

## **Bring Up the Exhibits: GIS and the Humanities at Cornell University Library**

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**Abstract.** The paper describes the efforts of the Cornell University Library and the Maps Unit in particular to reach out to audiences that are not usually identified as our “primary audience.” For decades there have been no geography departments in most of the top private universities in the United States, including Cornell. Thus, the University Library’s Map Collection is in the unique and somewhat awkward position of not having a “primary audience.” In its absence we try to provide support to a broader audience primarily in the humanities. The paper brings together the various outreach and teaching initiatives of the Map Collection and argues that the absence of a “home” department is not an impediment to the research and learning potential of maps special collections and GIS technologies.

**Keywords.** Geographic Information Systems, Humanities, map collections, map exhibits, outreach

### **1. Introduction**

When 2011 I was giving a Map Collection tour to the parents of first-year students, someone observed, “So, you have more than 350,000 maps, atlases, journals, and books, and no Geography Department?! Who then uses the collection?” The quick, and quite true, answer would be, people are “doing geography” all over the Cornell University campus – researching historical and present boundaries, examining linguistic groupings, imagining how a particular place looked 100 years ago. The bigger question however is what the role of map and geospatial collections and services in a research university without a specialized geography department is.

For decades there have been no geography departments in most of the top private universities in the United States, including Cornell. Thus, the University Library’s Map Collection is in the unique and somewhat awkward position of not having a “primary audience.” In the absence of a “usual” primary audience we try to provide support to a broader audience primarily in the humanities.

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Humanists are quite familiar with space as a concept or metaphor, but only lately have they developed an interest in the influence of physical, geographic space on human behavior and cultural development. GIS lie at the heart of this so-called spatial turn. With GIS users can detect visual patterns that remain hidden in texts and tables. (Bodenhamer et al., 2010.)

In this context the new exhibits we display every six months in the lobby in front of the Maps Room serve two purposes: one, increasing the visibility of the map collection, including advertising the opportunities that maps and mapping software present and two, engaging in the cultural discourse at the University, local, national, or even world level. Thanks to this, our collaboration with various departments at Cornell University sharply increased the past several years. For instance, we create original maps for books by Cornell faculty; as well as maps illustrating dissertations, theses, etc. We also employ instruction and outreach methods to achieve our goal reaching even wider audiences: one of our approaches is to offer a six-session workshop for local school kids, introducing them to GIS and their various applications. The latter is part of a partnership between the Cornell University Library and the 4-H Career Exploration Program, which strives to provide middle- and high school children with exposure to academic fields, to develop leadership skills, to provide hands-on experience in a college setting, and to introduce them to Cornell University. The lack of space does not allow me to describe in more detail the various outreach initiatives, but I hope that the exhibit narrative will show that the absence of a “home” department is not an impediment to the research and learning potential of maps special collections and GIS technologies.

