amendment must be viewed in terms of how contemporaries understood individual versus collective obligations to the community, and how the community was viewed in light of “the militia.” Thus my work in both courses focused on the roles of and ideas about community, religion, place, and space in American History.

“Assembly and Association” continues this work of exploring the confluence of these ideas and roles, and mapping the public institutions that gave public space and life its contours.

I transferred to the Digital Humanities (DH) track within the MALS program in order to combine my scholarly and teaching interests in history and digital technology, and to prepare a
portfolio of digital projects and research that I might build upon throughout my career. I took professors Matthew Gold and Stephen Brier’s Digital Humanities Praxis I course during my first semester, where we learned about DH theory and the tools, methods, projects, institutions, and pedagogy that support digital scholarship and teaching. Through a combination of readings, in-class discussions, renowned guest speakers from across the field, technical workshops, and research assignments, I became immersed in the world of DH and began forming an understanding of its variety of applications, how it inflected critical humanities scholarship, and how I would apply it to my own research. In particular, speakers such as Tom Scheinfeldt and the staff of New York Public Library’s Digital Labs, along with texts like Todd Pressner’s *Hypercities*, Franco Moretti’s *Graphs, Maps, Trees*, Dan Cohen and Roy Rosenzweig’s *Digital History*, were instrumental in helping me connect the study of history and memory with digital media and methods. Further, the collection of essays edited by Professor Gold, *Debates in the Digital Humanities*, introduced me to formative pieces by scholars such as Johanna Drucker, Tara McPherson, Matthew Kirschenbaum, Bethany Nowiskie, Cathy Davidson, and professors Gold and Brier themselves. These works and speakers sparked in me an eagerness to investigate further how new media shape historical scholarship and cultural memory, and the role of educators and scholars in the stewardship of historical information in a rapidly evolving technical and pedagogical landscape. Further, they showed me that there is a lively community of educators, scholars, practitioners, theorists, and technicians at work in DH, helping to advance this relatively new field. My final paper for this class examined practical and theoretical differences between DH and digital history as well as the role of pedagogy in encouraging history students to engage with digital spaces and resources in their studies. In this way, the
Praxis I course both built on my previous work and offered new critical spaces, registers, and vocabulary for considering digital scholarship.

The DH Praxis II course followed, where I studied with professors Luke Waltzer and Amanda Hickman, and worked with a group of fellow DH students to develop and build a digital project over the course of a semester; this experience was essential to the conception and execution of “Assembly and Association” in terms of my own understanding of project management and technical design. I partnered with three classmates to build Digital HUAC, a prototype for a digital archive and research environment that would consolidate otherwise far-flung testimony from the House Un-American Activities Committee’s hearings. Our goal was to gather, standardize, render searchable, and tag each hearing transcript with relevant metadata, so that users could conduct research in a centralized location using a powerful search engine. This combined my interests in and experience with digital archives, historical research, and leveraging new technology to support research. At the heart of Digital HUAC was a deep belief that digital research environments are not prescriptive; rather, they gather and present materials or methodological frameworks and then allow users to generate their own interpretations using the sources. This, too, was something that I carried over into “Assembly and Association” which, though it advances an argument, prioritizes engaging its readers to arrive at their own interpretation by engaging with the data and maps. Over the course of the semester-long Praxis II class, our team collaborated and managed our project using Google Docs and Sheets, for its ease of use and transparency; built our website using Python, PHP, and server space from Reclaim Hosting; organized, standardized, and tagged our transcripts in Google Sheets; developed finding aids and subject headings; created outreach and marketing plans that involved appealing to
research institutions, libraries, and special collections departments; and ultimately built a working version of the tool.

Beyond improving my technical skills and gaining firsthand experience in managing the multifaceted lifecycle of a project, Praxis II made real for me one of the central concepts of DH that I began to study in previous semester: that digital work embraces and even encourages uncertainty and, to an extent, failure. Through journal entries, process assignments, and in-class presentations, I had space to reflect on the project at the individual and group level; assess the efficacy of positions that I took; critique how the project was being received, and how faithfully it hewed to course requirements; analyze intellectual and technical decisions; and ultimately examine the effectiveness of Digital HUAC in terms of delivering on its aims. This constant reflecting, often in a collaborative setting, along with Praxis I’s introduction to the community of DH practitioners and theorists, showed me that scholarship need not be solitary nor wary of criticism (self-generated or otherwise), and that a perpetual emphasis on process really does benefit the work. Furthermore, Praxis II taught me to push myself in terms of the conception and execution of such projects, but also to respect my own limitations, if for no other reason than to maintain discipline when it comes to project schedules.

