

Technology and the Historian: Transformations in the Digital Age. Adam Crymble. Urbana: University of Illinois Press, 2021. xii + 249 pp. \$19.95. eBook ISBN: 9780252052606.

This book unfolds a history of technology's significant but long-underestimated impact on the discipline of history since about the 1950s. This history outlines the driving force of computer technology for the historical profession through five topics, each one in a chapter that follows a chronological order: historical research, the archive, the classroom, the self-learning system, and scholarly communication channels. Given Dr. Adam Crymble's own research experience in digital humanities and migration history in England, the scope of his account is mostly limited to the United Kingdom and North America. Crymble provides a detailed account of the different ways in which historians, in the face of shocks and opportunities presented by the "age of the computer" (10) starting in the mid-twentieth century, have used technology to facilitate their own and others' research and the discipline of history. Revisiting this history between historians and technology, this innovative and perspicacious study will be of relevance to both historians and digital humanities scholars.

The author offers a "distinct historical narrative" of the term "digital history" (14). This is mainly because, on the one hand, digital humanities scholars prefer to talk only about the present and future of how technology can help in their fields. On the other hand, although "digital humanities" is a term frequently referred to by some commentators in the twenty-first century, this field is too broad to distinguish those various methods and projects that are all covered under it as long as they are self-described as "digital." To clarify the concept of "digital history," the author suggests that instead of giving a definition of it, it is necessary for historians to separate practices from what we call "digital humanities" that are subordinate to or closely related to the discipline of history, and then to give those practices a historiographical framework. This study has successfully accomplished such tasks. The book stresses the application of new technologies to traditional disciplines as a nascent research direction, which will stimulate future studies in a similar perspective.

Claiming that research, collection management, teaching, learning, and communicating are the five core areas of the historians' activities, this book's organized structure weaves together the stories between technology and historians in each of these areas, so that they reflect a holistic picture of the development of the discipline over the last half-century. Chapter One focuses on how historical research has been linked to computing from the mid-1950s on. The author traces two independent threads of development which can both be regarded as the prototype of "digital history" research that began in 1949 and lasted for decades. These are the Quantitative History movement, enlightened by Frank Owsley's *Plain Folk of the South* and promoted by later economic and social historians, and the Humanities Computing movement, which originated from a linguistic project, *Index Thomisticus*, by Robert Busa. Although the author takes the present "digital history" as the product of both movements combined (45), the rise of mass digitization in the 1990s and early 2000s marks the time when the followers of Humanities Computing took the lead in the development of "digital history." The author then discusses the mass digitization wave

and its profound influence on the archive in Chapter Two. Crymble observes that the establishment of reenvisioned archives, which encompasses the collection of primary sources from diverse origins through computer technologies, alongside the digitization of texts, can be traced back to the 1970s. This fruitful process has culminated in different manifestations on both sides of the Atlantic. In Chapter Three, the digitization of history classrooms also demonstrates divergences between the United Kingdom and North America. Crymble does not specifically delineate the distinct models in these regions. Instead, the chapter provides a chronological summary of the four waves of digitization in history classrooms. Nevertheless, it is evident from this account that these waves have emerged in response to varying academic traditions and social contexts across different regions.

As the first three chapters demonstrate that the main works of historians in recent decades are often inseparable from the use of computers, the history of how historians have taught themselves relevant technologies from the 1970s onwards, which is described in Chapter Four, is inextricably linked with the underpinnings in those preceding chapters. As a founding editor of *Programming Historian*, a website that aims to teach historians from around the world to adopt programming skills in their research, Crymble introduces the origin, approach (how it helps historians learn to program), and development process of this project. This sensitivity to online classrooms and communication leads him in Chapter Five to present the blog as a site of scholarly communication in the discipline of history under the influence of computer technology, recounting how it came into historians' careers and lives, and challenged or changed the status quo of the history academic community.

The specific cases illustrated and analyzed in this work indicate that there is not one coherent area in the discipline of history that can be named "digital history" as the practices it plausibly includes are diffused and distinct. Hence, Crymble raises his most important argument in this solid study — the inefficacy of the term "digital history." This book explores how computer technology has brought about a transformation in the career of historians, and the impact of "digital" or the technology it refers to on historiography is all-encompassing. The author hopes that history practitioners can adopt a specific and precise vocabulary when referring to digital methods and tools at a time when many branches of this discipline require the participation of computer technology. To this end, he includes a glossary at the end of the book (175-182) with the definitions or redefinitions of various concepts and practices that were formerly part of "digital history" from a perspective of a historian. Given that the selection of the vocabulary and the definitions of the terms are personal, it may not be perfect, but it shows a helpful approach to deconstructing "digital history."

Crymble admits that his observations of stories between computer technology and historians are geographically limited; however, he emphasizes the necessity of negotiation and collaboration between cultures since there is fundamental regional variation in the involvement of computers in the discipline of history. Under such circumstances, can this work inspire narratives of relevant histories in other regions? How can the history of scholars working with computers in non-Anglo-Saxon or even non-European cultures be written? This introduces another pertinent issue: in regions such as the United Kingdom and the United States, which are located at the center of academic discourse in many humanities disciplines, there are not only scholars who use computers

to study the history of their own culture, but also practitioners who help “digitalize” the history of other non-English cultures. If a historian, who is interested in pre-modern Chinese history, needed to write a book on the history of the impact of computer technology in this field, it would undoubtedly involve considerable efforts and achievements of East Asian experts based in Western institutions since the last century. For instance, an influential project for insiders of Chinese history, the China Biographical Database (CBDB), is based on a relational database of Song Dynasty (960–1279) China’s officials created by Robert M. Hartwell at University of Pennsylvania in the 1990s. Explorations in digital research practices like these, which geographically fall within the scope of the author but are based on non-English sources, are rarely discussed in this book. Obviously, the negotiation and collaboration proposed by him have already existed for decades in many cultures with their histories of the technology and the historian waiting to be written.

Crymble’s work provides an insightful historiographical examination of how computer technology has been implicated in various practices pertaining to the field of history. This book merits attention from students, researchers, and practitioners of the historical profession, as it serves as a salient reminder that technology has long pervaded, transformed, and continually shaped every dimension of our discipline.

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