

## Building the Past: *HistoryForge*, Ithaca, and Beyond

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This paper is in honor of Bob Kibbee, the founder of *HistoryForge*, who passed away in May.

*HistoryForge* is an interactive digital history project that allows people to visualize and explore their local history through the individuals who lived there and the buildings and neighborhoods they lived in. *HistoryForge* is also a volunteer-driven community history project. Lastly, *HistoryForge* is an open-source application developed by The History Center in Tompkins County, designed to be utilized by communities across the United States.

*HistoryForge* starts with volunteers transcribing historic census records into searchable databases and constructing historic map layers. Census records form the main framework for information about people on *HistoryForge*. Volunteers transcribe the handwritten manuscripts of the U.S. decennial censuses into our census databases. Data entry forms are built to respond to the specific fields in each census and to encourage a quick and accurate transcription. When the enumerator's handwriting is hard to decipher, transcribers use city directories and other historical resources to record alternative name spelling, addresses, and other information, wherever possible. We find that the local advantage in terms of resources and name recognition and a little extra effort make a big difference in our resulting transcription.

Maps serve as the foundation for visually displaying the rich historic demographic data from the census and other sources. Volunteers use *MapWarper*, an open-source application, to geo-rectify and mosaic historic maps. We chose *MapWarper* because it is a user-friendly option with a smaller learning curve for people without GIS backgrounds. There is a free online version of *MapWarper*, but to maintain control over our maps, we have installed a version on our server.

As volunteers transcribe census records into *HistoryForge*, they attach each person to a building based on their address. This process enables the development of an authority record for each building. The building record then "houses" residents for each census year along with additional information about the building from the maps and other sources, and photographs when available. The building record is the mechanism that enables the platform to map people to their location.

Census transcription began as and continues to be a community social event that brings together local history enthusiasts a few times a month over their shared appreciation of local history. In our transcription sessions volunteers work in pairs with one person reading the information from the handwritten census manuscript and the other person entering it in the data entry page. These sessions are also used for training. New transcribers are paired with experienced transcribers to learn the process including things like how to find the census sheets online and how to interpret the handwriting. Transcription sessions moved to Zoom during the pandemic and are now continuing in person. Trained transcribers also work on their own from home.

Once an initial historic map layer has been constructed and the records from one census year have been entered, community users can begin to use *HistoryForge* to explore their local history. On *HistoryForge*, users can search on any of the fields in a given census year like race,

place of birth, and/or home ownership. This allows users to learn about the individuals who lived in the community as well as the larger community context in which they lived. For example, searching on Italy as the place of birth in multiple census years shows how Ithaca's Italian immigration increased dramatically in the early 20th century. Search results including people's names, addresses, and occupations also show how the employment, residential, and familial patterns of Ithaca's Italian immigrants changed over time. They also encourage additional exploration into a person's life or an occupation.

*HistoryForge* began in 2016 as the brainchild of Bob Kibbee, a retired Cornell librarian who specialized in census data, maps, and geospatial information. He envisioned creating a platform that paired the rich historic demographic data from the manuscripts of the U.S. censuses with that of the Sanborn Fire Insurance Atlases. Working with another History Center trustee, a software engineer with a PhD in History, they conceptualized and built the initial prototype for *HistoryForge*. Using volunteers from the community who transcribed census records for the City of Ithaca, New York, home of The History Center, the initial development focused on that city. The goal from the beginning was always to build an open-source application that could be utilized by any community in the United States.

In 2019 the History Center received a two-year Public Engagement with Historical Records Grant from the National Historical Publications & Records Commission (NHPRC) of the National Archives. This grant advanced the formal development of *HistoryForge* from an Ithaca-based project into a functional open-source platform which could be replicated in other communities.

Under the grant we redesigned the user-interface, formalized procedures for transcription, map layer construction, and volunteer training, and created user manuals for the various parts of the project. We also expanded our model site, *HistoryForge Ithaca*, to include additional census year data entry pages and datasets (1900-1940), building records, historic map layers and photographs. By the end of the grant the site had five complete datasets of the U.S. population census for the City of Ithaca comprising over 83,000 census records as well as almost 6,000 building records, eight historic map layers, and over 400 photographs.

Most importantly, the grant instituted a new testing partner program engaging three institutions to implement *HistoryForge* in their communities and evaluate its replicability. These three sites: the Local History Discovery Center of the Seymour Public Library District in Auburn, New York the Chemung County Historical Society in Elmira, New York, and the Oberlin Heritage Center in Oberlin, Ohio. After training by The History Center's team in early 2021, each site followed the documented model of *HistoryForge Ithaca*: recruiting volunteers, constructing map layers, and hosting transcription sessions to build *HistoryForge Auburn*, *HistoryForge Elmira* and *HistoryForge Oberlin*.