After Praxis II, I asked Luke Waltzer to advise me on my master’s thesis, which would eventually become “Assembly and Association.” I knew that I wanted to undertake a digital history project that combined my graduate coursework and teaching, but was less sure about the topic. I had a number of ideas, but during the initial stages of conceiving of my thesis, I felt hampered by one of the greatest advantages of a liberal studies master’s program--the sheer catholic breadth of coursework that I had done to that point. Early conversations with Luke were fruitful and it was clear how fortunate I was that he signed onto the project; but aside from
centering around Europe during the Second World War, my ideas covered far too much ground. I wanted to map the historiography of the Holocaust; investigate the nationalization of railroads by Nazi Germany throughout Europe; somehow map the exodus of intellectuals and ideas during the formation of the Third Reich; and on and on. I was inspired to combine digital history and DH work with research interests in Nazi Germany by the work of Anne Kelly Knowles, et al. in authoring *Geographies of the Holocaust*. Still, I struggled with what new insights I might add to the field, and eventually decided to focus on a place and series of historical questions closer to home: the development of the Hudson Valley.

Luke has been an incredibly insightful and supportive professor and advisor throughout. I have received the full benefit of his expertise as an historian, builder of educational technology platforms with Blogs@Baruch, writings on digital humanities, digital history, and pedagogy, and position as Director of the Teaching and Learning Center at The Graduate Center. From shepherding Digital HUAC along to advising me on “Assembly and Association,” Luke has instilled in me the need to continually assess how lines of historical inquiry, visual representations of information, narrative, and argumentation are inextricably linked— all of which I did not fully understand prior to our working together.

The project forms a fitting end to my master’s degree, as it leverages methods and disciplinary goals from the fields of history and DH. “Assembly and Association” tackles questions about the nature and geography of how social relationships and institutions developed; relies on networked learning, as it incorporates methods, data, and approaches from a variety of DH and digital history projects; and strives to build a space for readers and students to develop their own interpretations of historical events and sources. Finally, in striving to build a model for doing digital history, the project has helped me critically appraise my teaching style and consider
the place of digital media, resources, and networked environments in my own classroom. I found continuously that I was both a teacher and a student while researching and designing this project.

Data

As noted in the Historical Background section of this project, Columbia County in the 19th century serves as a useful model for its geographic location and makeup. The “two significant rail centers” at the heart of the county, Hudson and Chatham,\(^3\) connected Columbia to commercial centers near and far, while the rest of the county was filled with rural farmland and small towns.

My initial goal was to develop a project that would allow me to consider the impact of railroad expansion in New York state on the spread of religious institutions during the railroad’s most explosive period of growth, the mid-to-late 19th century. I was curious to see what if any effect this new system of travel and transport of commercial goods and ideas would have on how rural and semi-rural New Yorkers organized their spiritual lives. I began by looking at historic railroad maps, visualizations, and data from a number of sources. Stanford’s Spatial History Project highlighted the various applications of historic railroad data,\(^4\) which was helpful for brainstorming directions to take the work in--but less so for providing data to work with, given that the focus of this suite of projects is the American West. Eventually, I landed at the University of Nebraska-Lincoln’s “Railroads and the Making of Modern America” project site.\(^5\) UNL’s project not only offers dynamic maps and essays broken out by historical topic; the site also provides railroad data between 1840 and 1870 in the form of GIS, KML, and Shapefiles,\(^6\) which I used in this thesis.
From there, I started looking for historic religious data in New York. Thanks in part to Lincoln Mullen’s extensive work, documentation, and data collection on the topic of American religious history, I traced the geographic spread of various faiths by examining NHGIS census data, as well as religious almanacs, yearbooks, and meeting minutes notes, in order to determine the scope and scale of the proliferation of churches and parishioners throughout New York during the 19th century. There was much information to go on; however, mapping this data to reflect change over time became problematic: while the ascendent faiths in 19th-century New York—the revivalist Methodist and Baptist sects, according to historians Mark Noll, Roger Finke and Rodney Stark, and George Marsden—maintained scrupulous records, I was unable to find information about when each church was built.

For example, here is an excerpt from the Methodist Meeting Minutes of 1848, showing the sites and number of parishioners for each Methodist church in the New York Conference, which governs Columbia County.  

![Figure 3 Photograph of a page from Minutes of the Annual Conferences of the Methodist Episcopal Church, Vol. 3 1839-1845](image-url)
Compare this with the Congregationalists in New England, as Lincoln Mullen demonstrates, who recorded the location and the year of organization for each church.

