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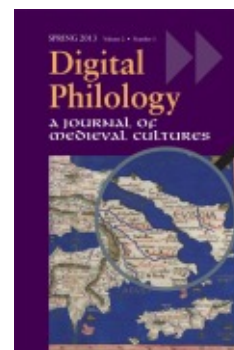
Old Light on New Media: Medieval Practices in the Digital Age

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Old Light on New Media
Medieval Practices in the Digital Age

▶ This essay offers an insight into the way digital editions of medieval texts can be employed to replicate the medieval reading experience. Awareness of the characteristic features of medieval textuality, exemplified through select late medieval texts, can help in developing increasingly flexible editorial models, which are more consistent with medieval reading practices than current editions. Editions, transformed from single textual occurrences into fluid, communal, and unfolding processes, can uncover a complex notion of medieval hypertextuality by linking texts, images, and tunes. They can then even trace the reception of a given text. As readers are empowered to zoom in and out specific textual components, of manuscript witnesses, of families and printed editions, digital editions can present individual witnesses alongside editorial apparatuses and thus bridge the gap between the Old and the New Philology.

Medieval texts often survive in a fragmentary and rather confusing manner. Only a fraction of the original textual evidence is available to the modern scholar. However, medieval works, which appear in analyses as the final result of a unique authorial intention, are in reality only elusive phantoms. Texts that are considered to be the same by modern textual critics, are preserved in manuscripts that differ significantly from one another: entire parts can be added or omitted from a particular manu-

script, and variations appear not only in wording, but also in length or format (such as scrolls/codices, or the presence of interlinear and marginal commentaries). Illustrations and musical notation were often integral to a given text. At times clear references to pictorial elements or diagrams survive in manuscripts, even though such elements may no longer accompany the text in these same manuscripts.[1] The material form of texts as they are present in medieval sources challenges our modern notions of textuality in many ways. The dawn of a new era in scholarly analysis and editing techniques opens new possibilities for digital editions to bridge the gap between the medieval and the modern concept of text. The following discussion of current solutions will exemplify attempts at displaying textual sources in multiple versions or including interconnected layers of information. This will lead to an exploration into the ways medieval textuality can be used to inform and transform digital editions, to become more flexible and more consistent with medieval reading practices.

The aim of traditional critical editions is to create the "best" version of a text following Lachmann's method: after the survey of all the surviving textual sources (*recensio*) and the collation of witnesses (*collatio codicum*), the reconstruction of a genealogical tree (*constitutio stemmatis*) follows, leading to an attempt at correcting the text on the basis of the genealogical relationship of the sources (*examinatio et selectio*), and at unearthing the original, authorial version with the help of further emendations (*emendatio*). Essentially, Lachmannian editorial techniques result in a hypothetical authorial version, one whose existence is merely assumed. Still, with the help of an *apparatus criticus*, readers are presented with important surviving variants that had occurred in the course of the transmission of a given text (Timpanaro). Since Lachmann's day, various methods have emerged for reconstructing the "best" version and selecting the preferred reading from among the variants. Recently, digital tools have been employed to create a *stemma* with the help of a computer-based analysis of variants (Roelli and Bachman). While this process unavoidably entails subjective interpretation and personal decisions, the end result is a hypothetical "original text" that gives an air of objectivity, too often treated uncritically by readers.

The New Philology (Cerquiglini; Nichols), a product of the late twentieth century, challenged this traditional approach. Its practitioners saw the Old Philology as too simplistic and misleading, and emphasized in its stead the value of each and every reading and variant preserved in manuscript sources. They claimed that a critical edition in the Lachmannian sense produces a sequence of words that was most prob-

ably never penned down nor read during the Middle Ages. By discarding the popular "vulgate" tradition of a text in favor of a hypothetical original version, modern editors produce a construction that has lost touch with surviving sources and their complex process of transmission.[2] The New Philology stresses the importance of every single manuscript witness of a given text as a special manifestation of the text's existence, meaning, and reception. However, to date, editions that have followed the theoretical tenets of the New Philology have neither employed nor ushered user-friendly techniques for the presentation of works that exist in multiple manuscript witnesses.

