



PROJECT MUSE®

---

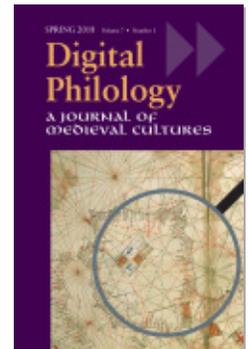
## Digital versus Analogue Textual Scholarship or The Revolution is Just in the Title

Barbara Bordalejo

Digital Philology: A Journal of Medieval Cultures, Volume 7, Number 1, Spring 2018, pp. 7-28 (Article)

Published by Johns Hopkins University Press

DOI: <https://doi.org/10.1353/dph.2018.0001>



➔ *For additional information about this article*

<https://muse.jhu.edu/article/700506>

# Digital versus Analogue Textual Scholarship or The Revolution is Just in the Title

► Several recent works have addressed the question of the extent to which recent advances in digital scholarship imply a revolution in scholarly editing practice. The current article addresses claims of a qualitative leap in the scholarly editing and suggests that while digital means present many advantages, digital editing practice is less far removed from print scholarly editing than might otherwise be thought.

## 1. Introduction

Since the inception of electronic textuality, there have been many articles which have proclaimed a revolution in textual editing (Deegan and Robinson; Smith; Robinson, “The Digital Revolution”).<sup>1</sup> One might easily lose count of how many conference presentations and project proposals promised that everything was going to change. At times, scholars focused on the delivery system of the digital editions, on how these texts were going to be presented. At other times, those who had taught themselves to code attempted to produce tools that were reliable and so easy to use that they would not require specialized help and thus might bring the benefits of the digital world to a wider group of interested scholars. This article examines the methodologies of those objects called digital scholarly editions and compares the methodologies implemented for their production with those used in the past in the making of scholarly editions in print form. The aim is to assess the degree of difference between digital and analogue scholarly editions. The article concludes that the advent of digital tools, despite some notable contributions (speed,

re-workability), has not translated into fundamental changes in textual scholarship. Moreover, what should be one of the most significant advantages of digital scholarship, that it enables the creation of base work that could be redeveloped for use in multiple projects, has not managed to prevail over individual interests and nineteenth-century notions of copyright.

In the foreword to *Electronic Textual Editing*, G. Thomas Tanselle states that printed and digital editions are not ontologically different: in essence, they both are the products of a series of procedures used by textual scholars which culminate in the production of one or more texts. However, Tanselle's apparently reasonable statement has found a group that treats it as a suspect notion. Professional digital humanists have difficulty accepting the idea that editions, digital and analogue, are the result of the same processes and have the same types of aims. For example, in her book *Digital Scholarly Editing*, published in 2016, Elena Pierazzo expresses a perspective that is precisely the opposite of Tanselle's. Pierazzo writes that:

Scholarly editorial practices are undergoing deep structural and theoretical changes. Such changes are connected to the adoption of computers, both for supporting editorial work and for disseminating it. (Pierazzo 7)

She then continues by stating that while early adopters thought that computers were just "electronic research assistant(s) able to offer relief from 'idiot' work," while instead, they are "leading us to question the hermeneutics and heuristics of textual scholarship." In reference to computers as "research assistants" relieving scholars from repetitive work, one might expect Pierazzo to specify who suggested this idea. In practice, editors who use computer-assisted analysis in the making of editions are fully aware of the responsibilities involved in every single decision made within the life span of a digital editorial project, just as editors who work in print projects are aware of the same responsibility. Pierazzo's second point is worth reviewing: has the way we interpret and investigate texts changed because we use computers to support our textual critical and editorial work?

The technologies that surround us have affected all aspects of our lives, and their far-reaching effects can be seen everywhere. In our work as editors, the last few years have shown us the unprecedented success of crowdsourcing transcription initiatives in which people outside academia make a significant contribution to what are, ultimately, more or less obscure research projects. A superb example of the crowdsourcing

success is *Transcribe Bentham*, a UCL-led initiative that aims to transcribe all of the writings of the British philosopher Jeremy Bentham.<sup>2</sup> Similarly, *Trove*, a collection of digitized newspaper articles at the National Library of Australia, has allowed the general public to participate in the correction process. The public's contributions, in some cases, amount to a significant number of individual changes.<sup>3</sup>

Projects such as these make clear that some aspects of our work as textual critics, and as humanists, have changed. However, it is not clear that all aspects of textual critical and editorial work have been affected to the same degree. The following sections explore the types of changes that have been implemented in textual scholarship and assesses whether these can be referred to as revolutionary.

## 2. The Myths of the Digital

### 2.1 Accessibility

In a recent article entitled “The Digital Revolution in Scholarly Editing,” Peter Robinson proposes that the changes in our discipline “may amount to a revolution,” and he sets to uncover how that revolution might differ from the one that has been presented to us (Robinson, “The Digital Revolution” 181). The article points out some commonly mentioned aspects of this putative set of “radical changes.” For example, it might be argued, as Robinson does, that the fact that there are now millions of manuscript images online amounts to a “revolution.”

