

Introduction: Ancient Manuscripts and Virtual Research Environments

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This volume of *Classics@* explores and analyses a methodological turn in ancient studies: the practice of presenting harvested data in ancient manuscripts within virtual research environments (VREs). What changes when research on ancient manuscripts occurs in a VRE, especially in early Jewish and Christian literature, New Testament, and Classical works? Does it matter if we undertake research in a digital medium rather than in a traditional print context? How does working with digital images and born-digital data intersect with the traditional print mentalities that have until recently defined philological research? Because VREs offer wide and usually free access to diverse information regardless of one's geographical location, they continue to have an outsized influence on the research landscape of the humanities in more complex ways. [1] Most notably, perhaps, is the required emphasis on collaborative forms of research in these contexts, representing a profound change to the usual humanist paradigm that is defined by the Romantic representation of the nineteenth-century lonely scholar. [2] The caricature of the textual scholar as a solitary genius sifting through dusty volumes in medieval university libraries is now surely *passé*.

Along these lines, Leonardo Candela, Donatella Castelli, and Pasquale Pagano published an important and wide-ranging article in 2013 in which they argued that VREs may lead to “a future where regardless of geographical location, scientists will be able to use their Web browsers to seamlessly access data, software, and processing resources that are managed by diverse systems in separate administration domains.” [3] In other words, VREs could be a new way of defining research, possibly becoming the new “covers” of the scientific objects, replacing the paper covers of printed books as signs of knowledge territories. Candela, Castelli, and Pagano offer the following definition of a VRE, one that has become a point of reference for the field:

Virtual Research Environment (VRE) is used with a comprehensive scope, i.e., it represents a concept overarching all the environments cited above and identifies a system with the following distinguishing features: (i) it is a web-based working environment; (ii) it is tailored to serve the needs of a community of practice [...]; (iii) it is expected to provide a community of practice with the whole array of commodities needed to accomplish the

community's goal(s); (iv) it is open and flexible with respect to the overall service offering and lifetime; and (v) it promotes fine-grained controlled sharing of both intermediate and final research results by guaranteeing ownership, provenance and attribution. [4]

Interestingly, two of the five features that define a VRE are focused on the community of practice. At their core VREs foster collaborative research. For these authors, such a “web-based working environment” is expected to become “the ‘default’ approach for scientific investigations as well as for any societal collaboration-based activity” within ten years. [5] This conclusion might sound ambitious, but now, eight years later, this situation is becoming a reality, a point that we hope to illustrate with the publication of this issue of *Classics@*. It is not that print outputs and classical modes of humanities research will disappear, but that the methods and outputs are becoming more complex, more multi-modal, and less-attributable to the labors of an individual scholar.

The long and short contributions of this fascicle are selective examples of this move in research, and they have been collected from the first conference organized by the MARK16 project. [6] A five-year project funded by the Swiss National Science Foundation (SNSF), MARK16 works, as its primary methodological challenge, to build a Virtual Research Environment (VRE) focused on the last chapter of the Gospel according to Mark. [7] Consequently, the online conference organized by the project in September 2020 from Lausanne (CH) focused on this point by gathering together a range of scholars working on ancient manuscripts in diverse fields, as well as scholars from the digital humanities. We are very grateful to the SNSF for their support of this event and the production of the resulting publication.

Seventeen papers have been submitted and accepted: nine long papers based on the invited and selected talks, followed by eight short papers based on poster presentations. We are very grateful to *Classics@* for offering an efficient publication process, in open access (OA), and with a high level of editorial control. [8] Indeed, it is crucial for research on VREs to be able to share first results or beta versions because this enables scholars to receive timely input from colleagues, gradually improving the VRE's shape and content. The continuous format of research produced on a VRE requires OA forms of publication, including visual material, as several articles demonstrate in this issue.

The first two long papers open the issue with projects focused on literature produced in ancient and Greco-Roman Egypt. In “Crossing Boundaries Between Humanities and Informatics: The Case of Egyptian Papyri,” Elena L. Hertel, Stephan M. Unter, Kathrin Gabler, and Antonio Loprieno (University of Basel, CH) present an innovative way to reconstruct

fragments of ancient papyri by using their fibres, based on the Turin corpus of papyri, the most extensive known papyrus archive from the Pharaonic period. Isabelle Marthot-Santaniello (University of Basel, CH), in “D-scribes Project and Beyond: Building a Virtual Research Environment for the Digital Palaeography of Ancient Greek and Coptic Papyri,” presents the first steps toward a VRE that works to fill the gap between classical philology and digital tools for papyrology and paleography.