Old and New Philology are the two extreme ends in a scale of possibilities. The Lachmannian critical edition reduces the medieval variety into a single artificial reality. It gives an oversimplified picture, which nevertheless has the virtue of presenting a clear and manageable product. Readers are offered a text in a form similar to that of modern printed books: a sequence of words that can simply be read from beginning to end. The New Philology, on the other hand, emphasizes every manuscript witness and every textual variant as meaningful evidence, even when such inclusion testifies to a lack of comprehension. It aims at preserving an accurate picture of the materiality of medieval texts and is not willing to negotiate and reduce the complexity of the textual tradition (Adams; and Foys for early medieval cases). Yet, the tenets of the New Philology, which leads one to refuse evaluation, selection, and hierarchy, may result in a lack of transparency and clarity. The sheer volume of raw information may prevent readers from perceiving the text as a singular entity at all, deterring less experienced readers or inhibiting leisurely reading (Rico). This is not an absolute necessity. Multiple versions do not necessarily inhibit readership: segmented, non-linear, and hierarchical reading are, and have always been, a common phenomenon, appearing both in scholarly and more popular environments. Texts with footnotes and annotations necessitate diffused reading, as does the more leisurely custom of consulting a dictionary to understand a specific word, stopping mid-reading in order to decode an intertextual allusion, referring backwards to recall what has happened, or rereading a passage in a new light after discussing it with friends. The text as a singular, self-identical subject is primarily a product of the printing press, which restricted the number of circulating variants and obfuscated the diversity of manuscript culture. The digital environment does not require such parsimonious handling of surviving sources, as it has the potential to represent texts in a way that reflects their medieval existence. Yet, it seems that this potential remains unexploited in many digital editions that still carry on the burdensome heritage of the printed book.

The form of a codex, textual divisions and medieval letter shapes, have all survived the introduction of print, a testimony to tradition and repetition. The transition from printed books to digital editions is marked by a similar preservation, evident in the influence, the shape, and the structure of the printed page has exerted over recent media. Some digital editions are employing the new technology primarily as means of dissemination: they merely reproduce existing printed critical editions, even though their searchability, navigation, and referencing possibilities surpass their printed counterparts. Conceptually, they remain closely bound to the idea of a singular, final version of a text.[3] The power of the traditional page format with its centrally located main text and annotations at its bottom is so strong that it has become an integral part of the scholarly mindset. Scholars have grown used to thinking of their texts in the forms they take on a printed page. Such a mentality is resistant to change to such an extent that even digital editions that are not based on a previously printed version still tend to reproduce the appearance of one; their texts are presented as the visual reproduction of a printed book, although no such book has ever been printed.[4] The effect of print-mentality on the scholarly edition is not limited to mere appearances. By closely following the layout of a printed page, readers' attention is directed to a single text-body, which has been chosen by an editor.

This problem extends to the ways inner references follow the layout (or even mindset) of the printed page, using line numbering as means of textual navigation although it is not necessary in the digital environment. Some digital critical editions have successfully replaced the traditional, numerical referencing by encoded references. Thus, for example, in the *Online Critical Pseudepigrapha* a reader may click on a word to see its manuscript variants or a reference to a quotation (Scott). Yet, even these types of editions preserve the concept of a traditional Lachmannian critical edition: only a single main text created by the editor is presented, and readers do not have the opportunity to view a single textual witness, or a comparative visualization of selected manuscripts. Just as in traditional printed editions, it is still up to the reader to mentally reconstruct a particular manuscript version with the aid of footnotes and references.[5]

The basic tools of connecting pieces of information in the internet culture are encoded links. These are a key innovation of the digital era, and are gradually being accepted by editors of digital texts. A matrix of textual elements has the potential to transform the appearance of editions. It can extend beyond a singular text to create a fluidity that was

