CREATING SPATIAL HISTORICAL KNOWLEDGE: NEW APPROACHES, OPPORTUNITIES AND EPISTEMOLOGICAL IMPLICATIONS OF MAPPING HISTORY DIGITALLY

Conference at the German Historical Institute Washington (GHI). Co-organized by the GHI, the Roy Rosenzweig Center for History and New Media (RRCHNM), and Digital Humanities at Berkeley. Made possible by support from the Deutsche Forschungsgemeinschaft (DFG). Conveners: Matthew Hiebert (GHI) and Simone Lässig (GHI). Participants: Robert C. Allen (University of North Carolina), Dan Bailey (University of Maryland), Ralph Barczok (University of Konstanz), Waitman Wade Beorn (University of Virginia), Cameron Blevins (Northeastern University), Pim van Bree (LAB1100), Alex Christie (Centre for Digital Humanities, Brock University), David Eltis (University of British Columbia), Elisabeth Engel (GHI), David Hochfelder (SUNY Albany), Paul Jaskot (DePaul University), Geert Kessels (LAB1100), Randa El Khatib (University of Victoria), Steffen Koch (University of Stuttgart), Mareike König (GHI Paris), Habbo Knoch (University of Cologne), Anne Knowles (University of Maine), Katherine McDonough (Western Sydney University), Trevor Muñoz (MITH, University of Maryland), Jana Moser (Leibniz Institute for Regional Geography), Michael Newton (Digital Innovation Lab, University of North Carolina), Joe Nugent (Boston College), Atiba Pertilla (GHI), Stephen Robertson (RRCHNM), David Eltis (University of British Columbia), Anne Sarah Rubin (University of Maryland, Baltimore County), Diana Roig Sanz (Open University of Catalonia/KU Leuven), Ute Schneider (University of Duisburg-Essen), Franziska Seraphim (Boston College), Jennifer Serventi (National Endowment for the Humanities), Helmut Walser Smith (Vanderbilt University), Werner Stangl (University of Graz), John Theibault (independent scholar), Paul Vierthaler (Leiden University), Jon Voss (Historypin), David Wrisley (American University of Beirut).

This event brought together forty historians from North America, Germany, and beyond to comparatively examine emerging digital approaches, new research questions, and implications for the discipline of history and its understanding for those using or producing digital maps and other spatial methods to create spatial historical knowledge. For centuries, historians have provided maps within their work to visualize complex information. With the increasing awareness of spatial dimensions in history and the invention of Geographical Information Systems (GIS), historical research granted mapping a greater
methodological role in processes of research and scientific discovery. In introducing the keynote lecture by workshop co-convener Stephen Robertson entitled “Toward a Spatial Narrative of the 1935 Harlem Riot: Mapping and Storytelling after the Geospatial Turn,” Simone Lässig observed that maps are research objects all historians use at one point or another, and asserted the importance of engaging critically with the new varieties of maps that digital technology makes possible. In the keynote, drawing upon his work to create a narrative of the 1935 Harlem Riot based on Year of the Riot (a map developed as an extension of his award-winning Digital Harlem project), Robertson presented spatial narrative as a form of digital scholarship, showing how interpretations and arguments that advance historiography can be developed from maps that combine and display diverse sources.