Figure 4 Screenshot of a page from *The American Congregational Yearbook for the Year 1854*

This meant that, in order to show the spread of churches throughout Columbia County over time, I would have had to examine each denomination’s yearly records looking for new churches—an onerous task that, like tallying changes in parish sizes, cries out for a computational solution. In future iterations of this project, I would like to explore such solutions.

After spending time tinkering with these church records and trying to determine how best to represent church expansion on local and regional scales, I ultimately ended up using NHGIS census data to parse religious data at the county level in New York in the mid-to-late 19th century. Without exact church locations, this seemed the best strategy, as it would still allow me to draw some conclusions about spiritual life in a region undergoing massive upheaval thanks to the expansion of the railroad system. In addition to looking at census data about the number of churches, I also recorded what the census termed the “aggregate accommodations”—what we
might know as the seating capacity of the average church—and the “property value” of each denomination’s churches in total. I chose these categories because they would allow for geographic extrapolations: for example, one might investigate the changes in total church buildings and their value and by asking what changed to the land on or around which they were built, or what demographic trends might have driven these changes.

What became clear was that the Methodist sect far outpaced its counterparts during this period, mirroring the larger national trend.\(^\text{11}\) Still, I recognize that county-level data, and indeed data furnished by the census, which is not the most precise measurement, has its pitfalls; as Mullen writes, US census data is handcuffed by, among other factors, imprecise questions stemming from census takers’ “concerns about church and state.”\(^\text{12}\) Nevertheless, for the purposes of this project—which offers a starting point for future investigations and models an approach that combines various threads of historical mapping—NHGIS furnished useful census data on the topic of religion. Importantly, the US census began asking questions about religion with the 1850 census, and continued until the formation of the Census of Religious Bodies in 1906.\(^\text{13}\) At the time of writing, NHGIS does not provide religious data for the US censuses of 1880 or 1900—so for this project, I gathered data from the 1850, 1860, 1870 and 1890 census results. The gap between 1870 and 1890 point to another issue with NHGIS data, but one which will have to be overlooked for this project.

In the end, I could not settle on a compelling visualization for the religious data that I collected. For example, I experimented with creating, among many other variations, chloropleth maps showing the frequency of churches per square mile, or the value of church property by denomination, but these seemed inadequate representations. Elsewhere, I created layers within Carto, whereby users could hover over Columbia County and read the statistics I’d gathered on
pop-up information windows--but this too seemed to belie the driving aim of the project as a resource for building questions relevant to historical geography. Finally, I decided to post my data table to this project in lieu of a corresponding map. This way, readers can see what the pre-mapping data looks like, and I can write transparently about the difficulties I encountered trying to map source information. I learned throughout this project that historical sources often do not exist in formats that are easy to work with. Making sense of and standardizing each data point is one thing; but then understanding what visual representation best suits this information, and accepting that it might not work out perfectly, is quite another. This, I think, is at the heart of digital humanities work, and is certainly related to its cardinal acceptance of failure.¹⁴

As I considered the spread of churches and railroads in Columbia County, I became increasingly interested in how the railways intersected with the development of other institutions that represented and shaped aspects of American life beyond the spiritual. Stanford’s Spatial History Project and its “Shaping the West” projects, and in particular Cameron Blevin’s “Geography of the Post” (GOTP)—a phenomenal investigation and dynamic visualization on the expansion of the US Postal System in the American West of the 19th century, which forms part of Blevin’s dissertation¹⁵—were instrumental in helping me understand additional ways to look at historical geographical information adjacent to the railroad network. In the spirit of GOTP, I tracked down New York Postal History at the New York Public Library and logged the names and dates for post offices that went up in Columbia County in the 1800s, in order to begin framing questions about the expansion of the postal system here and its effect on public life.

What was the demand in Columbia County for post offices? What might the expansion of the post during this period tell us about the “broadly inclusive network” of communication via post?¹⁶ As Blevins notes, “no other public institution was so ubiquitous and so central to
“everyday life” as the post office, which provided access to “the nation’s largest communications network in the nineteenth century.” The postal system offers an entrypoint into mass communication, how these Americans shared information, organized communal spaces, and possibly how they imagined themselves as connected to one another across space and time.

Beyond the post in isolation, as David M. Henkin notes, the US postal system and American newspapers were historical complements: the former was seen in many ways as the primary vehicle for distributing political information to the American people, while the latter served as the medium itself for collecting and broadcasting political ideas and developments.