## **2. The Mapping of The Grapes of Wrath**

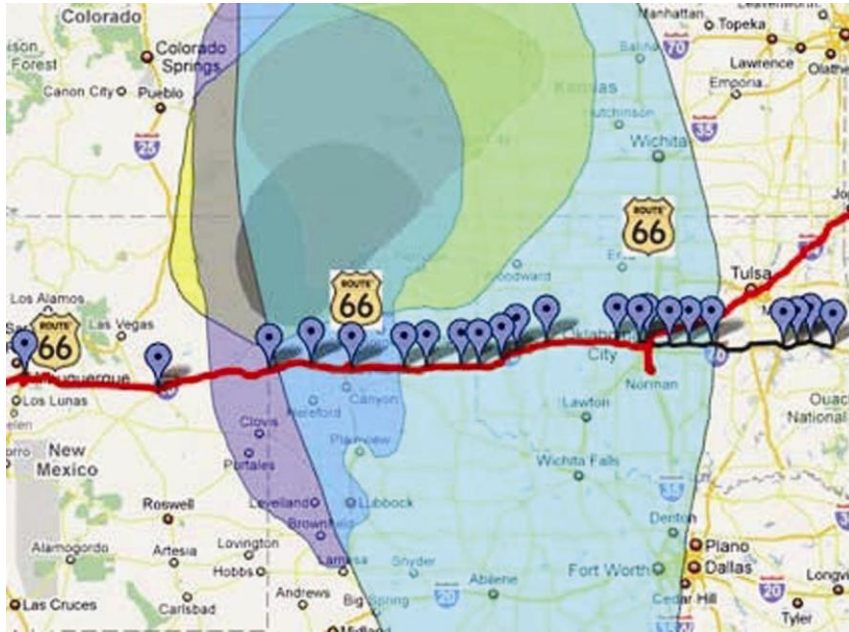
Several years ago Cornell launched its Freshmen Reading Program, as part of which incoming freshmen read and engage in year-long discussions of a particular book. This creates a sense of community and academic integration. Several times, where the content allowed us, we prepared a map exhibit in support of the project, as, e.g. in 2009, when we mapped John Steinbeck’s *The Grapes of Wrath*. The exhibit was part of the Library’s involvement in the project and the celebration of the 70th anniversary of the publication of the novel.

When we learned that the incoming freshman class reading project was *The Grapes of Wrath*, we asked ourselves, why not map it? After all, it is an extraordinary account of a major upheaval and transition in the way of life of large groups of people in America, caused by both environmental and social factors. We can read it from multiple perspectives--as literature, as a sociological or political study, or as an economic report on the poverty of the 1930s. We can also listen to the music or view the art that it inspired. And we can look at its geography – there is a natural link between literature and geography. Geography has a big influence in shaping any society. Literature, like all art, is ultimately a reflection and illustration of the landscape that produced it. Virtually every story has a setting that can be expressed in geographical terms. Therefore, as part of the discussions within the Reading

Project, in July 2009 we published an interactive online map (Fig.1) that drew some excited reviews from visitors on our blog page, like the one by Aimee Noel, Dayton, OH, on August 7, 2009: “This will be an extremely helpful site to use in my classroom. Thank you for the time and attention to detail that you are investing into this project.”

Encouraged by the positive response, we decided to continue our efforts and prepare a map exhibit aimed at helping to visualize the events and places in the novel, and showing the influence of physical, geographic space on human behavior and cultural development at the same time demonstrating the possibilities that GIS grant us. GIS can be applied in answering a variety of historical and cultural questions, e.g. did the Dust Bowl of the 1930s result from over-farming the land or was it primarily the consequence of long term environmental changes; how did the internal migration of the 1930s-1940s change the demographics of the Great Plains; why were the migrant camps in California concentrated where they were, etc. We considered two methods of approach to realize our goal: the above mentioned interactive internet map, and a physical exhibit combining both maps prepared by using some mapping software (ArcGIS) and an explanatory text. We were convinced that by using graphics together with text we will reinforce students’ perceptions. The expectation was based on the results of various studies showing that when users view a map prior to reading a related text they are able to recall more information from both the map and the text and so more accurately (Verdi and Kulhavy, 2002, 43.)

Of course, ours was not the first attempt to map a literary work. For instance, Jerome Burg, founder of the Google Lit Trips Project, has mapped the locations in *The Grapes of Wrath* and provides some additional information in the placemark balloons. For our project, we did a similar thing – we mapped the Joads’ journey and geocoded all the places mentioned in the book together with an excerpt from the novel that mentions the particular place. We, however, did not stop here. As we all know, Steinbeck immortalized Route 66, the Mother Road, as a symbol of the quest for better life. Therefore, we felt that Route 66 must exist on our map. And, of course, we wanted to show the driving force of the events in the novel – the ecological disaster known as The Dust Bowl. (Fig. 1) It seems that we ultimately succeeded – in addition to the comments in the blog, an anonymous viewer posted the following comment in the body of the map: “You totes saved my life and my grade...”



