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# Engaging Community and Spatial Humanities for Postindustrial Heritage: The Keweenaw Time Traveler

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## The Keweenaw Time Traveler www.keweenawhistory.com

The Keweenaw Time Traveler is an interactive, online historical atlas that creates a comprehensive spatial representation of the social and built environments of one of the country's first and largest extractive landscapes. Launched to the public in the summer of 2017, it combines deep mapping with digital public humanities to create a mutually beneficial online tool for researchers and community stakeholders alike. On Michigan's southern shore of Lake Superior, the Keweenaw Peninsula has an abundant built heritage that includes abandoned mine shaft buildings, former company towns, and ethnic community halls. Such sites recall the region's copper mining industry, active between 1860 and 1950, and demonstrate to tourists and residents alike the need to address the social and environmental impacts of deindustrialization. Our interdisciplinary team of researchers at Michigan Technological University is building the Keweenaw Time Traveler to empower citizens, municipal officials, and tourists, as well as academic researchers, to gain and share knowledge about this region's changing built and social environments, and to help a postindustrial community leverage its own past toward a healthier, more prosperous future.

The Keweenaw Time Traveler project combines approaches from the spatial humanities, public history, and American studies. It answers the call of scholars such as David Bodenhamer to leverage the power of geospatial technologies and information to investigate the contingent and discursive relationships between people through space and time that drive American studies scholarship today.[1] The project builds on foundational work in digital spatial humanities and facilitates what Anne Kelly Knowles has called "inductive visualization,"

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which promotes the discovery and interpretation of new spatial relationships.[2] These relationships, analyzed using GIS technologies and methods, can drive critical inquiry about immigration, technological change, ethnic and class identities, environmental degradation, and more.[3] Moreover, the Keweenaw Time Traveler's community-engaged process of development promotes access, inclusivity, and empowerment for diverse heritage constituencies.[4] Following Sheila Brennan's call for public humanities projects to foster grassroots collaboration, the Keweenaw Time Traveler's platform and in situ public programming encourage a reflexive discussion about the impacts of deindustrialization and about the opportunities that the rich heritage landscape offers visitors and residents alike.[5]

To integrate contemporary humanities research with community-engaged practice, this project uses the concept of deep mapping, which is defined by five core principles. The map must be *flexible*, inviting exploration; *open* to accepting new sources or data; *user-centric*, supporting different pathways or views; and *immersive*, evoking experiences. The final principle, *path-traceable*, or supporting spatial storytelling, will be the focus of later platform developments.[6] To build a deep map, the foundation of the Keweenaw Time Traveler is hundreds of georeferenced and digitized historical maps whose individual buildings and landscape features are represented in a spatiotemporal geodatabase.[7] The maps and data reveal details about the region's built environments including the location, size, construction material, ownership, occupants, and civic address of over 125,000 residential, commercial, civic, and industrial structures over seventy years. The back end of this deep map is a historical spatial data infrastructure that allows for the rapid geolocation and relational linking of historical records to facilitate longitudinal research.[8] Researchers have just begun using the Keweenaw Time Traveler to investigate connections between the region's built environment and children's health, to explore the role of neighborhood development in changing social power, and to model how urban watersheds and the built environment change over time.[9]

Public participatory initiatives at the core of this deep map facilitate the co-production of knowledge and dialogue that are vital to our public humanities goals. Three "Citizen Historian" apps offer a game-like setting where users transcribe handwritten notations on maps, categorize buildings by use, and identify building materials by matching colors. These apps were developed using open design charrettes in the winter of 2017, and draw on research in crowd-sourced heritage projects and public participatory GIS practices.[10] Users have already classified over 375,000 variables and can follow their progress

on the project's homepage. In addition, the Keweenaw Time Traveler Explore app allows users to search the spatiotemporal database by contemporary and historical addresses, compare familiar landscapes over different time periods, and comment on user-contributed stories. Online users have added in the first four months over five hundred points with photographs, newspaper clippings, and personal memories about immigration, labor activism, business history, outdoor recreation, historical memory, and more.

Active programming, both in-person and online, extends the project's reach beyond the website and digital tools. We partner with the region's already motivated heritage community—which includes two National Park units, a dozen regional heritage partners, and three county historical societies—to attend outdoor festivals and offer scheduled presentations. Not only do these events teach visitors to use the Time Traveler at home, but they also stimulate face-to-face intergenerational conversations that promote the sharing of historical knowledge and discussions of the impacts of deindustrialization on the community. In-person events enfranchise marginalized groups including the elderly, children, and those with lower computer literacy or limited access to broadband.[11] An active social media agenda and blog connect resident stakeholders with Copper Country descendants who live elsewhere but remain connected with the region's history and people.[12] Likewise, the Keweenaw Time Traveler offers university faculty and public historians useful applications for service learning and immersive pedagogies.[13]

Future grant applications will support expanded search queries, additional visualization options, and a portal for data download. In the meantime, additional historical data sets are being developed that include employee records from mining company archives and regional school records. The data will offer robust spatial linkages between individuals and families and facilitate research about how industrial capitalism affects environmental justice and social inequality. The authors also plan to create a "Things" layer that geolocates archaeological and material culture collections to render the built environment at multiple scales. Altogether, the Keweenaw Time Traveler's combination of digital and public humanities is facilitating important community-engaged American studies work.

**Notes**

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