There are numerous scholars and others who declare that to have all the manuscripts, all the books of the world online, is revolutionary. We are giving access to everyone, for just the cost of an internet connection, to materials which used to be available only to the most privileged of scholars. Everyone can now wake up in the British Library. (Robinson, “The Digital Revolution” 182)

In theory, at least, the digitization of manuscripts appears to offer a more democratic approach in opening what used to be an even more exclusive club. That is, of course, if we conveniently forget that reliable, low-cost internet access is a privilege that mostly benefits Anglophone and Global North countries. Even if this were not the case, is the act of releasing millions of manuscript pictures revolutionary? Indeed, for a few scholars dealing with original materials with restrictions imposed by zealous librarians, one might argue that the publication of all the extant leaves of the great biblical Codex Sinaiticus, including leaves never accessible before even to specialist scholars, is revolutionary. This emphasis on the presentation of digital images and transcriptions is something

that has characterized the discourse of the digital editions. Robinson argues that this is not, in itself, a revolution. The case of Codex Sinaiticus is rare, with the great bulk of manuscript images online being of manuscripts perfectly accessible to anyone who goes to the library. We find Robinson agreeing with A. S. G. Edwards in that the digitization of large quantities of materials does not amount to a revolution (“The Digital Revolution” 182). We can access the same material we could always access, only faster. Robinson, in an earlier essay, described the enthusiasm for digital editions as follows:

For editors who saw their work in terms of this set of problems, the advent of the new technology appeared as the answer to their dreams. Famously, with computers and hypertext, we need no longer present just one text. We can present two, a hundred, a thousand. At a stroke, our first dilemma is solved. In place of editorial anxiety about which text, what choices, we can have all the texts, all the versions, and never have to make any decisions. It seems we may have a solution to our second dilemma too. We can have images, lots of images, showing all the different forms of the text, from manuscript scrawls, through cheap serialisations and deluxe printings. We can add galleries of sound, maps, videos: whole kits of material to equip the reader to taste the air the text breathed. What is more, this inclusive agenda, so in tune with an egalitarian age, seemed to offer all kinds of liberations: especially, the freedom from difficult choices. (Robinson, “What Is a Critical Digital Edition?” 18)

Robinson, sarcastically, continues by referring to himself and others as possessing a “kind of millennial enthusiasm” and having found a “golden path that would lead us into the glad confident morning of editorial utopia, where we editors would recapture our rightful value as the monarchs of the academy, the delphic [*sic*] dispensers of the editions of the future” (Robinson, “What Is a Critical Digital Edition?” 19). This was also a time in which Robinson saw “...a continuity between critical digital editions and printed critical editions” (Robinson, “What Is a Critical Digital Edition?” 18). In order to discover what Robinson finds revolutionary, we have to refer to almost the end of his article on “The Digital Revolution.” It is in the last part of his text that he describes his idea. For Robinson, the revolution rests with the individual. He believes that the opening of scholarly work for reuse will be a game changer and that it would change scholars themselves (Robinson, “The Digital Revolution” 200). Absolute openness could be a game changer. But it is not yet here. It is not even close to being here and, for all that, calling it a revolution is like calling any speculative fiction a revolution.

Our current reality is as he describes it in the previous ninety per cent of his article, where he describes editions which follow what he aptly calls “the Alexandrian consensus”, i.e., they are created by accessing what is naturally restricted (particular manuscripts or texts under the care of different repositories) to scholars who have the knowledge to create the editions. Even when we overcome the first of Robinson’s pillars, by making source materials widely available, we will always require specialized knowledge for the creation of editions.

## 2.2 *Limitless Space*

For Patrick Sahle, digital editions are appealing in that they do not suffer the same space constraints that traditionally limited printed editions. He bemoans the restrictive policies of publishing houses regarding the inclusion of facsimiles or fundamental evidence and goes on to state:

... while printed editions normally give exactly one version of a text, the deeply marked up textual code of the digital edition theoretically covers several views of the text and may lead to various presentations generated by specific algorithms. ...a main characteristic of a digital edition is its representation of a potentially large number of documents in a potentially limitless number of different views, such as facsimile, diplomatic transcription and reading versions. All are generated from the same electronic code according to certain, sometimes even user controlled, modulations. (Sahle 27)

Here, we observe the same familiar expressions that have populated articles about digital editions. The allusion to the multiplicity of texts and the limitless potential of a medium not constrained by the cost of paper are essential to Sahle’s view of the latent capabilities of digital editions. Although it is easy to assume that the high cost of print editions is related to the expression of their physicality, matters are more complex than this. The production of an edition, be it published digitally or in print, implies many other costs besides those associated with the production of a physical codex. The highest expense in grant applications for an editorial project is staff: editors, assistants, transcribers, and technical support. More often than not, large editorial projects require institutional commitment for their long-term maintenance. In a traditional publishing house, the cost of copy-editing and, particularly, marketing, substantially increase the production costs. For some publishers, marketing is at the top of their list of expenses.

### 3. Separative Characteristics of Digital Scholarly Editions

Pierazzo and Sahle have presented a series of separative characteristics that place digital editions in their own category, quite apart from printed editions. This section considers their arguments and reflects on their application during the production of the edition, as well as their integration to the final text.

#### 3.1 Pierazzo's "Digital Editorial Models"

In a section of her book entitled "Digital Editorial Models," Pierazzo presents three models that she considers are innovations brought in by the use of computers:

- 1-Phylogenetic
- 2-Social Editing and Social Editions
- 3-Crowdsourcing and Editing

##### 3.1.1 The Phylogenetic Model

For years, at the *Canterbury Tales Project*, we have used phylogenetic software to build what we have called variant maps, which allow us to explore different aspects of the textual tradition. We have also used these methods, with various degrees of success, to study other texts. Our experience with the use of evolutionary biology and stemmatic methods and our success, not only with *Canterbury Tales*, but also with Dante's *Monarchia* and *Commedia*, should be incentives to attempt to present these methods as unique and novel. However, this would be, at best, an exaggeration in regard to the essential aspects of the relationship between phylogenetics and stemmatics. There is an obvious connecting line between computer-assisted genealogical methods and their traditional counterparts.