not foreign to medieval readers. Establishing links and references between various textual components (sources and variant readings alike) constitutes the backbone of editorial work. This work still attests to the transitional period between print and genuinely digital editions, with its unique problems. Editors are often wary of losing data. They still imitate a printed layout, which can be printed and stored as a physical object, thus maintaining functionality even when stepping outside the digital environment (although only with the limited functionality that printed editions can offer). Behind this conservatism is probably not only pure traditionalism, but also the ever recurring fear of losing these links—the primary outcome of editorial labor—due to the ever-changing nature of digital descriptive languages, which can render one's work futile. Obviously, editors fear leaving behind the security offered by a printable version. This is a moment of transition. Cloud computing and digital readers are growing in popularity to offer both alternative and replacement for the printed book. Conceptually, a major step forward is discernible in editions which aim to contain a full version of each and every manuscript witness in its entirety, thus providing readers with the experience of consulting an actual manuscript source, and preserving their freedom of choice. The simplest way of furnishing this experience is to include both the diplomatic transcription and the photographic reproduction of each textual witness, as can be seen in the *Corpus Medicorum Graecorum*, the *Parzival Projekt*, or the *Homer Multitext* (Dué and Ebbott). There the readers are able to select their preferred textual witness and read it detached from the entire textual tradition; they can thus focus on a single moment in the temporal and spatial continuum of the existence of the "text." All textual witnesses and all variant readings have equal rights and equal chances to be represented, and the choice belongs to readers. These editions are already employing the growing possibilities of visual presentation that are generated by the digital environment. Pioneering endeavors such as the *Roman de la Rose Digital Library* (romandelarose.org) clearly outperform traditional, printed critical editions, as they include the entire tradition of a text, imagined as stretching over time and space, rather than containing only a scholarly reconstruction of the state of the text as it was when it had been first written down. Readers are able to view and survey the state of the text in various locations, in different centuries, and zoom into a certain stage of its history, while still having the entire tradition at their disposal.

Theoretically, one can conceive editions in which every element of a text (be it a word, an image, a chapter number, or a functional unit

as a preface) is linked to all other variants of the same item in other manuscript witnesses. Such a digital critical edition would treat the textual tradition as a two-dimensional database: each element of the text would operate as the marker of a table, on which variant readings from all surviving manuscript versions are ordered. This can be imagined as an extended spreadsheet, in which each element is a column, and each manuscript a row. The readers may read the text continuously from one source instead of an eclectic critical edition, so to say horizontally. At the same time, they could control all the variants of an element of the text in every single manuscript witness, as if reading the table vertically. Linking textual variants to each other as well would support a diachronical (vertical) reading, which would unfold the way in which a text transformed over time. An experimental showcase of such an approach is the *New Testament Transcripts* at the University of Münster, in which transcripts of 2 to 26 manuscripts, collated against each other, serve as the basis for such an edition (Strutwolf et al.). Each word of the text serves as the starting point for two discrete reading strategies, each in a different direction: either to continue on to the following word of the New Testament, or to move to its variant in another manuscript. This approach greatly facilitates navigation among the variants of a given text. In a similar vein, useful tools have been developed (e.g., the *Versioning Machine*, based on TEI XML, www.v-machine.org) to offer a simple means of presenting multiple versions of texts online, while the presentation of several variants in parallel allows easy comparison between selected textual witnesses (Schreibman).[6]

These fresh approaches to textual criticism open a wider range of possibilities than ever before. Among other features, we believe that digital editions could re-constitute medieval ways of reading, and thus allow modern readers to get a more accurate and more immediate experience of medieval texts. Below we focus on such characteristics of medieval reading practices that grew obsolete with the coming of print, and with the separation of (hand-)writing and reading a mechanically produced printed book (Eisenstein; Febvre and Martin; Vandendorpe 15–16). We intend to argue that replicating the medieval reading experience can offer more than an eye-catching display of lavish manuscripts: in our view, it enables us to properly understand the continuous interaction between words and their material form, to thoroughly grasp the way medieval texts functioned.

Medieval perspectives in the digital era

1. Fluidity and openness

First and foremost, in a manuscript culture the definition of a *text* is far from obvious. Much fluidity and openness existed in versions of works that were copied under the same title. Medieval scribes and readers did not necessarily consider these versions identical, but they attributed the same function to them. Such functional approach rendered the boundaries of a *text* open and permeable. This is especially true for those text-types, which served as practical aids for the creation of further texts, whether oral or written: different collections of distinctions, authoritative quotations, *exempla*, preaching aids and prayer books could run under the same title, and one often fails to find clearly demarcated borders between such compendia.[7] Even extensive narrative works often served as a net of citations rather than a clear linear narrative.