The first conference panel, “Charting New Methods” chaired by Jennifer Serventi, questioned whether digital mapping methodologies signal an epistemological shift within historiography, are continuations of longstanding uses of cartography by historians, or are potentially incongruous with the disciplinary aims of history. In her paper “Visual Ways of Knowing the Past,” Anne Knowles argued that the use of digital cartography and geographic information systems (GIS) since the 1990s have changed maps in historical research from suggestive illustrations of the past to means of contending with complexity, for reconstruction of past landscapes, and showing change over time. Drawing on her research on the U.S. iron industry and the European Holocaust, Knowles showed how translating historical sources into spatio-temporal databases may facilitate new questions and answers, stressing the capacity of iterative data visualizations in multiple modes to reveal patterns, dynamics, and facets of complex stories. In “What Gets Lost: Method, Theory, and Spatial History’s Disciplinary Shores,” Cameron Blevins reflected on inconsistencies between the digital spatial methods in the social sciences and the disciplinary aims of history. In the context of his project “The Postal West,” which involved the creation of a database to map over 166,000 U.S. post offices, Blevins argued that an interdisciplinary adoption of geographic methods without sensitivity to the specificities of historiography risks positivistic reductionism and loss of complexity. By using digital maps to visualize large-scale proliferation and patterns of post office distribution in the integration of the western U.S., Blevins ultimately returned to “old-fashioned disciplinary questions about American history,” approached from a greater scale, and called for a disciplinary turn within the digital humanities. Helmut
Walser Smith’s paper “Mere Illustration” distilled his experience of creating fifty maps with ARC-GIS for his forthcoming book, *Finding Germany: Nation Before, During, and After Nationalism, 1500-2000*. Smith classified his map-making into four sorts: plotting where a phenomenon occurred; translating historical text-based descriptions of place; mapping imagined or counterfactual geographies; and layering points and shapes to determine geopolitical dispersion and containment. Smith suggested that this fourth form of mapping may move beyond “mere illustration” to reveal new congruence and correlations, however, such a method is predicated on rich data sets largely unavailable outside of contemporary history and difficult in approaching nation-states with historically varying borders. The rich discussion that ensued explored the question as to whether the power digital mapping grants historians involves the creation or conveyance of knowledge, with participants pointing to mapping’s capacity to foster new questions, see data in new ways, and approach history at much greater scales.

The second panel, “Transformations in Historical Inquiry,” chaired by Atiba Pertilla, explored how emerging database-driven spatial infrastructure projects may reshape how historical research is undertaken and the ways in which past historiography may be built upon or challenged in this methodological shift. The panel commenced with a presentation on “Mapping Print, Charting Enlightenment” by Katherine McDonough, introducing her project of the same name (MPCE). MPCE constructs a database with information on the production, sales, dissemination, policing, and reception of early modern French books. McDonough envisions the project as automating tasks associated with locating places in historical texts, facilitating links between projects through place, and connecting to other gazetteers in an interoperable network of place-name directories. John Theibault, in “Mapping a Historiography: The Local Social Histories of Early Modern Germany,” presented his work to recover and revive an earlier period of historiography in early modern studies through database design and mapping. Theibault noted the decline in the 1970s of local social histories dependent upon quantification and social structural analysis and the ascendance of microhistories influenced by the cultural turn. His project, the Early Modern European Social History Geospatial Bibliography (EMESHGB) seeks to offer a “deeply annotated” census of the work done for early modern local social histories. In “Analyzing Multi-religious Spaces in the Medieval Muslim World,” Ralph Barczok and Steffen Koch presented their use of spatial
infrastructure approaches as an intervention into the historiography of medieval Asia and North Africa. A multi-religious reality persisted in this region and period, but the diachronic and synchronic complexity of populations remains understudied. The project visualizes the multi-religious demographics of 300 to 350 cities in Asia and North Africa in a geo-temporal, multi-view interface and interactive map. By providing the city-specific composition of religious communities over time through user-generated views, the project will assist historians in assessing the neglected temporal and spatial trends in denominational composition. Discussion treated the methodological differences in how historians and geographers create gazetteers, the differences between visualization and illustration, contested origins of microhistory, the role of space in the historicization of knowledge, and digital project sustainability.