Before we used phylogenetic software, genealogical research on texts was done by hand and was known as the Lachmann method (a misnomer that does not concern this exploration). Establishing the genealogy of a text is particularly important for works produced before the widespread use of the printing press (although there are some exceptions to this). As early as 1508, Erasmus, followed by Scaliger in 1552, argued that it was possible to show that manuscripts were genetically related. Karl Lachmann demonstrated this in his edition of Lucretius in 1850. We have used (and continue to use) phylogenetic software because it works very well with the types of traditions we have dealt with (including the *Canterbury Tales*, Dante's *Commedia* and *Monarchia*,

and Medieval Spanish *Cancioneros*).<sup>4</sup> We have also been involved in discussions about the development and testing of software specifically aimed to deal with literary and historical texts. The underlying model for SemStem, developed by Teemu Roos and Yuan Zou, is derived from traditional stemmatological theory and has been optimized to deal with internal nodes (manuscripts in existence that gave rise to other extant witnesses) and multifurcating branches of the tradition. The “phylogenetic model” should have been more accurately described as the “stemmatological model.” There is such a clear relationship between traditional stemmatology and the New Stemmatics that it is not conceivable to try to pass off the use of phylogenetic (or other similar software) as a new model. This can be more accurately described as an adaptation of a pre-digital editing model. It should not be considered exclusive to digital scholarly editions.

### 3.1.2 The Social Editing and Social Editions Model

The second digital scholarly editing model proposed by Pierazzo comes from contributions by Ray Siemens and his team at the University of Victoria.<sup>5</sup> Pierazzo describes it as follows:

This editorial model is grounded in Jerome McGann and Donald F. McKenzie’s theories of the social text which undermine the author as the sole authority, focusing instead on the circumstances of the production of the work; from here to undermining the editor as the sole authority for publishing the work is an easy step. (Pierazzo 19)

Pierazzo assumes a remarkable closeness between the theoretical positions of McGann and McKenzie. Although these approaches might be understood as complementary, they are different. McGann sees the text as a product of the intervention of many more people than its author. In his understanding of textual production, the author is just one person in what becomes a long line of contributors.<sup>6</sup> McKenzie, on the other hand, focuses on the importance of the reception of the material aspects of the text from a sociological perspective (McKenzie). These theories arose independently of each other, but were developed around the same time and used similar sounding words. It is easy to see why anyone would conflate them, but these theories had an independent genesis and are quite distinct.

Siemens et al. experimented with the use of social media as both a tool for the creation and the presentation of scholarly editions. They describe the result as a mixture of “traditional scholarly editing practices and standards with comparatively recent digital social media en-

vironments” (137). The example used to illustrate this model is the Devonshire Manuscript Social Edition, about which Ray Siemens has written and published several articles (Siemens; Siemens et al.; Compton et al.). I have spent some time analyzing this edition, mostly in a quest to understand how it was created and the implications of the use of social media during its development. The first thing that one uncovers is that although it is called a social edition and has been published using Wikibooks software, its text has been produced manually:

The transcription for this present edition is based on examination of both a microfilm of the Devonshire Manuscript and the original document. Microfilm of the Devonshire Manuscript was provided by the British Library, from which two paper copies were prepared. These paper copies were each transcribed in a blind process. Collation of these two transcriptions proved unfeasible by electronic means, so they were collated manually. This resultant rough transcription was resolved as far as possible using expanded paper prints and enlarged images. Remaining areas of uncertainty were resolved with manual reference to the original document itself, housed at the British Library. This final, collated transcription forms the basis for this current edition. (Siemens, “A Social Edition of the Devonshire MS”)

The use of a double-blind transcription is a well-known method to obtain a clean transcription as it is assumed that two individuals are unlikely to make mistakes in the same places. Others, such as the scholars from the Institute for Greek New Testament studies in Muenster, and David Parker and his team in Birmingham, have used the same method for the initial production of their transcriptions. The problem with this is that, although two individuals are unlikely to make mistakes in the identical places if they are working from an unproblematic, clean document, that is not the case when complexities arise. My experience with manuscripts of the *Canterbury Tales* is that our transcribers when facing a difficult, unclear, or obscured reading, tended to misinterpret it in precisely the same way. This is also true about medieval scribes, which is precisely how some of the more remarkable and informative variants arose in the text.<sup>7</sup>

The statement that it was “unfeasible” to carry out digital collations of these transcripts is not explained further. The lack of context makes it impossible to know whether this is accurate. In any case, there were, at the time, multiple options that could have been implemented to create a digital collation and, since it only required the comparison

of two transcription versions of the same witness, even software not optimized to deal with re-writings and re-arrangements, such as *Juxta Editions*), could have been used. In the end, one is forced to conclude that not only the text of the Devonshire Manuscript Social Edition was arrived upon without recourse to any social media tools, but also that it is possible that no advanced digital tools were used at all. In this way, the “social” or collaborative aspect of this edition were developed around the annotations, analysis, and interpretation of the text.

However, Siemens has suggested that social media and Web 2.0 technologies enable a new type of edition in which the traditional role of the editor is radically different from that of traditional print editions and of the digital editions produced up to this point, a proposal similar to the one of crowdsourcing, which uses social media as a resource for the production of scholarly work. The aims of the edition are described as follows:

Our goal, through community engagement via Wikibooks, Twitter, blogs, and Drupal-based social media, is to use existing social media tools to change the role of the scholarly editor from the sole authority on the text to a facilitator who brings traditional and citizen scholars into collaboration through ongoing editorial conversation. (“A Social Edition of the Devonshire MS”)

Within the Devonshire Manuscript Social Edition, there is no clarification about how this role of facilitator might work or about the nature of the ongoing editorial conversation. One way to understand how the Devonshire Manuscript Social Edition differs from other electronic editions is by analyzing what has been done as part of other electronic editions and how it has been done, and compare and contrast this with equivalent aspects of the Social Edition. While exploring the history of changes in within the edition in 2013, it became evident that most of the changes were generated by people linked to the Electronic Textual Cultures Lab, a University of Victoria-based research group led by Siemens. For example, the section under the title “Transcription” has contributions by two people (Cultures33 and Cultures92). One imagines that they are part of the Devonshire Manuscript Editorial Group as each of them can approve comments. Cultures92 approved what might have been a comment on February 20, 2012 at 22:35. It is unclear whether anyone can approve comments. If that is not the case, then how is that status achieved? Another critical section should be the one on Punctuation and Scribal Marks, which was initiated by Cultures92, apparently developed by Cultures4, and with two alterations by Cultures17. Both of these sections in the edition are descriptive: they describe what has

already been done, rather than give instructions for anyone that would like to contribute. During my last access to the edition, there were comments awaiting to be approved in the main page (see Fig. 1). These were suggested by SeMelmoth at 15:19 on April 13, 2017 (see Fig. 2),

Fig. 1. Main Page of “A Social Edition of the Devonshire MS.”