**Figure 1:** A screen shot of the interactive online "Grapes of Wrath" map. The colored layer shapes show the different level of wind erosion, result of the Dust Bowl.

With the permanent exhibit in the display case in front of the Map Room in Olin Library we had a slightly different goal. We wanted to show the real, physical, geographic context and environment. We did map the Joads' itinerary, the Historic Route 66, or, "The Mother Road", where the migrants travelled to California; however, we put the emphasis on the enormous extent of the Dust Bowl, the migrants' destinations, and the efforts of the federal administration to accommodate them. The maps in the exhibit came in different formats. Most of the materials shown were illustrations in books. We also showed, with their permission, a map from the National Agricultural Library special collections. The rest of the maps were original creations using GIS software based on data harvested in various sources (Fig.2, Fig.3, Fig.4, Fig.5).

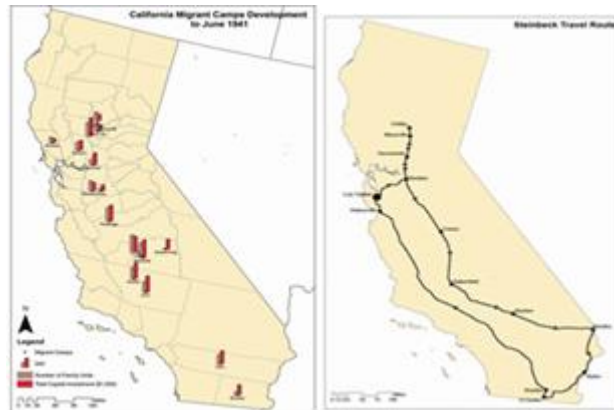


Figure 2: California migrant camps development to 1941

Figure 3: Map of John Steinbeck's travels in California during the fall of 1937 in preparation for "The Grapes of Wrath"

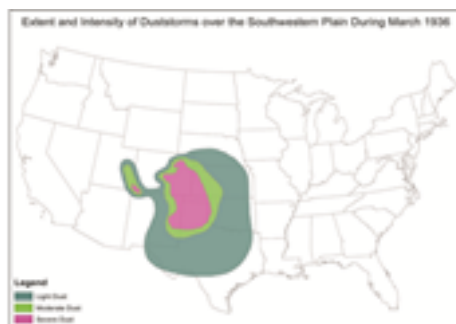


Figure 4: Extent and intensity of the dust storms over the Southwestern plains in 1936



Figure 5: Percentage of normal precipitation between Sept. 1934 and Feb. 1935. The light at best, rainfall, and the careless cultivation and overgrazing, depleted the subsoil moisture and greatly contributed to the dust storms of the 1930s.

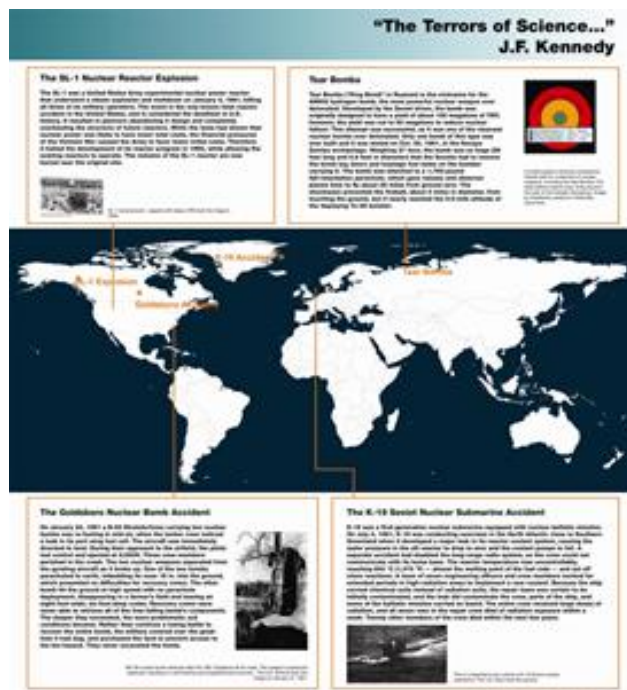
### 3. The 50th Anniversary of Olin Library