The third panel, “Mapping Power,” chaired by Elisabeth Engel, explored the powerful role maps and other spatial representations played in the achievement and preservation of geopolitical power regimes and the capacity of digital spatial methods to provide historical understanding and critique. Werner Stangl’s project “HGIS de las Indias: A Dynamic Reconstruction of Colonial Spanish America,” constructs a dynamic Historical Geographical Information System for Spanish America at the end of the colonial period. Stangl presented the technical manifestation of his project as undermining the oft-avowed dichotomy between GIS and new digital humanities techniques perceived as more qualitative and participatory in their associations with neogeography. Perennially criticized as a positivistic science in mathematically integrating geometric abstractions of the world for spatial analytic systems, GIS seem at odds with traditional humanities methodologies. Stangl argued that his source material — which includes administrative descriptions and maps, census data, episcopal visits — reenacts the colonialist narrative but does not seek to legitimize its perspective. Matthew Unangst argued in “Mapping Imperial Geographies in East Africa” that the use of GIS software and related digital tools tacitly reinforces colonial geographies. Inherently, Western cartographic frameworks cannot represent African conceptualizations of space and instead maintain the borders contemporary historical geographers challenge. For imperialists, early maps of stateless Africa served as juridico-political tools, subsequent maps visualized empire prior to conquests, and later maps, today the basis of postcolonial African states, rationalized colonialism and claims to sovereignty through a scientific planetary
Unangst called for increased digital “counter mapping” projects, pointing to the promise of network analysis and new modes of mapping to visualize multiple layers of sovereignty and meanings attributed to landscapes. Robert Nelson in his paper “Slavery on the Move: Counter-mapping the Domestic Slave Trade” presented “The Forced Migration of Enslaved People, 1810-1860,” a data-rich web project that offers an animated and interactive map of the domestic slave trade and its forced migration during the fifty years prior to the Civil War. Utilizing statistical modeling and areal interpolation, the map shows for the first time in detail areas where enslaved people were moved from and into, addressing the lack of census bureau data about the enslaved population from efforts by Southern leaders to obfuscate the extent of the slave trade and the forced distant migration it entailed. Areas of intense importation to distant areas of exportation over a twenty-year period are displayed, showing the slave trade’s cyclical and traumatic generational nature, while illustrating also the economic and demographic pressures in their spatial logic upon slaveholders to aggressively expand in the 1840s and 1850s and seek supportive policies leading to the sectional crisis. In his presentation “Spatializing Mass Violence: Immersive Digital Environments for Holocaust Memorial Museums,” Habbo Knoch presented “Memostory 3.0,” a project to develop immersive digital environments for Holocaust research and education. While stressing the need for ethical criteria in developing digital representations, Knoch argued that the prevalent commemorative approach to generating knowledge about the Holocaust, with its ethic of strongly limiting representation, has severely underestimated the spatial dimension of violence in its structure, dynamics, and experience at Nazi crime sites. Concealing this spatial logic, museum and on-site presentations have conveyed knowledge about the Holocaust using chronological and systematic based explanations, disregarding place, space, and topographies. “Memostory 3.0” integrates a full 3D-virtual reconstruction of the Bergen-Belsen camp with GPS-based geo-referencing and embedded historical sources, including photos, drawings, diary entries, and eyewitness reports. Access is provided on-site via an augmented reality tablet application or off-site by means of digital exhibitions. The resulting discussion included explorations of the user’s role in creating historical knowledge versus traditional conceptions of the public as consumers of historical facts; ethical considerations in digitally modelling the Holocaust; and the relationship between research and pedagogical aims in the construction of digital environments.