Fig. 2. Pending Revisions of “A Social Edition of the Devonshire MS.”

the changes mainly address the inconsistencies in nomenclature in the manuscript reference, including the main title of the edition. In 2013, during the “Social, Digital, Scholarly Editing” conference (Saskatoon, Saskatchewan), Siemens publically acknowledged that the assumption that the contributors to this edition were formally linked to the Electronic Textual Cultures Lab was correct.

A few things can be concluded from the previous review. Firstly, both McGann and McKenzie developed their theoretical models for and about print and these theories have not been ported to the digital realm. Secondly, the inclusion of the word *social* in the title “Devonshire Manuscript Social Edition” states a claim which is not supported by the edition itself. Rather, the edition was produced using traditional methods, with transcription and collation done by a few collaborators working closely together and under the direct supervision of the editor, and not by any kind of broader “social” group. It is displayed via a Web 2.0 interface that allows some degree of input from its readers, yet even here this input is revised and approved by the creators of the edition who act as its moderators. If it is a social edition at all, it is only so in a very limited way, and cannot stand as a revolutionary model of digital editing.

### 3.1.3 Crowdsourcing and Editing

Crowdsourcing, the transcription of a vast amount of materials by collaborators not initially related to their project and who are donating their time, might be the only method that is exclusive to the digital era, and yet one must wonder whether it constitutes a model for editing. Up to this point, it has been possible to massively crowdsource corrections to texts that had been produced by OCR or transcriptions with relatively simple encoding systems, such as is the case of *Transcribe Bentham* (Causer and Terras). The caveat of *Transcribe Bentham* is that it is not an editing project. Instead, it is the prelude to an edition that will only happen when all the transcriptions are carried out. *Transcribe Bentham* is a digital humanities experiment. This does not diminish the project in any way: it is one of the most successful and brilliant initiatives within the digital humanities and will serve as an example to many others to come. It is just not an editorial project in itself and its transcribers, who are following unambiguous guidelines set up by experts, are not editors. The creators of the project describe it as a “collaborative transcription initiative, which is digitizing and making available digital images of Bentham’s unpublished manuscripts through a platform known as the ‘Transcription Desk.’” There are no allusions to editing in this site, presumably because the editors will be experts on Bentham.

For the digital edition of the *Estoria de Espanna*, crowdsourcing had some success. Around ten crowdsourcers who contributed transcriptions. Of those ten, one—Nick Leonard—was the most prolific. A thorough account of crowdsourcing and the *Estoria de Espanna* can be found in the article “Transcribing the *Estoria de Espanna* using Crowdsourcing” (Duxfield).<sup>8</sup> This limited success in crowdsourcing mirrored the attempts made by the *Canterbury Tales Project*. In order to transcribe Middle English manuscripts, knowledge of Middle English language, linguistics, and paleography are necessary. Projects such as these ones are so complex that the massive numbers of transcribers that can work in projects such as *Transcribe Bentham* and *Trove* can never be reached.

Of the three digital scholarly editing models proposed by Pierazzo, one clearly precedes the use of computers; a second one has a supposed theoretical framework from the 1980s which was developed to explain the process of print and has not been digitally adapted, much less realized; and the third one has been used to produce transcriptions in a step previous to the task of editing. These supposed models for digital scholarly editions do not stand on their own as exclusive products of this era.

### 3.2 Sable’s “Digital Paradigm”

According to Sable, the digital paradigm is defined by multimediality (or transmediality, as he calls it later on), hypertextuality, modularization, and fluidity.

#### 3.2.1 Multimediality

Most digital scholarly editions follow a text-image model<sup>9</sup> and a few editions include other types of materials, such as audio or video.<sup>10</sup> Martin Foy’s *The Bayeux Tapestry Digital Edition* appears as a multimedia edition, but this is more due to the nature of the material than to the design of the edition itself.<sup>11</sup>

The TouchPress editions have realized some of this potential. *The Waste Land* and *Shakespeare’s Sonnets* are two remarkable examples of multimedia literary applications.<sup>12</sup> They are both optimized for use with tablets and present effective multimedia experiences. *The Waste Land*, for example, not only includes a digital facsimile of the manuscript, but also audio files and interviews featuring experts on T. S. Eliot. The text has been annotated and explicated. Fiona Shaw delivers it in performance and there are six alternative readings, including one by Eliot and one by Alec Guinness. The result is an extraordinarily complex vision of the poem. But, for all that it is included, *The Waste Land* lacks the most

important thing that any scholarly edition should contain: an expertly curated text that considers all aspects of the history of its composition and its subsequent transmission. Something similar can be said about *Shakespeare's Sonnets*: the great performances are included, the text is annotated, a facsimile of the 1609 Quarto. But as with *The Waste Land*, a scholarly edition of the text is lacking.

Although Sahle is correct when he suggests that digital editions have the potential of multimodality, this potential has not been fulfilled in scholarly editions and could potentially be used in non-digital editions. After all, multimodality exists when more than one medium are presented together. It is potentially possible to combine print and audio, for example. Multimodality cannot be considered a separative quality of the digital editions.

