CHAPTER ONE

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USING GIS TO MAP THE HISTORICAL LANDSCAPE

connecting people to their histories
The Philadelphia City Archives is about what you would expect: a huge, musty room lined with long shelves covered with overstuffed boxes. Inside one of those boxes sits a 1914 photograph labeled “Slums - 1225 Pine Street.” The image overwhelms the disarming simplicity of its caption. “Slums” is an adequate descriptor, but “squalor” is the term that better captures what is actually shown. The photo reveals a filthy room with a dusty bed in one corner flanked by a decrepit dresser and chair. Garbage lays strewn across the floor. A window allows scant, uncertain light into the dwelling. What is the meaning of this picture? What does it tell us? These answers are multifaceted, and they serve to illustrate the many uses of PhillyHistory.org (www.phillyhistory.org), a unique database of historic photographs integrated with GIS.

The slum photograph is only one of the over 90,000 image records housed on the PhillyHistory.org site. Philadelphia’s City Archives holds approximately two million photographs dating back to the late nineteenth century. Photographers assigned to city departments such as the Departments of Streets, City Transit, and Public Works originally took these photographs in order to document public works projects. They snapped pictures before and after the completion of street repairs and building construction as a risk management tool. At the time, these pictures may well have seemed boring. By documenting the mundane, however, the City has enabled today’s public to discover something quite remarkable.

The Philadelphia Department of Records (DOR) created PhillyHistory.org with the assistance of Avencia Incorporated, a Philadelphia-based GIS software company. The site was designed to act as an online version of the City Archives. This mapping website uses ESRI’s ArcIMS technology to facilitate searches and displays of historic pictures. Citizens can locate photographs within a specified neighborhood, within a given distance of an address, near a particular intersection, or at a named place like “City Hall.” In addition, users can search for images by keyword, topic, and year. For example, a user might look for a picture of gas lamps or they might request photographs near their own home address. All search results are returned with a map showing building footprints, streets, and the location of photographs in the area. DOR has also created a web-based historical asset management system that enables its employees to upload scanned photographs, enter historical information, and assign geographic locations on a map. The web-based system uses GIS technology to identify the location of each image, thereby enabling interns to constantly add to the database of scanned images.

Previously hidden away in the City Archives but now available to online users, these pictures capture streetscapes of playing children, horse-drawn carriages, and Philadelphia’s historic homes and public buildings through the decades. For historians and history buffs, these photographs are superb resources. Like diaries, journals, letters, and other primary sources, these images cannot always speak for themselves and often require interpretation. To understand an image, a viewer must consider its larger context. Once placed in their historical context, however, the photos are immensely rewarding and useful assets that help to further illuminate that context.

The 1914 slum photograph illustrates this point. At the time the photo was taken, Progressives enjoyed broad support across American society. These reformers, among other things, pressed for things like improvements in city sanitation and the health of urban residents. One can imagine them looking upon the cellar slum with particular dismay, realizing that several people probably inhabited this disease-ridden hovel. For the historian, it is the feeling conveyed by the picture, perhaps more than the specific details of filth or the arrangement of furniture, that is paramount. Similar to the writings of...
Jane Addams or Upton Sinclair, this photograph helps to illustrate the harsh realities that many poor immigrants and other Americans were forced to endure during the era. It draws into sharper focus the many challenges facing poor urban dwellers in the twentieth century as well as the challenges for Progressives. The portrait of slum life can have even more utility for a junior high or high school student learning about Progressivism. An evocative photo can often do much to enliven an otherwise dry set of facts.

Were the site simply a collection of old photographs, it would still serve a worthy purpose by illustrating the face of post-Civil War Philadelphia. But PhillyHistory.org’s use of GIS significantly broadens the website’s utility. In fact, the marriage between photographs and GIS has rarely been achieved in such a sophisticated manner. Once a photograph has been connected to a recognizable address, it is “geocoded” and tied to its specific coordinates on a map, enabling it to be connected to a wealth of additional information. Consider, for example, that you have identified a 1917 photograph of billboards at the intersection of Broad Street and Girard Avenue. Aside from graphically identifying the place where the photo was taken, PhillyHistory.org also indicates, through a series of red flags, the availability of several other photographs near this location. Regardless of how you find this picture (searching by address, keyword, neighborhood, topic, or year), you can look at the accompanying map and discover numerous other images in which you may also be interested. But the map’s utility does not end there. You can also measure distances, directions, sizes, and shapes of nearby urban features. By reviewing the map, you might discover that a photo area lies one block south and east of the modern-day Towers Apartments, helping you to reconcile that image with the modern landscape. All of this encoded information points the public towards more photos and offers a geographical context for image searches.