The life of Christ was one of the most common narratives of the later Middle Ages, retold time and again orally, visually, and textually. Treatises on the Passion of Christ had been written both as a narrative, following a historical sequence, and typologically, linking the events of the story to scenes from the Old Testament. A good case in point is the treatise *Extendit manum*, written by the Augustinian hermit Michael of Massa at about 1330. The eleven surviving manuscripts could be neatly edited in the traditional Lachmannian manner. However, the subject of the treatise, a typological exposition of the binding of Isaac (Gen. 22.10) as related to the death of Christ, is linked with earlier and later retellings of the Passion story to such an extent that it would be difficult to represent the entangled relationship on the printed page. Verbatim accordances abound between the different versions, as with those of the *Meditaciones vitae Christi* (De Caulibus), Heinrich von St. Gallen, Ludolf of Sachsen, or Ulrich Pinder. Yet, the exact character of the transmission often remains unclear, and the definition of the source of vernacular translations is often lacking.[8] The integrity of the text or the original authorial intent appears to be of secondary interest. Rather, authors, scribes, and editors seem to have conflated several sources into one narrative for specific goals: informative (canonical and uncanonical events of the life of Christ, and their typological parallels) and functional (e.g., meditation on repentance during Lent). Such composite textual traditions, in which several versions are amalgamated into new variants, provide an important glimpse into the continuity between the contiguous notions of copy, version, and independent texts.

2. Non-linearity

Scholarly attention, and in its footsteps digital editions, has traditionally been drawn to linear accounts, be they chronicles, literary narratives, or homilies. However, the manuscript evidence reveals that non-linear texts proliferated all through the Middle Ages, and especially from the thirteenth century onwards (Rouse and Rouse, *Preachers*).[9] List-like glossaries and concordances, mnemonic works or image-centered treatises, all attest to a non-linear aesthetics prevalent in the Middle Ages. Such forms of non-linear strategies of reading and writing are evident also in the New Form of Preaching. While the earlier homiletic form was structured around a biblical narrative reading (the pericope), the New Form expounded upon a biblical segment in a complex array of major and minor divisions (Poleg, "A Ladder"). An extreme example of such a non-linearly structured text is the *Summarium biblicum*, a biblical mnemonic tool which summarizes the contents of the Bible, in which every biblical chapter is represented by a single word (Doležalová, "'Biblia Quasi in Saculo'"; "Mémoriser la Bible"; *Obscurity and Memory*). The chain of words is organized into hexameters and thus the whole Bible is condensed into some 200 nonsensical verses. Like all other lists, i.e. texts juxtaposing words with no syntactical relationships, the *Summarium* is much more liable to being textually corrupted in the course of its transmission.[10] In addition, it is not simply a *text*: it was primarily intended to be memorized, that is, stored in one's mind. Thus, the *Summarium*'s written copies are only snapshots of the mental images that were the primary form of its existence, and, as individual versions of the appropriated and digested information, they much differ from each other. The *Summarium* does not make any sense if read as a poem; it can be approached in a meaningful way only when divided into segments, each of them interpreted as a biblical reference. Even then it is *used* rather than *read*.

Digital media enable one to grasp divisions and specific elements of such non-narrative structures in a more efficient manner, as the digital environment itself gives preference to non-linear ways of reading and is capable of reproducing the medieval experience of such texts for modern readers. Every keyword or segment of a text has a place within an abstract sequence and can be connected to its glosses as well as the texts that are behind it (the Bible in the case of the *Summarium*). An entire cluster of information can be consulted in the same way as if it had been stored in one's memory. In addition, the variety of manuscript versions of texts, glosses, layouts, and scribal notes, could be browsed according

to individual interests and associations, thus offering readers a comparison beyond anything that could be offered by a traditional edition.