### 3.2.2 Hypertextuality

Sahle considers hypertextuality to be another characteristic of the digital paradigm. He describes it as follows:

*Hypertext* is another buzzword from the dawn of electronic textuality. With the World Wide Web and its underlying technologies, the complex and advanced theory of hypertextuality has been reduced to the practice of simple links. However, even these *hyperlinks* are very momentous and mark an important difference between printed and digital texts. While the former always included rather *implicit* links and references, the hyperlinks of the latter restructure the contents of editions, open up new and manifold paths of reception and blur the boundaries between an edition and its contexts. (Sahle 29)

It is unclear why Sahle considers that the hyperlinking of printed editions, in the form of notes, glosses, and references is implicit. Moreover, hyperlinking does not restructure contents. In every case, hyperlinking is predetermined by the editor(s) and allows a single path each time. It might be that it is merely a question of perception to say that suddenly there are many paths of reception in digital editions. It seems that there have always been such paths in editions of any kind.<sup>13</sup>

### 3.2.3 Modularity

The supposed restructuring of digital editions through their hypertexts result in a modularized structure of the edition (Sahle 29). This suggests that separate parts of an individual edition can be isolated from the whole and used independently of the others for new projects.

Consider a massive undertaking such as the digital edition of the Codex Sinaiticus.<sup>14</sup> The edition includes the virtual restoration of the manuscript, by bringing together pieces held at four repositories in four countries.<sup>15</sup> The digitization team created the images that are part of the editions and that were used as the basis for the transcription. The Codex Sinaiticus edition shows, for the first time since the manuscript was separated, its folios in their intended order. The text of this edition was created following a conventional method for the creation of transcriptions of the Greek New Testament: two transcribers produced independent transcriptions which were later compared using computer software. Discrepancies between the transcriptions were resolved and thus the final transcript was created. In a separate process, the transcriptions were converted into TEI-XML. A process of alignment of transcriptions and images was carried out separately.

Independently of the transcriptions, another group was working on the conservation aspects of the manuscript and created the physical descriptions. The edition also includes translation modules for English and German. Every component of the Codex Sinaiticus edition was created in a modular way, as imagined by Sahle. More often than not, digital editions require the use of multiple individual tools to create a complete product, and this might result in a perceived modular structure.<sup>16</sup> However, all editions are released in an integrated form, perhaps also in function of their hyperlinking, and cannot be used in a modular way. In other words, even when the editor(s) have used different pieces of software to create the different parts of the edition, their final product is a complete whole that can only be used, navigated, or read in ways that the editor(s) have determined in advance. This is precisely how a complex scholarly edition of the scale of Codex Sinaiticus works: its many modules have been integrated to such degree that they are impossible to separate from one another. After publication, the edition cannot be dismantled so its parts can become something else. Modularity might be a characteristic of the digital creation of editions, but it is not a characteristic of digital or print scholarly editions.

### 3.2.4 Fluidity

Sahle counts fluidity as a characteristic of digital scholarly editions, as they do not have “authoritative reading as [their] primary goal.” For him, these editions are fluid in two ways, in that they are generated in real time and that they do not have a distinct moment of publication. Once more, I find myself in disagreement with Sahle.

The digital edition of the Codex Sinaiticus went online on July 6, 2009. It had been visited by more than one million people in the first few days. Not much later than that, a few transcription mistakes were pointed out by readers. For almost ten years, we have known of mistakes within this edition. However, by the time that the errors were pointed out, the project was finished. And, although someone could have introduced corrections, no one wants to take responsibility for recompiling the many files that create the paths linking the different sections. The risk is too high and so this remains the only version of the edition that has ever existed.

Perhaps for different reasons, other digital works end up static. For example, *Jane Austen Fiction Manuscripts* was launched in 2010.<sup>17</sup> It has only been changed, in 2012, after the sale of the manuscript of “The Watsons” and to accommodate for a change of font within the site. The original release date and the date of the subsequent changes are recorded in their site.

My edition of Caxton’s *Canterbury Tales* is generated in real time, as are many of the SDE publications, but the *Online Variorum of the Origin of Species* is not. The latter consists of a series of static XHTML files generated from the original XML. Naturally, this does not make the Caxtons fluid and the *Variorum* not fluid. Most users would not even know there is a difference in the way the files work in both editions. As to not having a distinct moment of publication, *Caxton’s Canterbury Tales: The British Library Copies* was released on CD-ROM in 2003,<sup>18</sup> while the first edition of the *Online Variorum of Darwin’s Origin of Species* was released on November 24, 2009, the second edition in September 2012. Every digital edition in which I have been involved has a specific release date.

I am ready to accept that not all scholars follow the same habits, but I venture that they cannot be very interested in analytical bibliography or bibliographical precision if they fail to include a release date for their editions.

## 4. Conjunctive Characteristics of Digital Scholarly Editions

### 4.1 Collation

In the previous sections I have analyzed the characteristics that Pierazzo and Sahle have put forward as exclusive of digital editions. None of them is exclusive to the digital medium. From this point, I explore other elements that show the continuity of methodology between print and digital scholarly editions.

D162 2 No. 1

Al this sentence

Ad <sup>1</sup>	Ad <sup>2</sup>	Ad <sup>3</sup>	Bo <sup>1</sup>	Bo <sup>2</sup>	Bw	Ch	Cy	Cp	Cx <sup>1</sup>	Cx <sup>2</sup>	Dd
Ds	Ei	En <sup>1</sup>	En <sup>2</sup>	En <sup>3</sup>	Fi	Gg	Gl	Ha <sup>1</sup>	Ha <sup>2</sup>	Ha <sup>3</sup>	Ha <sup>4</sup>
Ha <sup>5</sup>	He	Hg	Hk	Ht	li	La	Lc	Ld <sup>1</sup>	Ld <sup>2</sup>	Ln	Ma
Mc	Mg	Mm	Ne	Ni	Ps	Pw	Py	Ra <sup>1</sup>	Ra <sup>2</sup>	Ra <sup>3</sup>	Ry <sup>1</sup>
Ry <sup>2</sup>	Se	Si <sup>1</sup>	Si <sup>2</sup>	Tc <sup>1</sup>	Tc <sup>2</sup>	To	Si	Di	Ph <sup>1</sup>	Ph <sup>2</sup>	Ph <sup>3</sup>

And + s.  
- + a.