The somewhat fluid nature of Philadelphia’s physical geography has presented challenges to the development of PhillyHistory.org. Consider, for example, the fundamental issue of street names. Over time, Philadelphia street names have been altered for a variety of reasons. City planners have changed names in response to modifications in street design, to commemorate important figures, and for political reasons. Mapping the location of most pictures in the archives is not affected by these changes, as most street names have remained constant. But there are several prominent thoroughfares such as Kelly Drive (formerly East River Drive) and Christopher Columbus Boulevard (formerly Delaware Avenue), as well as smaller streets, whose names have changed over the years.
PhillyHistory.org is able to correct for name changes by way of the City’s Unified Land Records System (ULRS). The ULRS contains a database of real estate parcels in the city that has been integrated with other important geographic data including addresses, land records, and tax accounts to establish a single, accessible repository for all Philadelphia addresses. Street aliases (different names used for the same street at different times) are among the data available through this system. With this system in place, a search for “Delaware Avenue” and “Oregon Avenue” would return a large collection of photographs at or near the intersection of those streets. The website identifies these images as being located at Columbus Boulevard and Oregon Avenue, however, because the database “knows” of Christopher Columbus Boulevard’s previous incarnation as Delaware Avenue. On the accompanying map, any photographs found along Delaware Avenue are plotted along Christopher Columbus Boulevard.

PhillyHistory.org also provides access to the Philadelphia Historic Streets Index, a detailed database of street name changes. This index was compiled from the original road records, docket books, jury decisions, and surveys held by the Philadelphia City Archives. An 1858 city ordinance provided for the establishment of an alphabetical index of former names, together with the location of the street and the new name given to each. By an 1897 ordinance,
names of intermediate streets were indexed by old name, location, and new name. From these sources, the Philadelphia Department of Streets has developed and maintained a comprehensive survey of official road records for the City. This index, searchable through PhillyHistory.org, is a fine resource that not only serves as a helpful complement to the site’s photographic component but also stands on its own as a tool for research on Philadelphia’s ever-changing street monikers.

In addition to shifting street names, another challenge in developing PhillyHistory.org relates to the definition of neighborhoods. The website’s mapping system allows users to pose queries that “find” images within the boundaries of a given neighborhood. The problem is that neighborhood boundaries can be arbitrarily determined and a given neighborhood may be envisioned differently by different people. For example, Fishtown is recognized on the website as the area bounded by Frankford Avenue on the west, Girard Avenue on the southeast, and Norris Street on the northeast. It is traditional to designate this area as Fishtown, but many Philadelphians contend that the neighborhood actually extends past Norris to York Street or even as far as Lehigh Avenue. PhillyHistory.org, unfortunately, cannot anticipate everyone’s definition of the city’s neighborhoods. The website’s map interface, however, does provide flexibility. Users may look for all photographs of Fishtown, and if the corresponding map does not cover the entire area they seek, they can zoom and/or pan as necessary to encompass the desired area.

PhillyHistory.org’s GIS component also offers a chance to put its pictures and maps to practical use. The technology could enable website visitors to create their own walking tours of Philadelphia. Visits to historic sites in Old City or Fairmount could be enhanced, not only leading people to locales in which they are most interested, but also allowing them to compare landscapes of the past with their modern counterparts. Further improving the ability to see how the past contrasts with the present, photographs on PhillyHistory.org can also be viewed in GoogleEarth, a program that uses aerial and satellite imagery to allow people to virtually navigate through a 3-D landscape.

In addition to the existing website, PhillyHistory.org can also be accessed on a hand-held, Internet-enabled device such as a cell phone or a pocket PC. PhillyHistory Mobile, as it is called, was developed in tandem with plans to make Philadelphia America’s first entirely wireless Internet hotspot. Users will be able to access the Internet via handheld devices...
While historic geocoded photographs currently form the centerpiece of PhillyHistory.org, the website offers other resources, as well. In addition to the Historic Streets Index, visitors can access a historical blog. With the continuing popularity of blogs, the DOR views the PhillyHistory.org blog as an opportunity to place the City Archives’ fascinating images into their historical context. Its contributors are professionally trained in the craft of history. They seek to open a window into the past, one photo at a time, and to do so in a way that is accessible to all history enthusiasts, be they students, professors, or the average person. New entries are added to the blog each month. Like Philadelphia’s past itself, these entries are diverse. Some contributions have focused on familiar topics such as Independence Hall and Center City while others have delved into such less well-known places and events as the 1842 Lombard Street race riots, Brewerytown, the industry along the Schuylkill River, and the Sparks Shot Tower.