To this end, I wanted to include information about newspapers in Columbia County during this time period to supplement postal data and add to the picture of mass communication and public life. The Library of Congress’s “Chronicling America” project provides data about historic American newspapers, and so I searched for and downloaded geographic and titular information about Columbia County newspapers in the 19th century. I was interested in how, taken together, data about the US post and newspaper system might offer insights into how this public thought of itself as readers, writers, and communicators; in particular, examining how “as with the proliferation of so many artifacts of the expanding antebellum print culture (including newspapers, novels, political pamphlets, urban signage, and fashion magazines), the increasing availability and affordability of the post encouraged the acquisition, cultivation, and maintenance of literacy” and a sense of ownership over ideas and information. To do so, I wanted to combine the efforts of Blevins with the “Chronicling America” project to simultaneously plot post offices and newspapers throughout this time and place.

Finally, I wanted to look at the growth of public lending libraries in Columbia County during this historical period. As a trained librarian, I am interested in the history of libraries in
America and mapping their spread in order to raise questions around the intersection of libraries and broader pictures of literacy, information dissemination, and community. Columbia County’s New Lebanon, NY, is the site of the nation’s “first free public library,” formed in 1804; thus county residents were arguably long accustomed to the democratic ideals inherent within public libraries. How did the public incorporate libraries into their practices and understanding of themselves as readers, writers, and communicators? To find the data required to begin supporting these questions, I researched using the Mid-Hudson Library System and collected information about Columbia County libraries built in the 19th century.

So for this project, Columbia County, NY data consisted of:

- KML files for historic railroad data between 1840 and 1870
- Statistics about the number of churches, aggregate accommodations, and church property value by denomination, from the US Census years of 1850, 1860, 1870, and 1890, all furnished by the NHGIS.
- The names, locations, and dates of operation of 127 post offices built between 1786 and 1900.
- The names, locations, titles, and publishing dates of 68 newspapers that ran between 1792 and circa 1900.
- The names, locations, and dates of operation of 4 libraries built between 1804 and 1902.

The value in bringing these data sources together into a single examination lies in their representing a number of institutions related to public life and space during this period. By considering them side-by-side, “Assembly and Association” makes an argument on behalf of connecting the approaches taken by the historians and projects cited throughout.
Methods

While my data and sources correspond to the period between 1840 and 1900, there are gaps, overlapping eras, and incomplete records that make establishing a perfectly clean and orderly period of inquiry difficult to establish. Railroad data covers 1840-70; church data covers 1850, 1860, 1870, and 1890; and my newspaper, post office, and library information covers the entire period from 1786 to roughly 1902. The focus of the project is the period between 1840 and 1890, the bookend dates coming from the earliest historic railroad map and the latest pertinent census information. However, in order to better frame questions about change over time, I have included relevant data leading into and coming out of this 50 year period.

I organized and standardized this data using Google Spreadsheets, which I chose because this tool reads and generates CSV data and so that I might store my data alongside my project journal, notes, and draft writing assignments. Organizationally, it was important for me to keep everything in a central repository. Because I was working with an amount and type of data that was either preformatted (in the case of KML files) or that I could manage hand-coding, and since I knew that there was no significant danger of running into problems with versioning on this project, I opted not to use a separate data storehouse such as GitHub.

I then turned to choosing a mapping platform. Several considerations were key: ease of use; integration with my project site on the CUNY Academic Commons; and the ability to render dynamic, and not merely static, maps.

For this project, and based off of advice from CUNY Graduate Center Digital Services Librarian Stephen Klein, QGIS and ArcGIS seemed to be overkill. Though I would later lament not being able to create multiple layers for these maps, at the outset of the project my feeling was that the more gradual the learning curve the better. After experimenting with several alternatives,
I settled on CartoDB (now called simply Carto), for its promising seamless website integration and publication of dynamic maps and visualizations of tabular data. From that point on, my focus was on generating simple, data-driven maps that would allow users to see how historic geographical information went from source to screen. My hope for the visualizations, and indeed for the project at large, is for users to interact with the information and begin to frame historical questions with a geographic focus; that is, to investigate how space and place determined or were otherwise affected by the colocation of these institutions and phenomena. For example, did post office locations determine whether and how many newspapers published in a certain area? Or, what is the relationship between railway stations and churches: were ecclesiastical organizations--and which ones in particular--more or less likely to build a church in a town recently turned into a stop on a rail line? I was motivated by the extraordinary work coming out of departments--such as Stanford’s Center for Spatial and Textual Analysis, which oversees the Spatial History Project, and University of Nebraska-Lincoln’s Digital History Project, which oversees the “Railroads” project--and undertaken by individuals, such as Lincoln Mullen, among others credited here and in the Environmental Scan; my intentions for this project are merely to put some of these projects next to one another--that is, to bring together some of the sources and approaches that others use and play out what would happen if we were to consider, for example, the expansion of railways alongside the growth of print culture. Moreover, I think all of these institutions and phenomena structured the development of the public sphere during this time period. I want users to be able to consider how and why these institutions developed in certain ways in a finite space, by looking at these data sets in total and in dialogue with one another.