3. Interaction of text, image, and sound

One of the most striking features of the digital era is its multimedia nature, and the rich culture that evolves from the interaction of visual and aural experiences. Obviously, images and written texts have long coexisted in manuscript and print form. Images have related to texts in a variety of ways, mutually expanding or subverting the meaning of each other. In the medieval example, images had a more fundamental role than the simple juxtaposition of text and image. An image did not necessarily serve as an illumination to a specific textual point (as in most modern uses). Images structured textual elements. In works such as the *Castle of Prudence* or the treatise on the *Six Wings of the Seraph* (both intrinsically linked to late medieval preaching and penance), images served to expound and give structure to the entire narrative (Fletcher; Carruthers and Ziolkowski 83–102). Without the image—or at the very least a mental representation of it—the usability of the entire text was diminished.

In a popular late medieval treatise called *Nota hanc figuram* the pictorial elements are used as the main structuring device of the text, almost as a form of easily memorized table of contents (Kiss; Kiss and Doležalová). The text provides the reader with a stock of useful citations which are grouped according to twelve central Christian articles of faith (Creation, vices, virtues, Hell, Paradise, etc.). These could furnish authoritative arguments in a sermon. They could also guide meditation, penance and confession. The memorization of these citations is structured by a figure of a twelve-room house. Every room in the house contains four corners, to each of which a group of citations is linked. Clearly, these citations do not only form a linear chain, but they also engage in dialogue with images across the imagined space: they oppose the citations located at the same corner of the neighboring rooms.

The image forms an integral part of the way the meaning of the text was created, as the corresponding position within the image sets out the rules of reading. A table connected to the *Nota hanc figuram* treatise includes a list of virtues and vices, which are not only graphically opposed, but should also be sung to a melody, counterpoised at the interval of an octave, thus helping the user remember each pair of virtue and vice.

This textual superstructure is comprised of many more elements than simply letters: its conception is displayed by images that geometri-

Fig. 1: Image accompanying the text inc. *Nota hanc figuram...*, Prague, National Library, MS I.G.11a, fol. 17v–18r. Courtesy of the National Library.

cally reveal its internal correspondences, and assist in its memorization; the written text exposes the ideas and the ways in which these thoughts should be used; music provides a further structuring element by coupling the opposing virtues and vices that are to be meditated upon. This was truly a medieval multimedia experience, in which text, image, and tune joined to create one single meaning. Obviously, digital critical editions have an unprecedented potential for rendering the complexity of medieval use and enjoyment of such texts to the modern reader.

4. Reception

Origins and manuscript evidence are seen as paramount for every scholarly edition and comprise the backbone of its *apparatus criticus* and commentary. Reception and elements outside the immediate questions of manuscript transmission and textual allusions are much more elusive. Although integral to the reading experice of the Middle Ages, these have been marginalized in critical editions. Medieval works reveal a complex notion of intertextuality. One of its obvious manifestation is the image-text co-dependency addressed above. Much like a modern hypertext, visual, textual, performative, and musical echoes opened different strata and multiple layers of meaning to medieval audiences. Thus, for example, the appearance of the *Glossa ordinaria* in the twelfth century

constituted a unique form of medieval hypertext in linking Bible and commentary (Salomon). A line from the Psalm mentioned in a monastic chronicle brought associations not only with a scholarly edition of the Psalms, but also with its continuous chanting in the course of the divine office, or its unique appearance on the pages of an illuminated Psalter (at times accompanied by allegorical *tituli*). Sermon collections referred to visual images and literary narratives to church and civic rituals.[11] Many modern students of the Middle Ages lack the life-long liturgical experience of medieval readers, who often chanted the divine office day in and day out, immersing themselves in visual images or in religious songs and literature. By tracing and re-inserting these echoes, digital editions can provide the modern reader with an invaluable service.

