of a reader who is concerned with the profound pro-Roman-Catholic orientation of modern Protestantism.

The style of writing is adequate for a scientific, as well as a rather general readership. The many footnotes clearly differentiate between the main lines of reasoning (in the main text) and minor thoughts or marginal discussions (in the footnotes). The given sources assist the reader in finding more literature on subjects of interest and invite one to validate the arguments made in each chapter in light of original Reformation documents.

Overall, this book is a very commendable work, covering the most important topics of Adventist doctrinal issues and granting deeper insights into some rather unknown facets of Luther's theology (e.g., Luther's understanding of predestination and his closeness to Calvin's perception; Luther and images or music).

Seminar Schloss Bogenhofen   René Gehring
St. Peter/Hart, Austria

Clivaz, Claire, Paul Dilley, and David Hamidović, eds. *Ancient Worlds in Digital Culture*. Digital Biblical Studies 1. Leiden: Brill, 2016. x + 255 pp. Hardcover. USD 125.00.

Ancient Worlds in Digital Culture provides helpful initial exposure to anyone seeking to be introduced to the challenges of Digital Humanities (DH). Those who expect a systematic guide that leads the reader through the methodology of DH, their challenges, and research outcomes will be disappointed. However, the book seeks to make available the different voices of different DH researchers. It covers a broad scope of praxis, from biblical scholarship to imaging technology, liturgy studies to general DH methodology. The introduction is excellent—a well-written description of the basic challenges DH currently face from established scholarly disciplines. The author introduces the reader to the issue of DH being nothing more than a marginal sécant (1). The commonly held attitude within academia towards DH being neither well-versed in the field of Computer Sciences, nor in the respective fields of humanities, however, indicates a misunderstanding of DH and a misconception of the core issues that constitute the fabric of the history of humanities (see Rens Bod, *A New History of the Humanities: The Search for Principles and Patterns from Antiquity to the Present* [Oxford: Oxford University Press, 2014]). The author explains that, "What is most important, to my mind, is not the tools themselves but the human analysis of the potentiality of the tools according to the proposed research. Otherwise, the risk is to have scholars considering themselves as DHers just because they use new tools" (4).

The first chapter begins with an overview on the origins, issues, and fields where DH are active. This beginning chapter is one of the most helpful chapters for readers who want to better understand the phenomenon of DH and seek a framework that allows them to conceptualize DH as a tool, and as part of a new culture intending to enrich the humanities.

The second chapter describes the shift from analog texts to digital texts, however, the focus is much more on the digitization of analog media and the benefits that come with it. The author highlights that philological analysis can now be carried out with the benefits of zooming into the pixels of ancient fabric, performing searches, and comparing a variety of ancient texts easily, on one computer screen. These advantages allow for better production of critical *apparati*. Surprisingly absent in this section is a focus on digital research that enables asking different type of questions—a feature only possible through DH. There is no doubt that databases of ancient manuscripts allow us to extrapolate data and ask old questions with new tools, allowing for better insights and potentially helping to verify or falsify different theories. The added value of DH, then, lies in its development of a digital culture that enables community-annotations, thus enhancing the democratic dimension of scholarship.

The third chapter shares how DH allow us to re-conceptualize NT textual criticism. The real difference is that all the data available is no longer affected by traditional "blind spots" (37–38, the author refers to the forgotten $\mathfrak{P}^{126}$ and its consequences), which limit the study of textual archetypes and the classification of what is to be regarded as canonical (cf. 43, 45, 49). After a discussion of Michel Foucault's contribution to textual interpretation, the author points out that "One of the most important gifts of digital culture is to make us more conscious of the presence of the 'printed culture glasses' with which we are reading all the data of Antiquity" (51). According to him, the concept of textual categories (e.g., canonical vs. apocryphal) no longer "matter[s] in a digital framework" (51, 53).

In chapter four, the reader will find an interesting test case in which the "rubber" of the more abstract reflections of chapter three "meets the road." Most importantly, the chapter focuses on the central questions that would have to be answered in order for DH to have a legitimate role within academia. First, do DH "have . . . a superficial or deep impact on research?"; second, are we just speeding up the process of analog research with the integration of DH or are we, in fact, changing methods and enabling new result categories (60)? The author seeks to answer these questions by reflection on the methods and results of the syriaca.org project (The Syriac Reference Portal). There is no doubt that widespread availability has been one of the great advantages made possible through DH, however, "more availability," both in the sense of more materials and in the sense of "more accessibility," has increased the problem of "finding relevant information" (61). Making more data available, then, does not yet mean that DH has improved the quality of research outcomes.

In chapter five, a transition happens from DH and their relations to biblical studies to ancient Greek literature studies. The analogy is drawn between the production of the great Homeric epics and the contributions of DH for the modern world seeking retrieving insights for the modern art of data production from the ancient art of data collection (cf. 102–103). The description of, and reflection on, the principle of economy that is worked out by the art of Greek poetry is the most helpful part here. In contrast to

the modern need for footnoting, "with a more complex and more performant structure than is sometimes recognized, the language of the singers of ancient Greece was a tool of appropriation and or re-appropriation but it also limited the accumulation of redundant knowledge. There was no referencing of the song whose information was absorbed and surpassed" (105). Central here is the limitation of redundant knowledge accumulation, something that is, per definition, at odds with the mechanisms of DH. The pressing question for the relevance of DH is, how far will search engines be able to filter out the noise of redundancy and bring the researcher closer to distinct and qualitative data?