Still, mapping in and of itself proved a challenge throughout this project for several reasons. There was often a tension between the results I wanted and those that I was able to
produce given my technical background. During my Digital Humanities Praxis II course at the CUNY Graduate Center, I worked with a group of talented classmates to build Digital HUAC, a prototype for collecting and rendering searchable the corpus of testimony from the House Un-American Activities Committee hearings. We went through a number of iterations of the site, ultimately producing a public-facing final project that we were proud of—but along the way we devoted a majority of our time to technical troubleshooting. Perhaps this is always the case with DH projects, but it was an experience that certainly influenced my decision to keep things as technically straightforward as possible with “Assembly and Association.” The results of this decision, however, were limiting. Most notably was the problem of clustering overlapping results. Google Maps and Leaflet.js both include workarounds for “spiderifying” visualizations, so that when a single geographic location contains multiple instances, users may hover over or click on the single point and the multiple results separate. Here is an example from Leaflet.

![Figure 5 Screenshot of a Leaflet.js "spiderified" map](image)
Such a display feature would have significantly improved the experience of viewing, say, information related to the 37 newspapers printed in Hudson or 10 printed in Kinderhook, documented here. Carto does have a cluster map type, which indicates the number of data points for a given location; but this is not as elegant as a “spiderified” or marker cluster solution:

![Figure 6 Carto Map of 19th Century Columbia County Newspapers, Railroads, and Libraries](image)

I eventually settled on altering the geographic coordinates in my data tables for each newspaper, though just enough to show some separation between these points. Without information pertaining to the addresses at which each newspaper was printed, it seemed the best option, even though the resulting map plotted, for example, the Kinderhook newspapers as distinctly afield from Kinderhook itself:
Related to this, Carto helpfully includes a torque map that animates data over a fixed duration based on date-number strings in the data. This is a really useful and dynamic way to visualize the establishment of certain institutions and show how quickly they appeared in a given time frame. However, when I selected the torque option, the map lost its display information--so users would be able to see when and where newspapers sprang up, but they would not be able to identify them by title.

**Next Steps**

In general, future versions of this project would benefit from a technical upgrade. CUNY supports ArcGIS, so this is likely a best option. Further, much of the detailed work that Lincoln Mullen has done to help historians and digital humanists think about mapping techniques and protocol relies on the programming language R. To truly take this project into its next phase, I
would likely build my maps from the ground-up using ArcGIS or QGIS, another mapping tool, utilizing some of Mullen’s strategies and best practices for parsing and mapping historical data. Beyond technical concerns, I would eventually want to use “Assembly and Association” to explore the pedagogical applications of digital history projects; as a history teacher, librarian, and masters student working at the juncture of history and digital humanities, I am interested in exploring how such projects could be brought into the classroom. In my DH Praxis I course, I wrote about the instructional promise of digital history projects: by engaging with historical sources in a networked environment and presenting “a suite of interpretive elements” around them, such projects allow “readers [and students] to investigate and form interpretive associations of their own” while diving into the source material themselves. In so doing, students would hopefully gain an understanding that “no one map, image, or diagram could represent historical conditions and ways of life, let alone the many modes of geographic analysis and interpretation” available; in other words, that they must work with maps as any other text or source, mining it for information and interrogating its meaning. And so in its presentation of source data and interactivity, “Assembly and Association” seeks to appeal to history teachers looking for projects to include in lessons on historical geography, map literacy, plotting and parsing historical data, and using maps to help frame historical questions.
End Notes


6. Ibid., http://railroads.unl.edu/resources.


8. Minutes of the Annual Conferences of the Methodist Episcopal Church, Vol. 3 1839-1845. New York: Published by T. Mason and G. Lane for the Methodist Episcopal Church, 1840-1940.


WORKS CITED


https://github.com/Leaflet/Leaflet.markercluster


Leaver, Dave. 2012. "Leaflet.Markercluster 0.1 Released". Leaflet. 


http://libguides.gc.cuny.edu/mappingdata.


Minutes of the annual conferences of the Methodist Episcopal Church, Vol. 3 1839-1845. New York: Published by T. Mason and G. Lane for the Methodist Episcopal Church, 1840-1940. https://catalog.hathitrust.org/Record/006771726.

Mullen, Lincoln A. "Digital History Methods In R". Blog. *Lincoln Mullen*. 


