CLAIRE CLIVAZ, PAUL DILLEY AND DAVID HAMIDOVIĆ, *ANCIENT WORLDS IN DIGITAL CULTURE*, (DIGITAL BIBLICAL STUDIES, 1), BRILL: LEIDEN–BOSTON, 2016, X + 259 PP., ISBN 9789004322479 (PBK) – 9789004325234 (EBK)

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Ancient Worlds in Digital Culture is the first volume in a promising series dealing with the prolific field of digitalisation in studies on Antiquity, placing special emphasis on biblical research using a cross-discipline approach. Chapter 1, written by one of the volume's editors, David Hamidović, is a declaration of intent as regards the spirit of this volume, published on paper and also as one would expect, digitally, as is the endeavour of Clivaz and Dilley, co-authors of the series. In a personal tone, Hamidović sets out the state of the discussion for this new situation, which is so difficult to classify and often considered to be of lesser importance than traditional humanities or at the latter's service, even being found under the heading of 'new media' or perceived as a circumstantial trend.

From the author's point of view, this example of Crozier and Friedberg's marginal sécant (p. 1), straddling various worlds, refers not only to an emerging field at the heart of human and social sciences that is spreading like a 'black tide' (p. 7) in our times; it also refers to programmes for teaching, digitalised resources, new platforms, computer tools and methods to visualise information, data searches and extraction, codifying texts, computational linguistics, digital publishing, geospatial analyses and forensic analyses. The author considers that after decades of development, the motley collection of digital humanities (DH) can be divided into three pillars: the creation of new tools, computational analysis and the establishment of new procedures. Furthermore, he states that the most ground-breaking contributions worthy of study by DH researchers today are to be found in online platforms, the appropriation of medical and forensic techniques (luminescence and multi-spectrum images), the educational application of new kinds of technology and the possibilities opened up by advances for representing the environment in which the manuscripts being analysed were developed (ecology, geography (GIS), history and social aspects such as gender, sexuality, ethnicity, etc.). The twelve chapters that make up this volume are representative of all the trends in which humanities converge with new forms of digitalisation. Throughout them, it is clear that the researchers, with their creative, interpretive work regardless of their geographic location and funding, are at the heart of DH as a key, irreplaceable element in constructing and reconstructing human knowledge about Antiquity.

The two following chapters are written by the series's co-editors. Thus, like the initial one by Hamidović, they act as a preamble to put the remaining nine into context, which deal with much more specific matters.

In chapter 2, Dilley uses the metaphor of the Library at Alexandria to explain the process of mass digitalisation, comparing it to the Library of Babel (Borges) due to the difficulty in gaining access given the diversity and incompatibility of the schemata, databases and ontologies, and the lack of standard digitalisation protocols. The age of digitalisation implies reconsidering philology as a discipline in which the medium plays a significant role in revealing what has been hidden, marked or distorted (p. 19), as well as being an invaluable way of breathing 'life' into the manuscripts, whose historical context we can get to know, beyond their physical attributes. The philological paradigm of a sole source or ideal has changed. 'Non-canonical' manuscripts are being recovered thanks to new technologies and programming languages that enable the relationships between different texts and versions to be visualised. This chapter provides a compendium of current digitalisation projects, most notably: The Online Critical Pseudepigrapha, Coptic Scriptorium, the New Testament by the Institut für neutestamentliche Textforschung, the freely accessed Thesaurus Linguae Graecae, and the *Open Philolog Project*. The latter gives an example to follow of interplaying electronic texts with images of ancient manuscripts, secondary sources of literature and multimedia archives in which cultural material is documented.

Chapter 3, by Clivaz, is perfectly structured. It addresses the fact that digitalisation has erased the dividing lines between literary genres and is fostering a reinterpretation of writing categories by breaking up the dichotomy between 'the expression of the ideas and the written support of this expression' (p. 38). As an example of this, she introduces Bovon's concept about the existence of a third genre that is 'useful for the soul', which goes beyond the comparison between canonical and apocryphal texts in textual critique of the Bible. This new system of classification, which accounts for texts representing the people's freedom of expression about God as a literature of resistance, is present in new digitalisation projects in which the borders between Christian and non-Christian texts are erased. By way of example, the Center for the Study of the New Testament Manuscripts in Texas includes the Grefory-Aland list together with the texts from the Septuaginta Bible and the apocryphal Christian texts; whereas the Paratexts of the Bible aims to digitalise 2,500 manuscripts from the New and Old Testaments in Ancient Greece and make them accessible (by using the servers of the Institut de recherche et d'histoire des texts and the Pinakes tool, it includes texts from a great variety of genres including pre-Christian and non-Christian texts); and the SAWS HERA presents corpora in Arabic, Arabic-Spanish, Latin and Ancient Greek.

Chapters 4 to 12 give examples of digitalisation in the twentieth century applied especially to studies of the Bible, except for chapter 5, 'Surfing on Penelope's Web' (Bouvier), which deals with *The Odyssey*.