The blog documents the rich social and cultural history of Philadelphia. It tells us much about the way people lived in the late nineteenth and twentieth centuries. The annotated images present a wonderful opportunity to teach the public not only about the lives of the rich and the famous but also about marginalized groups, including women, African Americans, and immigrants. Their stories are as integral to the city’s past as those of Benjamin Franklin and Mayor Frank Rizzo. The blog is thus a great opportunity to serve the public interest in the people of the past, both extraordinary and ordinary. A good example of this can be found in an entry about the Aldine Theatre at 19th and Chestnut Streets. The blog describes a 1928 photograph of the theatre’s advertisements for Al Jolson’s motion picture, The Singing Fool. Jolson frequently performed in his trademark blackface and his “blacked up” visage stares out from the marquee. The blog reads:

Blackface’s popularity highlights the complicated nature of late nineteenth- and early twentieth-century race relations. One recent historian argues that white society’s feeling toward blacks and their culture combined resentment, sympathy, and cooptation, or both “love and theft.” In the post-vaudeville era, more enlightened racial sensibilities emerged, leading to a decline in public tolerance for blackface. The practice serves as a painful reminder of America’s struggles with bigotry. (Lechner 2006)

This particular blog begins with a photograph of a theater showing a popular film and uses it as an opportunity to inform the public about the history of American racism. The blog uses professional
A desire to educate the public about the richness of Philadelphia history is what motivates PhillyHistory.org and, for this reason, the DOR has attempted to make access to its photographs as user-friendly as possible. In creating the site, DOR chose to make images available at a sufficiently high resolution for a student to incorporate a photo into a school report or for a municipal agency to print copies for their own use. Serious buyers are able to submit print requests and have the photographs printed professionally for a small fee. Users add photographs they want to purchase to an online shopping cart, and DOR photographers then print the pictures and send them to the buyer. This e-commerce component of the website will enable the Department to create a revenue stream that supports the project and expands the number of photographs available online. Because these photographs are in the public domain, however, the DOR makes no profit from such transactions.

The opportunity to buy photographs and research them geographically holds broad appeal for the Philadelphia community and will thus remain a central part of PhillyHistory.org. The DOR is soliciting input from other institutions, and these potential additions to the website’s holdings would offer exciting opportunities for historical research. Users would then be able to access this other historical information separately or in combination with the geocoded photographs. These changes reflect the DOR’s goal to establish PhillyHistory.org as a premier online historical database.

We will leave it to a non-Philadelphian to sum up the innovation at the heart of PhillyHistory.org. Captain John Smith (1530-1631) once wrote, “As Geography without History seemeth a carkasse without motion; so History without Geography wandreth as a Vagrant without a certaine habitation” (Newlin 2006). It would be difficult to find a more apt quote to summarize the philosophy behind Philly-History.org’s unique combination of GIS and history. On the website, mapping technology provides a “certaine habitation” for historical content and, likewise, that content animates geography’s inert “carkasse.” The DOR recognizes that history and place are inextricable. The locations of historical events do not always “make” those events, but they certainly serve as a primary frame of reference.

One final example makes this point explicit. Race-related riots have been an all-too-common occurrence throughout American history. Visitors to PhillyHistory.org will learn that in the nineteenth century whites frequently staged riots against black people and institutions.
Connecting People to their Histories

The timing of the City’s early nineteenth-century race riots speaks to the importance of drawing connections between history and place. Large groups of freed and fugitive slaves arrived in northern cities, particularly Philadelphia. As W.E.B. Du Bois wrote in his landmark 1899 work, The Philadelphia Negro: A Social Study, this was because “Philadelphia was the natural gateway between the North and the South.” Here geography played a critical role. The city’s “gateway” status resulted in a 48 percent increase in Philadelphia’s black population between 1810 and 1830. The city’s white population expressed dismay at this migration and the black community’s expanded wealth. The 1842 Lombard Street Riot capped off thirteen years of white-initiated race riots. Other northern cities experienced similar violence during the era, but the ferocity and extended duration of Philadelphia’s racial woes cannot be separated from its unique geography.

That geography and this city’s pivotal role in American history make Philadelphia the ideal candidate for a GIS-History website. PhillyHistory.org has developed into an innovative resource relevant not only to Philadelphians but to all United States history enthusiasts. It serves as a model for making history available to the public and using maps to showcase the place of the past within the current landscape.

REFERENCES


FURTHER READING