The fourth panel, “Digitally Remediating Spatial Source Materials,” chaired by Trevor Muñoz, presented some of the exemplary cases in the digitization of spatial source materials to investigate the effects remediating processes may have in the construction of knowledge. Waitman Wade Beorn in his paper “Spaces of Life and Death: Mapping the Holocaust Experience in the Janowska Camp” presented his web project built using the Map Scholar platform to combine spatial archival evidence in creating a narrative, geographically based portrayal of camp life at Janowska. Users are offered a partially guided and curated route through a wide range of oral, textual, and visual source material of perpetrators and survivors overlaid onto places where they originated. Anne Sarah Rubin and Dan Bailey in their presentation of “Visualizing Early Baltimore: Mapping Social History from Harbor to High Ground (1812-1820)” showcased the detailed, three-dimensional digital model of the topographical and visual landscape of the city circa 1815 modelled on print-based sources. Framing the project as “Google Maps street view for the nineteenth century,” the site strives to be both an accurate and publically resonant representation. Ongoing development of the project includes using the map as a staging environment for presenting historical data (e.g. population, labor market, spread of disease) and the inclusion of historical actors and themes within a variety of historically illuminating narrative paths. In her paper “Materiality and Time Layers: Cadastral Maps Between Paper and Digitization,” Ute Schneider investigated the effects of the remediation of cadastral maps, used from the beginning of the nineteenth century by European states to survey and visualize resources and properties for tax collection purposes, into digitized form from the 1970s. While new technologies such as lithography facilitated the reproduction of cadastral maps during the period of their use, corrections and other emendations were layered upon the originals over time. Schneider explored this unique materiality of cadastral maps and traced the implications accompanying their digitization had for users as well as perceptions about land ownership in Germany. Topics of discussion included: questioning the depth and detail needed for an effective map or visualization; losses in historical accuracy in digital modeling; issues related to the use of printed maps and other defunct data expressions for producing new source data; the distinction between space and place; the relationship between argument and visualization; copyright and restrictions in the creation and publication of maps; a deeper inquiry into the ethics surrounding map making; and the importance of preserving data in preserving cultural memory.
The fifth panel, “Spatial Approaches in Cultural and Literary History,” chaired by Paul Jaskot, attended to research areas associated in recent years with highly innovative methodological use of spatial techniques and analysis beyond traditional cartographical frameworks and imperatives. David Wrisley explored the question “What Is Spatial Literary Historical Knowledge?” in the context of his online project “Visualizing Medieval Places” (VMP), a gazetteer created from a large corpus of medieval French texts. The project indexes mention of places within these texts and maps their total occurrences, visualizing frequency and adding layers that include data from environmental history (e.g. agroecosystems, disease, climate). What emerges is a picture of the named world by writers of the language and time significantly distinct both from cartographic representations of space during the period and contemporary historical understandings of medieval literature in its relation to place. Diana Roig Sanz in her paper “Digital Mapping in Literary History: Multipolar Transfers and Complexity in the Mapping of Hispanic International Modernity,” discussed her work in examining the entangled and neglected history of Hispanic modernism. The project maps multipolar connections between cultural mediators (critics, publishers, and translators) and their productions (chiefly journals) within Hispanic transnational modernist networks between 1909 and the end of the Spanish civil war. Focusing on the transatlantic region rather than nations to reflect the true mobility of people, texts and ideas, the aim of Sanz’s digital mapping efforts is to analyze the socio-biography of cultural mediators, their social networks, differences between transferred products and sources, the multiple discursive modes of dissemination, and their inter-artistic activities. Alex Christie in his paper “Prototyping Spaces: Warped Cartography and Affective Maps” presented the Z-Axis tool, a geospatial mapping method and an online environment designed for scholars to rapidly produce three-dimensional maps that may advance theoretical, historical, or political arguments about source texts. Robert C. Allen (University of North Carolina at Chapel Hill) reflected upon the last ten years of his digital history research in his paper “From Moviegoers to Mill Workers: A Decade of Developing Tools and Approaches to Digital Spatial History.” Allen recounted the development, beginning in 2006, of the online resource for researching and teaching about early cinema, “Going to the Show,” which involved digitizing and georectifying original 1896 to 1923 Sanborn Maps (used for assessing fire insurance liability) from North Carolina University Collections to document hundreds of early cinema venues. The project expanded into “Main Street, Carolina,” a large-scale digital mapping project that provides temporal layers for
towns for examining the evolution of urban spaces and includes householder data, revealing, for instance, the social and racial construction of Charlotte following the Jim Crow policies. Building on the papers, discussion brought to light theoretical issues behind “distant reading” practices in literary history; the challenge of categorizing real versus imagined places within texts; the connections between literary and social history; issues in ontology construction; and practical problems surrounding the classification of texts.