The fourth chapter, by Michelson, explains the good points about the *Syriaca.org* platform at a moment in history in which studies on Syriac are on the rise. The author agrees with Dilley on the radical shift brought about by going from a situation of difficulty in accessing materials in studies on Christianity to one of overabundance in which he identifies economic inequalities between researchers in different parts of the world.

Syriaca.org is a collaborative project in which the users upload resources for studying Syriac. It is based on XML language (which enables the size of the source texts to be increased) and LOD (via which humanistic interpretative labels are included). The use of identifiers to connect related content via hyperlinks, coupled with free access for users, helps democratise the construction of knowledge and access to it. The platform will share its data with the Linked Ancient World Data Institute of New York and the Medieval Electronic Scholarly Alliance of North Carolina State University. This work is highly recommended, not only because of the website under study but also because of the comprehensive panorama of resources and databases that all experts in Syriac should know, some of which we shall highlight here as being the most representative of a digital nature: A Comprehensive Bibliography on Syriac Christianity; the Comprehensive Aramaic Lexicon; the E-ktobe, Peshitta, Syriac and Syrian Electronic Corpus projects; and the Syriac Studies Reference Library.

As mentioned above, the fifth chapter by Bouvier takes a more philosophical and less informative approach. The author again takes up the image of the shroud woven by Penelope, as endless as the Internet, and wonders if the 'book' as the ultimate exponent of knowledge transfer in Europe, the metonym for content, is going to disappear or necessarily transform itself in this new digital age. This basis serves as a prologue to an in-depth study of Homer's Odyssey as an example of writing that has gradually mutated in its formats, and in keeping with this so have the ways it is perceived. The parallel tales remain 'interconnected' (Calypso, Penelope and Telemachus) thanks to the participation of Athena; Homer himself becomes the first critic and re-writer of The Iliad, just as happens in the 2.0 net with collaborative construction; while the sirens's song is a symbol warning of the risks of infoxication from the avalanche produced by internauts. Ancient Greece, in its pre-bibliographic phase, developed ways of economising knowledge such as using hexameters in epic language, which prevented it from accumulating. The poet's task consisted of selecting the pertinent information for the audience at a specific moment, in a continual intertextual movement of appropriation and re-appropriation. In a transcultural, transnational world, the medium again plays a significant role, conditioning the format and knowledge being conveyed, as in Classical Greece. Today we are seeking tools to connect and recover information with the ancient poet's ability to summarise as he sifted through tales for his audience.

In the sixth chapter, Houghton and Smith address the workflow and tools that have developed to draw up and maintain the *Editio Critica Maior* of the Greek New Testament with the Workplace for Collaborative Editing. The three institutions funding the project (the INTF from Münster, the International Greek New Testament Project [IGNTP] and the ISBTF) share the same software and coding schemes in the Anglo-German Workplace for Collaborative Editing, in which COLLATE software is used for creating and transcribing highly accurate facsimiles, an editor is provided to alleviate the difficulty involved in working with XML, and peer reviews are carried out on the transcriptions.

Faced with the abundance of material on the Greek New Testament, the advantage of such a tool lies in the possibilities provided by an advanced search for measuring the percentage of coincidences between the different versions of the same text that have been digitised. On the other hand, biblical researchers and reviewers can also benefit from other projects such as the digitalisation of the Center for the Study of New Manuscripts and the NT.VMR (with images and a discussion forum) and access to the *Thesaurus Linguae Graecae*.

In the seventh chapter, entitled 'Min(d)ing the Gaps: Digital Refractions of Ancient Texts', Larsen and Benzek show the Geographical Information System to be an effective tool for deconstructing ancient texts and reconstructing contexts in the religious studies classroom from a cartographic perspective. As a case study, they use an educational exercise focusing on the figure of Paul: using texts written in his name, by or about him, the students themselves 'reconstruct' his journeys with maps so as to finally represent his character and thus by extension Christianity itself. This hermeneutic, 'geotextual' approach represents a considerable shift in textual and visual paradigms, ushering in new historical and demographic approaches related to the Bible: studies on gender, migration, economics and more.

The 'Thesaurus Gregorianus' is the eighth section in *Ancient Worlds in Digital Culture*. It adds the discipline of music to the book via this online database financed by the Fritz Thyssen Foundation, which is presented as a useful cross-disciplinary source for research into medieval liturgy and music. As it is not geared towards critical analysis of the originals but towards the diversity of liturgical traditions and the historical development of the pieces, it shares the most heterogeneous postulates of the digital age in human and social sciences. The article explains the creation and structure of the database: Kainzbauer's embryonic work for personal use has been revised and completed with 3,000

musical tableaux more of the antiphons found in new writings. Textual and liturgical analyses (transcription, lemmatised concordance, biblical and liturgical indices, and search functions) are also added to the simply musical information. The database improves upon the previous ones's capacity and speed of information recovery. This work includes screenshots of the system and of the different windows a researcher may simultaneously use on their PC, thereby aiding them in reading and understanding a complex system.