Ad<sup>3</sup>C He<sup>5</sup>  
Ph

Pages Out: Cp En<sup>2</sup> Passage Out: Ha<sup>1</sup>  
 Line Out: Ad<sup>2</sup> Ha<sup>3</sup> Line Out: P5

Fig. 3. Collation Card for the 1940 edition of the *Canterbury Tales*.

To create scholarly editions, we carry out collations. This was done before by writing down the variant readings found in different witnesses of a text. John Manly and Edith Rickert did it for every variant they found in the *Canterbury Tales* in preparation for the 1940 edition. For this, they created some 50,000 collation cards detailing whether a reading was present or not and what kind of variation could be found in the different texts (see Fig. 3).

Since the late 1980s, many scholars have compared the texts of their witnesses using tools created for that purpose. At the *Canterbury Tales Project*, we have used primarily *Collate* (now being replaced by *CollateX*), but there are other tools that, depending on the type and degree of variation might be helpful for different tasks.

With *Collate* we could work either by using a database with the variants or by comparing complete transcriptions of witnesses. Robinson's *Collate* required that texts were aligned and would look for matches before offering a possible variant or variant phrase. There was a pattern to this matching system. However, what made *Collate* suitable for scholarly editing, was a series of alternatives that the editor could implement by hand and that allowed the fine-tuning of the apparatus' presentation. Very much like the process of a traditional collation, but with the speed and accuracy of the computer.

#### 4.2. *Publication*

There is a publication model for digital editions that follows closely the traditional printing model: a scholarly press reviews the edition, accepts it for consideration, sends it out to peer reviewers, and finally publishes the edition.

In his article, “Project-based Digital Humanities and Social, Digital, and Scholarly Editions,” Robinson produces a lengthy description of many shortcomings, both technical and scholarly, of the *Shakespeare Quartos Archive*. In reference to the transcription, Robinson informs us that:

...the comparison tool suggested that there were some thirty differences among some thirty pages of text, compared across ten copies. Not one of these was a stop-press variant. About half were recordings of handwritten texts or marks in one or other copy. The other half were simple transcription errors: several cases where the long *s* form has been transcribed (incorrectly) as *f* in one copy, *s* in the other; several where a letter is wrongly reported as absent; and several where a piece of rogue computer code has infiltrated the text, e.g. “I&#x0027; embrace” National Library of Scotland for “I embrace” in Folger 1. (Robinson, “Project-based Digital Humanities” 880)

This is followed by the assertion that, once a reader has discovered not only that there are many fewer variants than reported, but also that about half of them arise from transcription errors, she will cease to make use of the archive. To establish how this publication came to light in this condition, Robinson researched the history of the project to discover that although there was an initial meeting with many experienced Shakespeare scholars, these were not consulted after that moment. Instead, the technical staff were put in charge of making the decisions that led to this sorrowful state of affairs.

This embarrassment could all have been prevented by the use of a peer-review system but, in the era of digital publication, everyone is a publisher and many can create their own website. This digital form of self-publication is only restricted by the skill of its creators as programmers.

Although it is possible to follow a regular peer-review process for online publication, this is rare. For scholars who see the digital world as a place for democratization this might seem like an opportunity. It is not, however, a revolutionary one. Instead, the lack of peer-review process results in the multiplication of mediocre work which, more often than not, is unfit of the name scholarly.

### 4.3 *The MLA White Paper*

Last year, the Modern Language Association's Committee for Scholarly Editions released a white paper on digital editions. The paper assumes that digital editions must be different from printed editions and so they require a separate and explicit statement. And yet, the assertions made in the paper that do not depart in any way from traditional editorial practices: editions must be accurate, editors must document their choices, etc.

Digital humanists have been telling a story of how computers have changed everything or are about to change everything. This is not true. As a textual critic, I have to agree with Tanselle. Although I have built a career editing texts that have digital outputs, I acknowledge that there is a continuity between print and digital editions that cannot be ignored. I am not alone in thinking this as the *MLA Statement on the Scholarly Edition in the Digital Age* states:

The digital modes in which the scholarly edition of the 21st century is so often expressed are deeply significant, but in many cases, they serve more to realize potential already inherent in our traditional understanding of the scholarly edition than to overturn that understanding. (MLA Committee on Scholarly Editions)

The members of the MLA CSE think that there is no revolution, that our understanding has not been overturned.<sup>19</sup> This acknowledgment is an important step in the right direction in order to continue to create scholarly editions of the highest quality. The creation of digital editions presents many challenges, including technical ones. Their potential for the removal of restrictions of space or capacity presents a problem in reference to our time as finite beings with limited time and resources. For this reason, we must act judiciously, investing our time in those aspects of our research that are concerned with textuality rather than allowing ourselves to be distracted by matters that are not the concern of editors.

There are disciplines, computational linguistics comes to mind, for which the implementation of computers has represented a fundamental change in their makeup, but this is not the case for textual scholarship. Editors must continue to edit according to the principles of textual criticism, and not according to the dictates of the digital fashionistas: there is no such thing as digital scholarly editing. There is only scholarly editing, which can be published in print or digital format, but that remains the same discipline linked to meticulous historical-critical work carried out by textual scholars or under their direct supervision.

