Notes on Material Philology: 
A New Approach to Manuscript Studies in the Era of Artificial Intelligence

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Abstract
This first note introduces the need to flush out a robust interdisciplinary method to analyse fragmentary manuscript corpora in general and the Judaean Desert Scrolls in particular.

Keywords: Dead Sea Scrolls, Judaean Desert Scrolls, Palaeography, Computer Vision, Material Philology

Introduction
In this brief note, I would like to introduce a series of articles that I have been writing on my website, jamesmtucker.com. As I rework these articles into a book, I thought it would be helpful to convert the articles to short notes and post the notes on Humanities Commons and Academia. By posting the notes to Humanities Commons and Academia, I am following an ‘open-source’ writing style that was inspired by Kathleen Fitzpatrick. Fitzpatrick initially drafted her published monograph, Generous Thinking: A Radical Approach to Saving the University through the Humanities Commons medium as Generous Thinking: The University and the Public Good. I liked this approach to writing, yet it does present some problems. I will address these problems at the conclusion of this process—but I am curious how an open-sourced approach assuages and addresses some of the very problems in Humanities. The goal, therefore, is simple: to create a process of collaboration around, through, and by the creative process of writing. Whereas the goal can be described in simple terms, I hope that I am not confusing simplicity for simpleness. I will elaborate on issues of collaboration, academic ethics, and research practices throughout the series of notes.

To be clear, these notes will not be the book, in the same way that Fitzpatrick’s website version of Generous Thinking was not the final product of the book, Generous Thinking. Rather, the process of sharing these notes is to foster an academic discussion that advances the field of biblical studies

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1Fitzpatrick 2019
2Fitzpatrick 2018
by embracing the fast evolving field of digital humanities and humanities computing. This is a story about philology – old and new. In this first short note, I would like to articulate the problems of researching fragmentary corpora: both the Judaean Desert Scrolls and the Cairo Genizah manuscripts.

**On the Role of Material Philology**

The fragmentary nature of the Judaean Desert Scrolls and Cairo Genizah manuscripts poses a significant challenge for understanding the various sociological, theological, and legal issues in the academic study of Judaism. In the past, scholars have resorted to conjectural readings to fill various lacuna, yet often times they do not explain their linguistic decisions apropos the fields of historical linguistics or semantics. Conversely, some scholars have resorted to material reconstructions, analysing various damage patterns, yet they do not consider the semantic and historical implications of textual reconstruction. The various processes of reconstruction—textual and material—are not binary processes of philological analysis when one approaches manuscripts as artefacts. When approaching the Judaean Desert Scrolls and Cairo Genizah manuscripts from a material philological perspective, both the ink used to make characters and the parchment or papyrus used to make a manuscript are mutually related, spatially dependent domains of information that function in tandem. To address the fragmentary nature of the Judaean Desert Scrolls and Cairo Genizah manuscripts therefore, requires a robust interdisciplinary method that implements recent advancements from the fields of digital palaeographical models, historical linguistic data (computational linguistics), computer vision, and high-resolution images of the material data modelled within a 2D and 3D dynamic environments.

**Overview of Series**

While the blog series focuses on the Judaean Desert Scrolls and Cairo Genizah manuscripts, the methodological insights can equally be applied to any manuscript collection—Greek papyri, Nag Hammadi Codices, etc. In this study, we will spend some time on some of the Cairo Genizah Talmud Yerushalmi fragments, *Sifra Assamani 66 [Vat.ebr.66]* and some of the *Tosefta* manuscripts. In the outline below, I have put into square brackets the research area of digital humanities. The outline shows a broad overview of the series of blog articles and notes. I am not decided how the structure of the book will reflect the writing process.

A general overview of the series can be outlined as follows:

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3Whereas ‘Dead Sea Scrolls’ is often used to describe the archaeological discovery in 1947, I find that this term is too limited and problematic. It is limited insofar as it takes its name from the rather large body of water in the Judaean Desert, the Dead Sea. The archaeological site of Qumran was positioned on the banks of the Dead Sea, and thus ‘Dead Sea Scrolls’ can be used to describe the manuscripts that were discovered in various caves. But manuscripts were discovered in different locations, with varying distances to the Dead Sea, and with doubtful connections to the site of Qumran. The term, ‘Judaean Desert Scrolls’, therefore, broadly encompasses the various locations that Second Temple manuscripts were discovered in modern times.
Conclusion

Thus, I would like to focus on how a digital approach to scholarly editing and textual studies can transform the field of biblical studies. In the above series of articles and notes, I will expand on methods of digital humanities so to explain how the media of our own day can shed light on the media of Second Temple scribalism. As readers of ancient texts, we create models of various types. As the digital Humanist Willard McCarty has observed, “By nature modelling defines a ternary relationship in which it mediates epistemologically, between modeller and modelled, between researcher and data or between theory and world.”

In sum, these series of notes and resulting book seeks to advance scholarly analysis by developing a new morphology to analyse ancient literary corpora, ancient hermeneutical techniques, and the appropriation of tools in our scholarly analysis of the social and political contexts of the Second Temple era.

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\(^4\)McCarty 2005
\(^5\)Mroczek 2011 and Najman 2012
References