In chapter 9, Hanneken describes the Integrated Spectral RTI technology applied in reading ancient manuscripts to distinguish letters and other data or indications such as fragments erased by the passage of time where there was once ink. The tool is revolutionary because it enables very delicate textures of objects such as inscriptions to be captured and visualised, while increasing the spectrum and resolution for the human eye in distinguishing colours. This technology has been applied to the reading of the *Dead Sea Scrolls* with spectacular results, since it surpasses the physical analysis. For their part, WebGL and the open standards have made it possible to link interactive images with annotations and analysis tools that are used to 'explore' palimpsests and illegible texts from libraries and museums.

With this work, it is clear that in the twentieth century the same age-old desire still exists to recover unknown texts that are essential to reconstruct the origins of Christianity and Judaism. However, we are in the midst of a boom in 'manuscript culture', understood not as a 'container' of data but as a material symbol in itself via which one may access the uses and customs of writing from Antiquity (mistakes, corrections, annotations in margins and decoration).

The tenth chapter deals with the process of treating and digitalising the 'Community Rule' of the Dead Sea Scrolls, so it bears some connection with the previous theme. In this case, the concept of a 'cluster of documents' is introduced, alluding to a less static and more inquisitive analysis, since the texts discovered represent variations of the same content created by different scribes. The chapter explains the numbering system applied to this finding and its limitations and inaccuracies, given that it is impossible to know the exact use of the document discovered. Given the fragmentary state of the writing, the author recommends a publication method that distinguishes between the private or transportable scrolls and the official ones, differences between scribes, and that the unity of the texts should be preserved, for which reason he advises against hyperlinks. For the sake of thoroughness, he intends to use a facsimile and Corel Draw to draw each one of the layers so that the user may observe the writing's material nature. Thanks to Hamidović, we enter a fourth dimension of the subject under study via the EMACS format, by creating not just one but various interactive subjects and texts that converge at the same time (p. 212).

The eleventh passage springs from the discovery by the author Sara Schulthess of a phenomenon that surprised her while she was working on a textual critique of the New Testament in the Internet age: many Islamic websites were found to have content on what is known as <code>taḥrīf</code>, in other words manipulation, alteration or distortion, especially carried out by Jews and Christians in their writings. As Ibn Hazm and his heirs did, the digital age takes up this trend again on platforms where Islam is condoned and textual critique of the New Testament is used to attack and explain the falseness of certain beliefs in the other monotheist religions. This trend of minute scrutiny of biblical texts casts the shadow of bad interpretations made by <code>pseudo-researchers</code> and the light of inter-religious discourse with interesting debates such as the one held by White and Ally, and the existence of the Yahoo Bible Textual Criticism forum.

The chapter by Apolline Thromas on rabbinic literature acts as a corollary to this first volume in the series. The author explains that use of the Internet is a conditio sine qua non for gathering originals from Ancient Hebrew. Nevertheless, the varied genres and non-unified compilations, the lack of referential writings, the difficulties in disseminating this kind of literature in Europe, the heavy influence of contact languages and the historical prohibition and expulsion all make it necessary to interpret the texts conscientiously, above all taking into account that today we come across transcriptions in modern Hebrew from classical Hebrew that are translated to the Latin alphabet without established guidelines. For this reason, she warns rabbinic researchers that although they may find interesting websites on the matter, they are not always created or maintained by experts.

Furthermore, the author recognises that many manuscripts are not in good condition and this affects their digitalisation. For example, scanned books have annotation marks, problems with contrast, folds, etc. Those that have been entirely digitalised are usually old editions with the added difficulties posed by the alphabet itself.

Following these explanations, she recognises that the *Cairo Genizah* provided a great incentive. It can be accessed reliably via the Friedberg Genizah Project and the initiatives that help to access and study this field in the digital age are multiplying: the *Responsa Database*, *Mechon Mamre*, *Historical Dictionary Project of the Academy of the Hebrew Language*, *The Ma'agarim*, the group project *Sefaria* and the *Digital Mishnah Project*.

Ancient Worlds in Digital Culture ends with two indices: one with authors and the other with descriptors which, together with the numerous references provided by the authors in each of their works, help expert readers to consult and recover information.

To conclude, we may say that the first volume in the series is a gem to read and is essential due to the choice of topics, the method and the quality of the works presented, the effect of compiling resources that many of them provide, and the many technical and material possibilities that have opened up for researchers into traditional humanities disciplines in the digital age. Within a small space, initiatives such as this achieve two valuable objectives: to describe emerging phenomena, giving context for the bases upon which they are founded, while also providing guidelines to structure and access them. Uncertainty in the face of a phenomenon that is difficult to harness is thus alleviated (Dilley), and work can focus on achieving better, more democratic results. In one compact edition, the guidelines are laid down to make use of a discipline that has erupted with great force: showing new technologies and platforms, assimilating findings, contrasting them with existing ones, ordering and cataloguing resources, perfecting and diversifying applications, and standardising languages and editors to weave knowledge together as a community. We hope this project shall continue and that new ones shall appear that replicate the formula in emerging areas: education, cultural and social studies, recovery and digitalisation of noncanonical manuscripts and languages, the application of forensic and geospatial techniques, creating protocols for common works and languages to share information and aid communication among experts, as well as the dissemination of discoveries among society and their impact on it. Human and social sciences may thus be revamped, achieving more funding and claiming a unique space for dialogue using information technologies.