With chapter six, the book returns to biblical studies (NT) and revisits some of the crucial questions and observations of chapter three. Obviously, NT studies have been dominated by matters of textual criticism. The authors show how DH have allowed the Institut für neutestamentliche Textforschung (Münster), the International Greek New Testament Project, and the Institut für Septuaginta- und biblische Textforschung (Wuppertal) to collaborate in much more efficient ways (111, 115). Those who have visited and consulted the New Testament Virtual Manuscript Room can witness the truly meaningful benefits for NT scholars around the world. Chapter six further explains how DH have allowed us to develop a digital library that comes with strong collaboration features and the ability to store annotations. From a research-method perspective, the development of algorithms helps to take over some of the analytic processes of the human eye, particularly when manuscripts are to be compared for the production of a critical apparatus (114, 118–119). A particularly appealing part of the program is that the researcher is not forced to accept all the assumptions of the institutions that produce the algorithms (which inform, to a great extent, the content of the critical apparatus). Rather, one is allowed to manipulate the data according to one's own organizing principle, thus verifying or falsifying one's own text-critical theories (120, 124).

Chapter seven continues in the field of NT studies, but shows how DH have enabled the scholar to digitize and visualize maps of St Paul's journeys. This allows for quicker access to the differences within cartography. The focus here is much more on visualization for pedagogical purposes. The actual factor of digitization for reshaping the fundamental ways in which research is carried out is not really addressed. This is also because digitization of cartography is not likely to influence methods and outcomes as flexible algorithms in text-critical studies.

Chapter eight provides an overview of the Thesaurus Gregorianus DH project. The project aims at providing a synopsis of all major Gregorian antiphones, melody, and lyric manuscripts. The synopsis includes deep annotations containing information about Bible allusions, quotations, lemmatical coding, and more. As such, it offers a rich resource for different disciplines, ranging from musicology, literature, theology, liturgy, textual criticism, and culture studies (169).

The most tech savvy part of the book is found in chapter nine. The author discusses modern imaging technologies and their benefit for DH. In doing so, he reflects particularly on Reflectance Transformation Imaging (RTI) and

how this technology has majorly improved the quality of photos of original written artifacts. For DH researchers the most interesting section is likely where WebRTI and Linked Open Data are discussed (191–193). One thing is to offer better quality images of original ancient texts; another is to make these images available for the scholarly community without harming the rights of libraries and the institutions that host the artifacts (191).

In chapter ten, the reader will be exposed to the typical problems one faces when digitally categorizing and digitizing ancient manuscripts. The samples discussed are the Qumran scrolls and how they relate to the *Community Rule*. How do physical criteria (text material, cave number, etc.) and interpretative criteria (textual clusters, textual variants, versions, editions, etc.) relate to each other? (201–202) It becomes clear that a traditional analog publication is unable to deliver the nuanced level of information that scholars have brought to the fore. Only a sophisticated digital publication is adequate and can represent, in a systematic way, the findings of scholarship (e.g., 207–209).

How does a digital culture influence the public reception of scholarly work? This is the core question of chapter eleven. Although the question is not asked initially, the chapter concludes by inquiring about the changed dynamics between web availability of primary sources and their use among those who embrace pseudo-science. The discussion of the Islamic Tahrif is what leads to this discussion, a discipline that seeks to falsify Christian doctrine by reflecting its incoherence with the Christian Bible-Canon, and—as a later development—aims to show the intrinsic textual fallacies of the biblical canon, similar to higher textual-criticism. After discussing the "original" Tahrif, the author proceeds by showing how the Tahrif discipline developed in the digital age, and how it helped pseudo-scholarship emerge (221). This chapter very concretely illustrates the potential dangers of DH.

The final chapter (twelve) illustrates how central rabbinic resources like the Midrash, the Talmud, and the Tosefta have benefited from DH. The author describes the movement from ancient manuscripts to print editions, and the movement from print edition to digitization. The challenges described are similar, if not identical, to the challenges described in earlier chapters. This illustrates that, although DH exercises take place in different fields of research, DH face similar problems.

While *Ancient World in Digital Culture* does not answer, nor is intended to answer, the central questions that gather around DH practices, it does allow for an organic experience of, and exposure to, the different scholarly fields that benefit from DH, demonstrating its challenges and blessings. The quality of the book, therefore, lies much more in providing a diverse collection of snapshots of DH practices rather than a didactic design that teaches the reader principles, relations to the different sciences of humanities, and DH processes. A book accomplishing the latter is still missing and much needed, particularly after having read *Ancient Worlds in Digital Culture*.

Andrews University   Oliver Glanz