To further expand *HistoryForge's* scope and functionality, we applied for and were awarded a Digital Humanities Advancement Grant from the National Endowment for the Humanities which started this October. [See Slide A]

One of the main challenges we are working on is that of mapping census records without street addresses. Rural communities which did not have standard house numbering systems until the mid-20<sup>th</sup> century or later present a unique challenge. Street addresses were first included in the U.S. census in 1880. To enable adoption by a larger range of communities and make it possible for all communities to map census data prior to 1880, we have started new approaches and workflows for locating and mapping households without street addresses on the census.

Tompkins County illustrates some of the challenges in mapping historic data for rural communities. The county is in the west central part of the state, known as the Finger Lakes region. It is comprised of nine towns, six villages, several hamlets or unincorporated areas, including one called “Podunk,” and the City of Ithaca.

The City of Ithaca had a different historical trajectory from the rest of the county. Ithaca was established by New York State’s Surveyor General and owner of the land, Simeon DeWitt, in the early 1800s as a village with a commercial center surrounded by small plots of land for rent. The founding of Cornell University in 1865 further hastened Ithaca’s development in contrast to its rural neighbors. Cornell professors, coming from universities in other locations, pushed for Ithaca to adopt modern conveniences such as street paving, electricity, and standardized street numbering systems. Consequently, there are several resources that are helpful for mapping census records in the City of Ithaca: street numbers which were recorded in city directories from the 1860s forward and which were listed on the census records beginning in 1880, as well as Sanborn Fire Insurance Atlases and other maps that record street numbers. The street names and numbers have not remained entirely consistent. Ithaca renumbered all of its streets in 1899 and has renamed and renumbered others since then, but the resources available have made it possible to translate historic addresses into current ones.

In comparison to the rest of the county, Ithaca was unique. Rural neighboring towns did not undertake a concerted effort to provide their residents with standardized street numbers until the 1950s and 1960s. Similar historic mapping resources and directories are limited. For example, only two of the towns had Sanborn Atlases, both limited in area. There were, however, maps and atlases covering the county which can be helpful for this project because they record property owners and residents. These include county maps from the 1850s and 1860s, a farm directory with map published by the *American Agriculturist* in 1914, and a series of rural directories with maps that covered each town in the county in the 1920s and 1930s initially called the “Clock System” and later revised as the “Compass System.” These systems, which focused on rural areas, primarily in New York State, did not rely on the existing street names which changed based on who lived there. Instead, the mapmakers assigned each rural residence with an “address,” a combination of numbers and letters based on its direction and distance from a given population center. Another very important resource for identifying where people lived: local knowledge. In rural towns where some current residents’ families have lived for generations such knowledge is easier to come by. Local knowledge also leads to the discovery of local resources which have been collected in town archives and people’s homes.

How then to map the census records in the rest of Tompkins County? Prior to April 1, 2022, our goal was to start with the 1940 census and work our way back. We planned to take advantage of local knowledge and have community members transcribe census records and help locate the residents, including their parents, grandparents, or other relatives. In addition to local knowledge, we would use historic and current resources to determine the present-day addresses for their residences wherever possible to map them. The 1940 census provided a few stiff challenges in the rural areas of Tompkins County: most places in the county did not have house numbers (although one enumerator did record the only available address-type information: each household’s rural delivery route), and several enumerators failed to record some or all of the street names in their district, though such street names generally existed. It was my hope that the 1937 “Compass system” map and directory for the county would be a helpful resource for locating many of the census residents on a map so we could then ascertain the current addresses of those buildings.

We started with the Town of Caroline, New York, a few miles southeast of Ithaca, because of their active and passionate local history group, the Caroline History Association. Transcription of the 1940 census was completed but our plans changed dramatically on April 1<sup>st</sup>, 2022, when the National Archives released the manuscript records of the 1950 census. This release provided two important boosts to this project. First, it expanded the local knowledge we could harness to community members who grew up in the towns in the 1950s to locate their childhood homes and those of their relatives as well as the homes of their friends and neighbors. Second, and even more importantly, the 1950 census itself contained an important new requirement for recording the location of dwellings in rural areas.

