as well as in cultural and social history. In addition to the usual index entries (names of persons, titles and positions, geographical locations, book titles, etc.) it also has a series of entries on such diverse subjects as food (vegetables, grains, spices), types of cloth and garments, rugs, shoes, and other useful categories that one does not often see, i.e., economic terms, medical terms, and remedies. The index can also be helpful in the identification of particular individuals. Scholars who have used al-Jabartī know that it is difficult to follow an individual emir as his title or position changes in the course of the chronicle. The index helps to answer some of these problems because it groups these different appellations together under one entry. For instance, the entry for the emir ʿAbd al-Raḥmān Katkhudā al-Qāzdughlī, one of the most important figures of the eighteenth century, includes under his name some of his earlier titles and provides some of the variations with which he is referred to (ʿAbd al-Raḥmān Katkhudā; ʿAbd al-Raḥmān Jāwīsh). One particularly interesting entry in the index is one for the author. In his chronicle al-Jabartī referred to himself, his family, his acquaintances, and his students. This autobiographical material thus collected together will be especially useful for anyone who is interested in reconstructing al-Jabartī's life. It can also be useful for the insights it could shed on the more personal side of a great *ʿālim*. Finally, some of the entries also make reference to major secondary works on a particular entry. In short, it is a very developed index that can be used in multiple ways.

This new edition of *ʿAjā'ib al-āthār* has two disadvantages. To begin with, its size—unlike the Perlmann and Philipp translation of 1994, which used thin paper and was consequently of a reasonable size, the present publication is not comfortable to handle due to its large size and weight. Secondly, its price (with postage and handling it comes to a total of $570) might limit the number of individuals who can purchase it. Nevertheless, this new edition will take its place in the canon as an indispensible tool for students and scholars of the eighteenth and early nineteenth centuries.

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The Digital Humanities and Islamic and Middle Eastern Studies. Edited by ELIAS MUHANNA. Berlin: DE GRUYTER, 2016. Pp. vi + 271. $140, £74.99, €99.95.

Under review is an edited collection on how to perform computer-supported research in Islamic Studies. Such computing technology can be used for "digitization, publication, and interpretation" (p. 4), and in the last two decades this has been done on such a scale that we can no longer deny the transformative effect it has on our work; the fields of Islamic Studies and Middle East Studies have entered the Digital Age. Elias Muhanna, the editor, sums up his mission statement as follows: "This transformation in the technique and approach of scholarship prompts us to consider the lines of inquiry opened by these new resources, just as it asks the question of what methodological instincts and practices may be eroded by the rise of computational paradigms" (p. 2). Since 2013, Muhanna has given shape to this prompt through his Digital Islamic Humanities Project. Out of the project have come three conferences; the book under review functions as the proceedings of the first. Unlike other proceedings, this volume is not a collection of disconnected contributions; rather the chapters form a fairly comprehensive treatment of the possibilities of using (and abusing) computing technology in Islamic Studies. I would even argue that had it not been for the steep price, this book could be used in the classroom, as virtually all chapters assume no previous experience and feature many full-color illustrations. In this review, then, I shall discuss this book on its merits as an introduction to Digital Humanities (DH) for scholars and students of Islamic Studies.

The book is divided into two parts: The first five and the last chapter are of a more conceptual and theoretical nature, while chapters six through ten are all showcases of different kinds of technology, detailing how they can be executed and showing what kind of results may be obtained.

The first chapter, by Muhanna himself, functions as an introduction. Muhanna demonstrates how DH is something many of us are already engaging with to some extent in our daily work without

realizing it. Learning more about DH is therefore to learn more about our own practice and to understand both the benefits of expanding it and the pitfalls if wrongly applied.

Travis Zadeh discusses in chapter two a number of theoretical issues concerning the use of digital texts, and at the same time gives an overview of what resources are available and where on the Internet to get them. The chapter is verbose but still highly recommended. Zadeh's main point is that digital versions of texts and the way we operate them do not supplant our older methods. For the sake of reproducibility, the cornerstone of good scholarship, references need to be made to immutable and clearly distinguishable sources. Digital files swerve around the Internet and sometimes disappear altogether, it is often not made clear on what they are based, and their digital nature makes them inherently prone to change. Since printed works perform far better in these regards, they will remain the point of reference. Note that on p. 22 it should read Archive.org, not Archive.com, and on p. 52 it should read Yazmalar (and yazmalar.gov.tr), not Yazmlar.

If Zadeh wishes to use new technology to facilitate an older methodology, Dagmar Riedel argues for the opposite in chapter three. Her main argument is best summed up in the last part of the final sentence: "employing DH tools for humanities and social sciences research is different from digitizing material artifacts in order to facilitate access to their literary content" (p. 88). Riedel thinks we are too often mere consumers of digital surrogates, interested in the textual content and not per se in the preservation and development of digital formats—as Till Grallert puts it in a later chapter: "[in] the field of Middle East studies we encounter individuals with limited access to resources toiling away in isolation from other researchers as the most common case" (p. 176). This makes for a disorganized way of digitization, preservation, and retrieval of files and hence the pessimistic cautionary title of Riedel's chapter: "Of Making Many Copies There is No End." Riedel therefore calls for more "Digital Humanists" in Islamic Studies. With ample references to theoretical reflections and DH examples this chapter is a good place to start for anybody interested in taking her up on that.

