

Alessandra Caravale, *Le banche dati archeologiche. Articolazione e formalizzazione delle conoscenze*. Firenze: All'Insegna del Giglio, 2022 | Book Review

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Over the course of three chapters, the volume analyzes a rich corpus of archaeological and museological projects, exploring the potential of digital databases for data analysis, dissemination, and preservation. Its rigorous and meticulous approach succeeds in avoiding excessive use of technical terms, making it accessible even to non-specialist audiences. Overall, the text is clear and fluid, serving as a valuable resource to a wide range of readers.

The first chapter provides an overview on a selection of projects discussing one of the most representative material categories in archaeology: pottery. The author uses these case studies to emphasize pioneering projects in the field, highlighting the challenges encountered in the design, formalization, and standardization of datasets. These efforts laid the groundwork for critical discussions on the foundational principles of digital humanities, showcasing how the process not only redefined classification methods but also fostered the development of new interpretative approaches to archaeological data. In closure of the chapter recent applications are explored: digital corpora, which go beyond simple consultations to facilitate classification, identification, and analysis of new material.

The second chapter delves into the role of databases in the historical evolution of archaeological computer science, examining their impact and development through the lens of projects and research published in the journal *Archeologia e Calcolatori*. This chapter is structured around



three main themes: contributions from French scholarship, the challenges and opportunities brought by the advent of the web, and projects developed by the Institute of Heritage Science (ISPC) of the Italian National Research Council (CNR).

Building on the concepts introduced in the first chapter, a more detailed analysis of critical contemporary issues is provided here, such as the need for interoperable digital infrastructures and the establishment of standards that would ensure fruitful communication between databases. These aspects are presented as pivotal for the advancement of Open Science, enabling new forms of collaboration and data access. Of particular interest is the third section, which explores challenges and opportunities posed by the proliferation of web technologies, introducing more recent concepts such as spatial databases and semantic web. These tools have significantly enhanced data dissemination and sharing within archaeological databases over the past decades. In closure of the chapter, an appendix by S. Fiorino adopts a practical perspective by providing a concrete example of using an open-source CMS like DRUPAL. This system is presented as an effective tool for managing and disseminating data from museum and bibliographic databases.

The third chapter addresses the theme of cataloging archaeological heritage, examining its historical evolution through a comparative analysis of the experiences of three different national administrations. The author emphasizes the importance of databases for the management, protection, and valorization of cultural heritage by state entities. The chapter begins with the pioneering studies conducted in the United States during the 1970s, with particular attention to the work of Robert G. Chenhall, before moving to the early adoption of these systems in Europe. Of particular value is the discussion on past attempts—some more successful than others—to standardize and catalog Italian cultural and archaeological heritage. This section offers a clear perspective on how institutions have approached these challenges and continue to do so, making it particularly useful for those unfamiliar with these initiatives, whether they aim to engage with them or merely consult their outputs. In this regard, the contribution of the Central Institute for Cataloguing and Documentation (ICCD) and the figure of Oreste Ferrari are highlighted. Once again, the case-study allows the author to highlight the need the necessity for standardization to overcome fragmentation in data management and integrate various types of information (textual, graphic, and geographic) into a single interoperable platform. Similarly relevant is the discussion about the benefits of open-source technologies and the creation of online systems that enable broader and more immediate access to data, facilitating information sharing among experts and institutions.

Concluding the chapter (and the book), the author reflects on future perspectives while underscoring how computerized cataloging, supported by advancements in digital technologies and the development of Open Science, constitutes a fundamental tool for the integrated and sustainable management of archaeological heritage.