## Notes

1. With time, the notion of a revolution has been called into question by some (O'Donnell) or referred to in milder terms (Price).
2. <<http://www.transcribe-bentham.da.ulcc.ac.uk/>>.
3. See <<https://trove.nla.gov.au/>>. At the time of writing this article, the top corrector was John Warren with 4,473,131 individual corrections. The fifteenth top text corrector had made more than 1.3 million corrections.
4. See Chaucer, *The Miller's Tale* and *The Nun's Priest's Tale*; Dante, *Commedia* and *Monarchia*; and Severin.
5. See Siemens et al.; and Crompton et al.
6. See McGann refers to a process of collaboration, but it seems to me that collaboration is circumstantial and requires both parts agreeing to work together. Often, authors are not consulted when it comes to the process of publication and occasionally we have documentation of their discontent with the final product, as was the case of Anthony Burgess US edition of *A Clockwork Orange* (Burgess).
7. See for example my discussion of Sertres/Certres/Sterres (Bordalejo, "The Manuscript Source) or troce/croce (Bordalejo, "Caxton's Editing" 48).
8. See also Duxfield's article in this volume.
9. *The Canterbury Tales Project* editions have always followed this model. Other editions published by Scholarly Digital Editions (SDE), including Shaw's *Commedia* and *Monarchia* work in the same fashion.
10. The non-scholarly applications developed by Touch Press, which include Shakespeare's *Sonnets* (*Shakespeare's Sonnets*) and T. S. Eliot's *The Waste Land* (*Waste Land*) are fine examples of multimedia editions.
11. *The Canterbury Tales Project*, in collaboration with Richard North, is producing an edition of the General Prologue, the *CantApp*, which aims to present the text of Chaucer creatively with the aim to appeal at unexperienced readers. The edition will include manuscript images, but also a reading of the text by Colin Gibbings and a complete video performance, as well as a transcription, translation, glosses, and notes. This will be, by all accounts, the first edition created by scholars designed to be distributed in mobile devices. However, this is not to say that what the *CantApp* can achieve would have been impossible before digital editions.
12. <<http://thewasteland.touchpress.com/>> and <<http://shakespeares-sonnets.touchpress.com/>>.
13. See Gabler's 1984 edition of Joyce's *Ulysses* or any of the Nestle Aland editions of the Greek New Testament.
14. <<http://www.codexsinaiticus.org/en/>>.
15. The principal section of Codex Sinaiticus, amounting to 347 leaves is housed at the British Library, 43 leaves are in Leipzig University Library, 6 leaves are in St Petersburg in the National Library of Russia, while some 18 leaves are preserved in Saint Catherine's monastery (<http://www.codexsinaiticus.org/en/codex/history.aspx>).

16. At the moment, there is no system that is flexible enough to be use with all types of texts and that will take scholars from transcription and encoding through to final publication. There are some systems that do this in limited ways, either by being only capable of supporting certain types of standardized encoding, as is the case of *Classical Text Editor* (Hagel), or by only fulfilling part of the necessary role (as many modular solutions for the transcription, collation, and publication of texts that are in existence). *Textual Communities* (Robinson) should solve most editorial needs for editors not working on genetic editions. We hope that a complete version of the system with integrated collation tools and stemmatological software will be released in 2018.

17. <<http://www.janeaugusten.ac.uk/index.html>>.

18. The current online edition is dated August 2012 (Bordalejo, “William Caxton’s *Canterbury Tales*”).

19. During the drafting of the document, John Young co-chair of the CSE, while Paul Armstrong, Heather Bamford, Susan Brown, Kevin Brownlee, Julia Flanders, Steve Nichols, Kenneth Price, and Ray Siemens formed part of the Committee.

## Works Cited

- Bordalejo, Barbara. “Caxton’s Editing of the *Canterbury Tales*.” *The Papers of the Bibliographic Society of America* 108.1 (2014): 41–60. Print.
- . “The Manuscript Source of Caxton’s Second Edition of the *Canterbury Tales* and Its Place in the Textual Tradition of the Tales.” PhD. De Montfort University, 2003. Print.
- . *William Caxton’s Canterbury Tales*. Leicester, August 2012. Web. 26 June 2017. <<http://caxton.dmu.ac.uk/>>.
- Burgess, Anthony. Introduction. *A Clockwork Orange*. New York: Norton, 1986. Print.
- Causser, Tim, and Melissa Terras. “Many Hands Make Light Work. Many Hands Together Make Merry Work’: Transcribe Bentham and Crowdsourcing Manuscript Collections.” *Crowdsourcing Our Cultural Heritage*. Ed. Mia Ridge. Dorset: Ashgate, 2014. 57–87. Print.
- Chaucer, Geoffrey. *The Miller’s Tale on CD-ROM*. Ed. Peter Robinson. Scholarly Digital Editions, 2004. Web. 25 May 2018. <<http://www.sd-editions.com/AnaAdditional/miller/images/millerhome.html>>.
- . *The Nun’s Priest’s Tale*. Ed. Paul Thomas. Scholarly Digital Editions, 2006. Web. 25 May 2018. <<http://www.sd-editions.com/NP/index.html>>.
- Codex Sinaiticus*. Leipzig University Library, 2007-. Web. 12 May 2018. <<http://codexsinaiticus.org/en/manuscript.aspx>>.
- Crompton, Constance, et al. “Understanding the Social Edition Through Iterative Implementation: The Case of the Devonshire MS (BL Add MS 17492).” *Scholarly and Research Communication* 4.3 (2013). Web. <<http://src-online.ca/index.php/src/article/view/118/269>>.