The three next long papers engage New Testament manuscripts, starting with a leading article by Greg Paulson (INTF, University of Münster, Germany) entitled “The Nestle-Aland as Open Digital Edition: Already and Not Yet.” As manager of the *New Testament Virtual Manuscript Room*, Paulson introduces the present shape of the digital edition of reference in New Testament studies, the Nestle-Aland, as well as the progressive steps toward the making of a digital open Editio Critica Maior, the dECM.^[9] Next, Garrick Allen with Owen Conlan, Clare Conran, Christophe Debruyne, Troy Griffiths, Nishtha Jain, Matthew Nicholson, Declan O’Sullivan, Kelsie G. Rodenbiker, Anthony P. Royle, and Ulrich Schmid (University of Glasgow, ADAPT Centre, Dublin and INTF, Münster), present the ERC TiNT project in “The New Testament in Virtual Research Environments: Titles, Greek Manuscripts, Data Querying.” They present the overall goals and rationale for the “Titles of the New Testament” (TiNT) project, focusing on the digital tools and workflow models they are developing to markup images, produce new metadata on manuscript paratexts, and enhance searchability. Finally, Claire Clivaz, Mina Monier, and Jonathan Barda (SIB, Lausanne, CH) present the beta version of the multilingual manuscript room application of the SNSF project MARK16, the first VRE focused on a particular biblical chapter. This test case is preceded by a comparison between the *Novum Instrumentum omne* published in 1516 by Erasmus and the emergence of digital editing practices in New Testament textual criticism.

The four last long papers present studies about VREs and topics of interest for all fields studying ancient manuscripts. Patrick Andrist (University of München, DE), in “New tools and database models for the study of the architecture of complex manuscripts,” presents the first draft of a tool that will enable the visualization of the internal architecture of codices, enlightening their materiality and codicological structures. In “The eScriptorium VRE for Manuscript Cultures,” Peter A. Stokes, Benjamin Kiessling, Daniel Stökl Ben Ezra, Robin Tissot, and El Hassane Gargem (EPHE–PSL, FR) present software being developed that has as its the goal the development of a web interface for an engine that automatically transcribes written sources, both printed and handwritten, in principle in any current or historical system of writing. Olga Serbaeva, with Hans Cools, Jan Clemens Stoffregen, and Roberta Padlina

(Universities of Basel and Zürich, CH), present “Inseri as a Potential IT Framework for Research Projects in Humanities: The Sanskrit Manuscripts Project as a Test Case.” Inseri is a framework that links different software modules, helping researchers with the dataflow throughout the life of a project. Finally, Erzsébet Tóth-Czifra (DARIAH-EU), presents some results of her inquiry in the H2020 project OPERAS-P in a piece entitled “Rethinking text, techné and tenure: evaluation and peer-review challenges around Virtual Research Environments in the Arts and Humanities.”

The first three short papers are focused on general topics. Elpida Perdiki and Maria Konstantinidou (Democritus University of Thrace, Greece) discuss the application of the handwriting recognition tool Transkribus to medieval Greek manuscripts in a contribution entitled “Handling Big Manuscript Data.” Elisa Nury and Elena Spadini (Universities of Geneva and Lausanne, CH) go on to present an overview of the “long history of automatic collation,” and Simone Zenzaro (University of Lausanne, CH) introduces the essential features of a software editor in the realm of VREs, entitled “Better VREs: Key Concepts and Basic Challenges.”

The final five short papers are focused on test cases, the first of which, by Uri Schor, Vered Raziel-Kretzmer, Moshe Lavee and Tsvi Kuflik (University of Haifa, IL), engages Hebrew literature in an article entitled “Digital Research Library for Multi-Hierarchical Interrelated Texts: From ‘Tikkoun Sofrim’ Text Production to Text Modeling.” Andrew Smith (Shepherds Theological Seminary, USA) then explores the possibilities of mining data from New Testament manuscripts in “Mining Manuscript Data in the New Testament Virtual Manuscript Room.” In “Test-cases and Projects,” Riccardo Macchioro (Radboud University, Nijmegen, NL) illustrates research on VREs in Patristic studies by presenting the ERC project PASSIM (Patristic Sermons in the Middle Ages). Francesca Galli and Elena Nieddu (Universita della Svizzera italiana, CH & Roma 3, IT) then explore the use of “VREs in the Study of Medieval Vatican Registers,” and Marie Bisson and Marie-Agnès Lucas-Avenel (CNRS, FR) focus on Latin VREs with a contribution called “Why Make a Digital Critical Edition of a Latin Source? The *Histoire du Grand Comte Roger et de son frère Robert Guiscard* by Gaufrèdus Malaterra in Context.”

We are deeply grateful to all of our colleagues for their articles and hope that this fascicle makes a contribution to an emerging new direction in the humanities. And last but not least, our warm gratitude to Keith DeStone and to Daniel Cline for their efficient and gracious involvement in the editing of this special issue.

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Footnotes

- [[back](#)] 1. For a complete theoretical framework of this issue, see Clivaz 2019 and Allen 2019.
- [[back](#)] 2. Carusi and Reimer 2010.
- [[back](#)] 3. Candela et al. 2013:75.
- [[back](#)] 4. Candela et al. 2013:75.
- [[back](#)] 5. Candela et al. 2013:77.
- [[back](#)] 6. For further detail on the conference, see Clivaz and Allen 2020.
- [[back](#)] 7. MARK16 (2020), ISSN 2673-9836, <https://mark16.sib.swiss>.
- [[back](#)] 8. Open access and scientific quality are sometimes seen as unequal partners; for an overview, see Natale 2019.
- [[back](#)] 9. The term was first coined by Clivaz 2020:103.

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