For the first time, census enumerators were given detailed instructions about how to record addresses in areas without street names or house numbers. For buildings without house numbers, they were to “write the street or road name and give location by direction from intersection with another street or road.” If there was no street name or house number, enumerators were told to “describe the location so that someone else would be able to locate the house on a map,” and to “Use the ‘Note’ if you need to.” The enumerator’s manual and workbook elaborated further with the example: “1<sup>st</sup> house on right after fire house, going north.” This emphasis on providing a written record of the enumerator’s route and an identifying location for each residence, as well as the resulting information recorded by the enumerators, which I like to call “locational breadcrumbs,” has proven extremely helpful. As a comparison, on the 1940 census for the Town of Caroline, 690 of the 1,737 residents were recorded without street names. In the 1950 census, only 172 of the 1,885 residents were missing street names.

These instructions also allow us to easily recreate the route of Phyllis E. Whittaker, enumerator for the first enumeration district of the Town of Caroline in the 1950 census. Following the directions in the manual, Whittaker noted her initial starting point and route at the top of the first census sheet: “Proceeding S-E on State Highway No 330, from intersection with route 79.” In the first column Whittaker recorded “State Highway No. 330” as the street name, and in the second column for house number she wrote “2nd house on left.” We can tell on this Enumeration District map the reason she started on the second house was because the first house was in the neighboring town of Dryden. Whittaker then proceeded down that street to the first intersection, continuing to record house numbers in increasing number from her point of origin. This enumeration district was particularly fortunate to start with. Some enumerators in the county were not as careful in their locational notes, neglecting to adequately indicate street names or house locations. Others chose to use mileage to differentiate house locations, leveraging the power of their odometers as they drove from house to house.

As we began transcribing the census records, volunteer transcribers were instructed to pay special attention to the locational breadcrumbs, capturing that information in a specific format to be used to determine the current addresses. Once the first ED of the 1950 census was transcribed, I downloaded the data into a shared spreadsheet sorted by serial number, the number assigned to each household in order of visitation (similar to family or household number in previous censuses) to approximate the enumerator’s route. The spreadsheet included identifying information for each person such as their name, relation to head, age, occupation, and industry. It also contained identifying location information such as the Agricultural Schedule No., to indicate farm households, and the locational breadcrumbs formatted as street name and location followed by house location, i.e., “Slaterville Road toward Slaterville from Besemer corner, 6th [house] on left.”

I began experimenting with the best way to determine the current addresses for these buildings by literally following the enumerator's route in my car. While I realized the same could be generally accomplished on Google maps with an assist from Google Street or Satellite View, I wanted to travel the enumerator's path to get a feeling for some of the physical terrain she would have traversed and to consider the obstacles she might have encountered. I also thought it would be easier to determine whether a house had been built prior to 1950 in person rather than using google maps. I was wrong.

To get closer to the point where I could tentatively assign a current address to the residents of the 1950 census, I worked with the Tompkins County Department of Assessment to create a list of residences built in the Town of Caroline by 1949 which I sorted by street name. This got me closer. Still, things did not always go to plan: some houses had been demolished or moved since 1950, while others had been turned into apartments and were now taxed as commercial and therefore not part of my list—something I had not initially considered. One last source proved extremely helpful, the Town historian gave me a copy of a 1957 street directory, created when the streets were first numbered. To my spreadsheet I added a column for recording addresses from the 1957 street directory and one for the current address from the list of residences built by 1949. Using the enumeration district map, a 1940 highway map which included buildings which I had geo-rectified and added as a map layer on *HistoryForge*, Google Maps, and the list of houses built before 1950 I worked to determine an initial list of the current addresses for the 1950 residents. Members of the Caroline Historical Association joined me at a local fire hall where we projected the spreadsheet and Google Map images of the current area on a large screen, where they verified some of the addresses and helped to determine others.

The workflows we are developing for addressing the census records in the 1950 and earlier census in Caroline and other parts of the county will provide an invaluable resource for this project. The results of census transcription will also prove to be an important historical resource to trace the development of this and other communities in Tompkins County. Once completed, the census databases in *HistoryForge Tompkins* will not only be able to show where people lived but how the population composition of these towns and this county changed over time.

*HistoryForge's* motto is "Local History Starts with you." I have used Ithaca and Tompkins County to illustrate the scope and the power of the system as well as the challenges we encounter in historical GIS projects. This project also demonstrates the value of partnership with community history groups, and the power of volunteers to bring history to life. How will you engage with local history? I encourage you to explore *HistoryForge Tompkins* [www.tompkins.historyforge.net](http://www.tompkins.historyforge.net) to see what it has to offer.

Slide A

## HistoryForge 2022-2024

### NEH Digital Humanities Advancement Grant

- Person authority records
- Databases and data entry pages for additional U.S. Censuses (1850-1880 and 1950)
- Geographic coverage to include surrounding localities within a single *HistoryForge* installation
- Location-based discovery and navigation to enhance the mobile experience for users
- New media types
- User-generated content portal
- Expansion of Testing Partner Program