- Dante. *Commedia*. Ed. Prue Shaw. Scholarly Digital Editions, 2010. Web. 25 May 2018. <[www.sd-editions.com/AnaAdditional/commediaonline/home.html](http://www.sd-editions.com/AnaAdditional/commediaonline/home.html)>.
- . *Monarchia*. Ed. Prue Shaw. Scholarly Digital Editions, 2010. Web. 25 May 2018. <<http://www.sd-editions.com/AnaAdditional/monarchia/index.html>>.
- Deegan, Marilyn, and Peter Robinson. “The Electronic Edition.” *The Editing of Old English*. Ed. Scragg, Donald S. and Paul E. Szarmach. Woodbridge: Boydell & Brewer, 1994. Print.
- Duxfield, Polly. “Transcribing the Estoria de Espanna Using Crowdsourcing.” *Magnificat: Cultura i Literatura Medievals* 2 (2015): 129–48. Web. <<https://ojs.uv.es/index.php/MCLM/article/view/4977/7071>>.
- Foys, Martin, ed. *Bayeux Tapestry Digital Edition, Bayeux View: Panel 1*. Scholarly Digital Editions, 2003. Web. 25 May 2018. <<http://www.sd-editions.com/bayeux/online/index.html#/facsimile%3DBayeux%26panel%3D1>>.
- Hagel, Stefan. *Classical Text Editor*. 1998-. Web. 25 May 2018. <<http://cte.oew.ac.at/>>.
- Jane Austen Fiction Manuscripts*. Ed. Sutherland, Kathryn. Oxford University and King's College London, 2010. Web. 25 May 2018. <<http://www.janeausten.ac.uk>>.
- Joyce, James. *Ulysses: A Critical and Synoptic Edition*. Ed. Hans Walter Gabler. New York: Garland, 1984. Print.
- Manly, John M., and Edith Rickert. *The Text of the Canterbury Tales Studied on the Basis of All Known Manuscripts*. Chicago: U of Chicago P, 1940. Print.
- McGann, Jerome J. *The Textual Condition*. Princeton: Princeton UP, 1991. Print.
- . *A Critique of Modern Textual Criticism*. Charlottesville: U of Virginia P, 1992. Print.
- McKenzie, Donald Francis. *Bibliography and the Sociology of Texts*. London: British Library, 1986. Print.
- MLA Committee on Scholarly Editions. *MLA Statement on the Scholarly Edition in the Digital Age*. N.p., May 2016. Web. 9 February 2018. <<https://www.mla.org/content/download/52050/1810116/rptCSE16.pdf>>.
- Nestle, Eberhard, ed. *Greek New Testament-FL*. Peabody, MA: Hendrickson Publishers Marketing, LLC, 2011.
- O'Donnell, Daniel. “Disciplinary Impact and Technological Obsolescence in Digital Medieval Studies.” *A Companion to Digital Literary Studies*. Ed. Ray Siemens, Susan Schreibman, and John Unsworth. Oxford: Blackwell, 2008. Web. <<http://www.digitalhumanities.org/companionDLS/>>.
- Online Variorum of On the Origin of Species*. Ed. Barbara Bordalejo, 2009–2012. Web. 25 May 2018. <<http://darwin-online.org.uk/Variorum/>>.
- Pierazzo, Elena. *Digital Scholarly Editing: Theories, Models and Methods*. Ox-

- ford: Routledge, 2015. Print.
- Price, Kenneth. "Electronic Scholarly Editions." *A Companion to Digital Literary Studies*. Ed. Ray Siemens, Susan Schreibman, and Alan Liu. Oxford: Blackwell, 2008. Web. <<http://www.digitalhumanities.org/companionDLS/>>.
- Robinson, Peter. "The Digital Revolution in Scholarly Editing." *Ars Edendi Lecture Series*. Ed. Barbara Crostini, Gunilla Iversen, and Brian Jensen. IV. Stockholm: Stockholm UP, 2016. 181–207. Print.
- . "What Is a Critical Digital Edition?" *Variants* 1 (2001): 17–36. Print.
- . "Project-based Digital Humanities and Social, Digital, and Scholarly Editing." *Digital Scholarship in the Humanities*, 31.4 (2016) 875–89. Print.
- . *Textual Communities*. 2012-. Web. 25 May 2018. <<https://textualcommunities.org>>.
- Sahle, Patrick. "What Is a Scholarly Digital Edition?" *Digital Scholarly Editing: Theories and Practices*. Ed. Matthew Driscoll and Elena Pierazzo. Cambridge: Open Book Publishers, 2016. 19–40. Print.
- Severin, Dorothy Sherman, dir. *An Electronic Corpus of 15th Century Castilian Cancionero Manuscripts*, 2006. 25 May 2018. <<https://cancionerovirtual.liv.ac.uk/>>.
- Smith, Martha Nell. "Electronic Scholarly Editing." *A Companion to Digital Humanities*. Ed. Ray Siemens, Susan Schreibman, and John Unsworth. Blackwell, 2004. Web. 26 June 2017. <<http://www.digitalhumanities.org/companionDLS/>>.
- The Shakespeare Quartos Archive*. Web. 2009-. 25 May 2018. <<http://www.quartos.org/index.html>>.
- Shakespeare's Sonnets » A New Perspective on the Immortal Sonnets*. Touch Press, 2012. Web. 25 May 2018. <<http://shakespeares-sonnets.touchpress.com/>>.
- Siemens, Ray, dir. "A Social Edition of the Devonshire MS (BL Add. MS 17492)." *Wikibooks, Open Books for an Open World*. N.p., n.d. Web. 26 June 2017. <[https://en.wikibooks.org/wiki/The\\_Devonshire\\_Manuscript](https://en.wikibooks.org/wiki/The_Devonshire_Manuscript)>.
- Siemens, Ray, et al. "Toward Modeling the Social Edition: An Approach to Understanding the Electronic Scholarly Edition in the Context of New and Emerging Social Media." *Literary and Linguistic Computing* 27.4 (2012): 445–61. Print.
- Tanselle, G. Thomas. Foreword. *Electronic Textual Editing*. Ed. Lou Burnard, Katherine O'Brien O'Keefe, John Unsworth. New York: MLA, 2006. Print.
- Transcribe Bentham*. Dir. Philip Schofield. University College London, 2010-. Web. 6 May 2018. <<http://www.transcribe-bentham.da.ulcc.ac.uk/>>.
- Trove*. National Library of Australia. 2009-. Web. 26 June 2017. <<https://trove.nla.gov.au/>>.
- The Waste Land: A Revolutionary Poem Brought to Life for a 21st Century Audience*. Touch Press, 2011. Web. 25 May 2018. <<http://thewasteland.touchpress.com/>>.