Chip Rossetti's chapter, in turn, gives us an insider's account of the Library of Arabic Literature series, of facing-page bilingual books. As such, the chapter is probably more interesting for publishers than for students and scholars. Its main argument is that for the sake of flexibility and longevity, texts are best stored in an unformatted, platform-independent way. It offers a gentle introduction to XML, Extensible Markup Language, which is a far better way to store a text than, for example, as a Microsoft Word (.doc) file.

The only chapter I would advise against reading is the fifth, which comes from Nadia Yaqub, who wishes to write about how to use Facebook Groups as sources for research. This is an important topic, because as people around the world start to use digital platforms more often, field research will have to follow suit and monitor such platforms. Engaging such platforms comes with challenges different from field research in the real world and thinking about this deserves space in a volume as this one. However, it is striking that pages 106 to 109 are verbatim copies of passages from a different article Yaqub wrote, without any indication (N. Yaqub, "The Afterlife of Violent Images," in *Middle East Journal of Culture and Communication* 8 [2015]: 327–54, where pp. 334–35 = 106–107; 336 = 107; 335 = 108; 337 = 108; and 330–31 = 108–109). Further examination of the article reveals that none of the photos taken from these Facebook Groups, which she included there, bears a copyright notice. She does say that the photographer is unknown, but remains silent on the uploader and whether consent was given to further distribute these photos. This is striking as she admits that these photos were "intended for private viewings and sharing among friends and family" (Yaqub, "Afterlife of Violent Images," 337), and in her chapter under review she acknowledges that these photos on the Facebook Groups "elicit a flood of painful memories and emotions" (p. 110). One would therefore imagine that scholars need to handle such materials carefully, and take care of both the legal and moral rights of reproducing these photos in scholarly publications. It seems to me that Yaqub has not done this. In addition to having reproduced photos freely, she strips Facebook users of their agency in other ways. Responses to obituaries are characterized as "formulaic expressions" that "clutter the page" (p. 105), and when she cites a few statements people made (p. 111), she does not say who they are. The one time that she does mention someone by name, the person is granted a total of six words (p. 113). This particular quote also appears in her article, but slightly altered (p. 352), leaving us guessing what exactly his words were. Perhaps

Yaqub thought that she need not provide credits as she writes that "The content of a Facebook page is 'owned' by Facebook, and researchers are required by its Terms of Use to obtain permission from the company before harvesting or mining data" (p. 112). Both claims are patently false. Facebook's *Statement of Rights and Responsibilities* states that "You own all of the content and information you post on Facebook" (https://www.facebook.com/legal/terms, accessed July 8, 2016). As such, it is up to the researchers themselves to negotiate access to this content. For transparency, I think it is a good idea to report on this negotiation in a publication.

From here we move on to the more technical chapters, which showcase different techniques, their application, and their results. Maxim Romanov's chapter six is an excellent start for this. In the first few pages he specifies what a "model" is and how a quantitative approach can support and sometimes supplant a qualitative approach. "Working with big data," Romanov writes, "one cannot maintain the nuanced complexity of details that is the hallmark of close reading" (p. 118). Instead, by machine collection of certain words or phrases, and putting those numbers together in a useful manner in a model, a larger trend can be uncovered. Romanov shows how this is done with an example, namely, an examination of social transformations among Islamic elites as can be scraped together from al-Dhahabī's *Taʾrīkh al-islām*. From here, things get complicated pretty fast and the reader is advised to move slowly through the article, comparing with the many illustrations what Romanov is doing and how effective it is. He describes his strategy and the result, not the technical implementation of it, and shows things that are successful and things that are not so successful. The fact that some of his main findings cohere with what has been argued for before in the academic literature proves that his models are working and gives credence to his more novel findings.

Alex Brey offers two DH contributions specific to manuscript studies. First, he illustrates that with a trick accomplished with a normal digital camera, aspects of a folio can be discovered that would go unnoticed otherwise. For example, Brey finds that a partially decorated folio must have been a fully decorated page before. Since he works with a lavishly decorated Quran copy, he then performs quantitative analysis on some of the decorative elements. Using the statistics software R, he lets the computer group together sura headings according to their own structure in comparison with the single-verse markers that are present on the same folio. From this Brey concludes that the sura headings and the verse markers on the same page were made by one person, not divided up among specialists. Digging deeper, Brey constructs five groups of sura headings, suggesting five different artisans. From here, he goes even further down the rabbit hole and compares each group of sura headings against the others, in an attempt to define personal style versus accepted norm. He finds that about a quarter of the creation of any sura heading is informed by personal style, but the analysis here becomes a bit speculative; a much larger sample than one manuscript would be beneficial. Toward the end of the chapter I had the impression that Brey is speaking more to art historians than to Islamicists, making his conclusion less relevant for us.

