Digging into Archaeological Data

The explosion of online, open access collections of ancient texts and artifacts, along with the secondary literature surrounding them, has transformed the speed and manner in which scholars of the ancient world perform their research. Among the various types of electronic resources for the study of the ancient world, open access collections of primary archaeological data—for example, the Archaeology Data Service (http://archaeologydataservice.ac.uk/) and the Archaeobotanical Database (http://www.cumin.de/archaeobotany)—are a particular boon for researchers, especially those for whom annual fieldwork may not always be possible, in that these collections bring large quantities of raw data directly to the researchers’ fingertips.

With more and more scholars sharing quantities of raw excavation data in large-scale e-repositories, the amount of data available for cross-site, cross-cultural, diachronic, and high-performance computing research continues to grow. Perhaps more significant is that this data is now accessible wherever an Internet connection is available. Field archaeologists can search online for comparable material at the moment that a feature or artifact emerges; instructors and students alike can demonstrate the research value of such repositories in the classroom and at virtual or physical conferences; and scholars can perform in-depth research in the comfort of a home or university office or even on-the-go, without the need to sift through dusty field notebooks or drawers of “small finds” that have been relegated to off-site storage. Multi-institutional and multinational projects such as Open Context (http://opencontext.org/about/) or the Temple Mount Sifting Project (http://www.echad.info/uifinds/)—are a particular boon for researchers, especially those for whom annual fieldwork may not always be possible, in that these collections bring large quantities of raw data directly to the researchers’ fingertips.

Archaeological data in such repositories is massaged to facilitate searching and thus requires expert curation, management, and preservation. However, such data should—and typically does—retain the better part of its “raw,” idiosyncratic nature. Users should be able to read notebook entries or item descriptions provided by the excavators, click through digital images of excavation units and finds, and visualize the site through contour maps, digital photographs, or GoogleMaps without major interventions from a curator or digital librarian. As more data enters these repositories (or a single repository of the future), one can imagine the rich output that will result: studies in long-distance trade and migration and cross-cultural investigations of specific technologies or materials, for example, will become even more richly informed than they are today. Historic data also has a place in these repositories. The list of densely populated site-specific or individual-specific archives—such as the Giza Archives (http://www.gizapyramids.org/code/emuseum.asp) or the Roland de Mecquenem Archives de Suse (http://www.mom.fr/mequenem/)—is ever-growing, yet at the moment these collections are frustratingly diverse, making the promise of federated searching so very exhilarating.

Aggregated archaeological data sets, like their sister collections of primary and secondary textual material, deserve the kind of large-scale, long-term support envisioned by Charles Henry in his EDUCATION REVIEW E-Content column of earlier this year, so that archaeological and related raw data—such as maps, plans, and satellite imagery; personal diaries and correspondence; and even original clothing, tools, and ephemera from past excavations—can be gathered, maintained, regularized, and disseminated on a wide scale, freeing the data from institutional (and individual) archives and hard drives and enabling the next generation of researchers to mine it for all it is worth. One need only peruse the programs of recent conferences such as the annual meetings of the Society for American Archaeology (SAA) or the Archaeological Institute of America (AIA) to see examples of how digging into quantities of archaeological data leads to new and deeper understandings of our collective human heritage.

Global aggregation of archaeological data holds not only untold benefits for research and teaching but also manifold opportunities to involve nascent and seasoned researchers in its development and maintenance. Numerous archaeological and related web portals have developed ways to capture and display users’ expertise as a means of augmenting the raw data presented. For example, the Temple Mount Sifting Project recently launched an Unidentified Finds Research Forum (http://www.echad.info/uifinds/), calling on users to publicly comment on digital photographs of as-yet-unidentified small
finds from the excavations. The comments posted often spur dialogue between excavator and commenter, serving not only as scholarly discussions in and of themselves but also as a visual display of the scholarly engagement process, something that is equally illuminating. One can easily imagine implementing such user-driven participation in a massive database of archaeological data. Mining the comments alone might spawn a thesis for a future anthropologist, science historian, computer scientist, or computational linguist.

At the moment, there is no one institution or cooperation that has assumed the role of amassing, curating, disseminating, and preserving the world’s archaeological heritage. But whoever the final steward or stewards of this data may be, academic libraries will want to play a major role. After all, as James Neal sagely observed in his recent E-Content column, the “multiple personalities” of academic libraries will persist: we will be legacy, infrastructure, repository, portal, enterprise, and public interest—a suite of personalities that might be applied just as easily to archaeologists.

Notes

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