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**Using Multiple Strategies to Find Connections in Digital Archives: Making Sense of Historical Data**

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RICHES Mosaic InterfaceTM (RICHES MI; https://richesmi.cah.ucf.edu) is the interactive and innovative digital platform for the Regional Initiative for Collecting the History, Experiences, and Stories (RICHES™) of Central Florida, an interdisciplinary project housed in the History Department at the University of Central Florida in Orlando. The mission of RICHES MI is to enable users to **search** the database using natural language, tags, topics, and categories to maximize their search results; **analyze** the results of their search using the ‘Connections’ module to show the relationship between the returned item and other items in the digital archive using a RICHES™-developed algorithm; **visualize** results through digital exhibits, map overlays, and visualizations, and **learn** regional history and historical methods as teachers and students use the RICHES™-produced digital modules and source sets. Combining multiple search and analytical tools in an interactive database offers a more effective approach to historical analysis and more closely approximates the process that historians traditionally use in research projects.

As historians moved into digitization of archival collections, the initial excitement of having ready access to rare documents and images took precedence over search and analysis problems that also accompanied this undertaking. Recent conference presentations and white papers demonstrate acknowledgement of these problems and advance solutions that call for greater collaboration between historians and archivists to write more detailed metadata and offer textual analysis tools for understanding larger datasets. A 2011 National Endowment for the Humanities–funded project on changing research practices among historians called for increased digitization of archival sources, the creation of new tools for interactive use of digital sources, and the development of capabilities for connecting smaller archives to larger repositories (Rutner and Schonfeld, 2012). In a discussion on digital history published in the *Journal of American History*, Daniel Cohen predicted that the next iteration of scholarship would include ‘methods like collaborative filtering and recommendation systems’ (Cohen et al., 2008). Historians have followed the lead of digital literature scholars in the utilization of data mining and text analysis tools (Nelson et al., 2012), but we believe that historians need to view the results of such tools in context with other documents in order to gain insight into their broader meaning.

RICHES MI addresses a number of issues previously raised by digital historians and moves into the realm of analysis through the Connections tool. Still in its early stages of development, Connections intersects with scholarship on sensemaking that is most frequently associated with intelligence analysis and journalism (Pirolli and Card 2005; Pirolli and Russell, 2011). In the model advanced by Pirolli and Card, ‘The sensemaking process is organized into two major loops of activities . . . a foraging loop . . . [and] a sensemaking loop’. Our system seeks to address some of these challenges posed by the search for relationships between data and apply leverage to some key points of the sensemaking processes.

Designed and developed by an interdisciplinary team of historians and computer scientists, RICHES MI was constructed using several open-source programs, including Omeka, Google Maps, and MALLET (topic modeling). Plugins that permit users to contribute to the database and that enable the mapping of multiple sites for a single item were added. The Connections tool (which can be used in the Search and in the Bookbag) provides users with a tree diagram of related items and enables them to visualize the connections by time, location, tags, and topics. Finally, users can save selected items to a Bookbag, where they can organize the items into folders and annotate them. By following a well-known sensemaking process, our system supports digital research that more closely replicates the archival experience across multiple collections and large datasets.

**References**

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