A more accessible and hands-on chapter—number eight—comes from Till Grallert, whose concern is how to correlate terms appearing in newspapers to geographical locations. Grallert shows how to make clever use of software we are already familiar with—a reference manager—to create a database that can be easily exported as an XML file. With that established, the tag for the place name can be isolated and expanded. Grallert follows the guidelines of the Text Encoding Initiative (TEI), which makes this chapter a good introduction to that widely used standard in the humanities. Not everything can be automated, as, for example, the latitude and longitude were apparently added to the XML file by hand. The most complicated step is that from data to visualization. Grallert takes the reader step by step through his workflow, including the crucial final steps toward visualizations, making this chapter an excellent starter for anyone interested in doing something similar for the first time.

A similar step-by-step, first-time introduction is offered in chapter nine by José Haro Peralta and Peter Verkinderen, this time for using the programming language Python to manipulate texts. They start simply with instructions on installing the necessary software to write and execute Python code, and take the reader from there to show how their context-based search tool is constructed. I found myself soon enough churning out meaningful results as I deconstructed Ḥajjī Khalīfa's (d. 1657) monumental bibliography *Kashf al-ẓunūn* in an attempt to find the number of entries, the average length of each entry, the number of authors mentioned, the number of books mentioned from each century, etc. (for

a report on this on my weblog, see https://digitalorientalist.com/category/coding/). I found that only very few things are left unexplained—for example, what the expression *r´\w+´* on p. 212 means, which I had to find out for myself. I also discovered that just as there is an *open* command for opening a text file, there is also a *close* command, but this is not used in the chapter, leaving me in doubt whether to use it or not. Nonetheless, this chapter was informative enough that I was able to take my own code even beyond what Haro Peralta and Verkinderen offer, leading me to think that this chapter makes a great start for anyone interested in using computing technology to manipulate large texts.

Chapter ten takes us into the classroom. Joel Blecher details his experience of using an English translation of a biographical dictionary of early hadith transmitters with about 500 entries in an undergraduate course. "Practically," Blecher writes, "[the course] meant students undertook close readings of primary sources and critical review of secondary literature while also mining data, creating a database, and using online visualization software" (p. 233). Each student extracted relevant information from the dictionary into a web form that parsed it to a spreadsheet. Blecher reports on the challenges of such a project, most notably the need to comb through the data anew and clean everything up to make it more uniform and suitable for a computer to read. He then shows some different visualizations that his students came up with, using RAW and Palladio.

The last chapter, by Dwight Reynolds, returns to a more theoretical reflection, namely, how we can disseminate our knowledge, both to the general public and to future generations of scholars. The main point Reynolds wishes to make is that "we must constantly be planning for obsolescence and technological change" (p. 265). The most important recommendations he makes in this regard is to store our data in several different formats and to get institutions to commit not only to host our data now but also to maintain it.

This book offers a solid introduction to the application of computing technology in Islamic Studies. Two recurrent themes are that many things called "Digital Humanities" can be accomplished with software that we already use or is easy to operate, and DH is not the solution to everything. As Dwight Reynolds notes, if we are not careful "we are essentially producing highly sophisticated searches of poor quality data" (p. 253); and as Till Grallert explains, this is chiefly because quantification of cultural history "generates a dangerous sense of exactitude that obfuscates the inherent fuzziness" (p. 196).

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Literati Storytelling in Late Medieval China. By Manling Luo. Seattle: University of Washington Press, 2015. Pp. xvi + 242. $50.

The last half of the Tang Dynasty was one of the great turning points in Chinese history. The transition to the Song saw a reconfiguration of the elite, as success on the imperial examinations replaced aristocratic pedigree to become the primary criterion for government service. The great clans lost their centuries-old monopoly on power and prestige, and in their place arose the literati: scholar-statesmen from diverse backgrounds whose collective identity was defined by education, examination success, and office-holding. How did this literati class, whose dominance would endure to the end of the imperial era, conceive of itself and the world around it during the period of its ascendancy? What were the pressing concerns, desires, and anxieties of late medieval men of letters?

These are among the important questions addressed by *Literati Storytelling in Late Medieval China*, Manling Luo's original and insightful new study of late Tang narratives. Researchers from across the humanities and sciences have long stressed the crucial role of narratives in the construction of personal and communal identities. To a large extent, the stories we tell about ourselves shape who we think we are, and reveal the kinds of people we would like to be. This understanding of narrative's psychological and social functions may help explain the proliferation of stories during the late Tang, when "tales of the marvelous" (*chuanqi*), historical anecdotes, narrative poems, and "transformation texts" (*bianwen*) were produced and consumed in unprecedented quantities. Late Tang literati were not only great poets;