The sixth panel, “Public History Online and Spatial Social Knowledge Creation,” chaired by Mareike König, attended to concerns and implications for scholarly and general knowledge creation in bringing spatial research processes and its productions to the online public. David Eltis in his paper “Mapping the Transatlantic Slave Trade” discussed his collaborative web project “Voyages: The Transatlantic Slave Trade Database” which has attracted over one million visits since it began in 2008 and has been remarkably productive in the generation of scholarly knowledge about the slave trade. The site provides a database of 34,938 transatlantic slave voyages, a searchable sample of personal information about 67,000 Africans carried on them, and a separate interactive database of numbers and routes. In its geospatial rendition, Eltis pointed to five major new insights on the slave trade the mapping project has revealed: the central effect of winds and ocean currents on its geo-structure; the vastness of the south Atlantic trade system; its wide geographic distribution; its direction from the Americas rather than from Europe; connections between the growth and size of merchant communities and slave trading; and the geographic pattern of slave resistances on voyages. Jana Moser in her paper “Special Conditions of Webmaps to be Regarded for Creating Spatial Historical Knowledge” considered five dimensions in the creation of spatial historical knowledge by a map: theme or content; temporality; spatiality; the medium or output format; and the worldviews of actors interpreting the map. Maps, Moser argued, must be understood as biased constructed models of the world, involving selection, reduction, and summarization. As such, maps are powerful instruments for communicating a singular statement or position about events, conditions, and developments. With colleague Tom Hoyer, Moser analyzed a collection of 217 interactive and collaborative web maps to determine specific features of online cartographic representations. They observed that while Web 2.0 communication processes often allow for collaborative production of content and comment, discussing visualization methods, data
quality, data origin, and inclusion of system affordances for critical assessment of design is very rare. David Hochfelder in his paper “Using Digital Tools to Create a Social and Public History of Urban Development” explored how digital tools can be used for the history of urban redevelopment in ways that incorporate social memory. His web-based project, “98 Acres in Albany” digitally reconstructs an area of downtown Albany, New York, that was demolished in 1962 to construct a futuristic state capitol complex. Lost streetscapes and buildings are being recreated on the basis of extensive archival and photographic record to provide accurate depiction of the area, while attention is paid to the people displaced in an effort to honor their memories and anchor them to the historical record.

In concluding remarks that highlighted salient critical questions raised during the conference in initiating a final discussion, Simone Lässig noted the rich variety of spatial digital history projects the event brought together and the new horizons it opened, including an argument-based turn in digital history. Lässig stressed that digital methodological developments remain connected to existing historical practices and emphasized the need to establish standards and a culture of respect around digital scholarship to ensure work in digital history and the collaborative authorship so often accompanying it are granted academic accreditation. In this context, ensuring a high quality of data and digitized source material for historians to analyze and contextualize through mapping and other digital methods is of great importance, while contending with issues of copyright and the necessity for sustainable digital infrastructure remains integral to that process. Crucial, Lässig asserted, is further developing traditional methods of historical scholarship for the digital age towards providing a Quellenkritik for digitized and born digital sources, and to determine how we must meet, secure, and create disciplinary standards while calling for big data, large digital corpora, and the use of digital tools. These questions are closely related to new forms of corpus creation and analysis via crowd sourcing and citizen/community science, and Lässig indicated this will be the main focus of the GHI’s second Annual Digital History Conference planned for October 2017. The fruitful discussions during the first conference and the often articulated desire for a forum that fosters international academic exchange about digital history and its place within the discipline have encouraged the GHI to move forward with organizing a digital history conference with a unique focus every year.

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