2011 marked the 50th anniversary of the largest library on the Cornell University's Ithaca, NY, campus. John M. Olin library was built in 1961. It was the first library in the country to be purpose-built as a research facility. Various events celebrated the anniversary, including an exhibition on display in Olin and Uris Libraries, and also online. It traced Olin's history through photographs, drawings and artifacts and examined how Olin had kept pace with evolving research needs. We took a different approach preparing the map exhibit. We tried to show what the world look like in 1961 by placing this concrete local event in a global geo-political context, at the same time demonstrating the opportunities the various mapping software presents to visualize our experiences.

Arguably the most important event of 1961 was the inauguration of President John F. Kennedy (Fig.6). The inaugural address was the fourth-shortest in U.S. history and one of the most important. It took place at the front steps of the U.S. Capitol building and addressed the most crucial issues of the time. 1961also saw the emergence of perhaps the world's greatest symbol of division: the building of the Berlin Wall. On April 12, a human being reached outer space for the first time. Despite the stated intentions, the arms race continued, leading to several serious nuclear accidents. Within the U. S., challenges to racial segregation gathered strength as the civil rights movement picked up speed. All these events became part of the exhibit.



**Figure 6:** poster of President John F. Kennedy's inauguration. The red star within the Google Earth image of the U.S. Capitol indicates the location of the ceremony.



**Figure 7:** A poster of several nuclear disasters of 1961, including the detonation by the USSR of the AN-602 hydrogen bomb, the most powerful nuclear weapon in history.

Our plans did not stop here. 2012 marked the 500th anniversary of the death of Amerigo Vespucci, and in March we created a new exhibit, “America or Columbia: 500 Years of Controversy” that tried to present the opposing points of view and also took a side itself. The space limitations do not allow me to present a more detailed account of the accomplishments of the exhibit, however the animated discussions it stirred up and the reference to it by Prof. Mary Beth Norton, a well-known historian and co-teacher of a course on the history of exploration, show that we have achieved our goals.

#### 4. Conclusion

Our collaboration with various departments at Cornell University sharply increased the past several years. For instance, NijTontisirin and consequently Johannes Plambeck, student-assistants and the unit’s GIS specialists, created the original maps for the 2011 book, “Islam: A Short Guide to the Faith”, by Prof. Shawkat Toorawa, Near Eastern Studies. We provided the maps and GIS analysis for Prof. Jon Parmenter’s (History) 2010 book, “The Edge of the Woods: Iroquia, 1534-1701” as well as the maps for Prof. Sandra Greene’s (History) 2011 book, “West African Narratives of Slavery: Texts from Late Nineteenth- and Early Twentieth-Century Ghana.” We also produced the maps

for the Matthew Robar's 2010 senior honors thesis, "All Politics Is Local: Even the Politics of War", in the Government Department. Our current projects include creating original maps for Prof. Rachel Weil's (Government) upcoming book "Plague of Informers" and the maps for Marion Dixon's dissertation, "The Making of the Corporate Agri-Food System in Egypt."

The fact that more and more members of the Cornell community are seeking our help can be attributed to their increased knowledge of the services we provide. The regular exhibits presented by the Map Unit of Olin & Uris Libraries are an important contributing factor to the increased visibility of the unit and the collection we curate and the various projects we either participate in or have been commissioned to perform. The exhibits that we prepare and display semi-annually are perhaps the most effective tool to accomplish all aspects of our efforts at once. They consist of a mix of scanned images of items from our collection as well as original maps we prepare using different types of mapping software. Through them we not only effectively deliver our message regarding key events from the past and present, but also promote the possibilities for application of GIS in the Humanities through graphically demonstrating the capabilities of the software.

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