The reception of a specific text is hard to track. Echoes of one medium in another are equally ellusive. However, their importance to our understanding of the rationale of its composition and reception and the medieval reading experience cannot be overestimated. The use of a text in the Middle Ages is far from evident, and surely not restricted to its immediate manuscript environment. An important example is the Interpretations of Hebrew Names (*Interpretationes nominum Hebraeorum*, hereafter *IHN*), a biblical glossary that guided readers through the complex and sometimes foreign text of the Bible, and exists nowadays in hundreds of late medieval Bibles. Its succinct definitions for the Hebrew, Aramaic, and Greek proper names of the Bible are far from a modern biblical glossary or gazetteer, and provide little in terms of literal understanding of the Bible (or for that matter, a clear allegorical, anagogical, or tropological understanding).[12] The true value of the *IHN* entries is revealed outside the scope of its manuscript tradition and that of the late medieval Bibles it accompanies. The entries of the glossary had a place of honor among late medieval sermons. Preachers—who often owned and consulted late medieval Bibles—made frequent use of the glossary in practicing an extremly elaborate form of preaching. The rise of the New Form of Preaching around 1200, with its intricate expansions of minute textual details, was contemporaneous with that of the *IHN* and of a new form of biblical manuscripts. Thus, the reception of this glossary offers a rationale for its evolution, nature, and later disappearance. Digital editions have the potential of unearthing the glossary's nature and explaining its popularity. Furthermore, although glossary and Bible cohabited the same manuscripts, their relationship cannot be taken for granted. A vast number of the entries (c. 40% based on sample entries) are biblical names that do not actually appear in the Bible they accompany. At the same time, the influence of the text—an

aspect seldom at the core of traditional critical editions—can be surveyed by examining the sermons in which these inventive interpretations of biblical characters turn up.

5. Integrity and scalability of information

While the New Philology has laid out clear theoretical foundations, primarily in reaction to the Old Philology's pursuit of a single imaginary text, its practicalities have remained largely unaddressed. The coexistence of multiple layers of information can easily dumbfound readers and users, especially if they are newly approaching the field. To prevent that bafflement, each witness should not be merely supplied, but also affixed with a certain value, in relations to other witnesses or an imaginary original text. This will preserve the readers' choice but also empower them to deploy as much, or as little, editorial input as they wish. The ability to concentrate on a single manuscript is paramount; but so is the opportunity to identify a closely-knit group of manuscripts, or to display editorial notes and suggestions for the existing text. Digital media can thus function in the vast grounds between the Old and the New Philology, presenting an interactive model for the deployment of original material and editorial additions.

An important issue in such a model is the *integrity of information*, presenting the various layers of textual, pictorial, and musical information in a way that is unobtrusive and replicates in the best way possible the medieval experience in a digital form. Variant readings, when relevant, should not necessarily take the form of a split-screen. While the appearance of an *apparatus criticus* was appropriate for printed editions, it is not the best visual means for their digital counterparts. The desire to juxtapose text and image, commentary and apparatus, has led websites and printed editions alike to divide and subdivide their screens or pages, assigning a designated area for text, image, commentary, and variants. The new technology, however, offers novel solutions which will then contribute to bridge the gap between traditional and new philology. Instead of separating text and variant, features such as "hover and click" now enable editors to present textual variants or commentaries as adjacent to the text, appearing and disappearing at will. This enables the visualization of different degrees of distance between variants, and brings back an editorial voice to the analysis of individual variants, perhaps less omniscient but nevertheless present and clear.

In digital editions there is a clear possibility of providing a number of interconnected layers of information and a variety of paths for the reader, offering both textual and iconographic comparison, as well as

contextual information (references, reception, manuscript descriptions, scribal identification, etc.). The active reader may not only choose one aspect but also explore the whole space in between them—for example, to view only the variants from a particular area or to zoom into a selected social or historical context—without obscuring the contiguous domains of information. A tool allowing this kind of scalable zoom of the focus is yet to be fully developed for digital editions.

The closest current endeavor is the abovementioned *Versioning Machine* customized by Marjorie Burghart, which allows one to view any number of manuscript witnesses of a text in parallel, with their variants highlighted (Burghart).[13] Interestingly, the program reconstructs the full texts of the individual manuscripts based on the variants noted down. Thus, the TEI XML encoded digital edition in the background of the Versioning Machine does not necessarily impose on the reader the necessity of having a main, critically established text—even though this option is still accessible, simply by choosing a different style sheet. The modern critical text and the manuscript variants run side by side. Ideally, by embracing the ability to zoom, readers may prefer using a critical edition, which reconstructs an original that may not have survived at all among the material evidence; they may just as well choose to follow the readings of a single surviving manuscript. Between the two extremes, *zooming* is created by the details that surround every single manuscript copy. The social and historical context of a manuscript could be presented to become an integral part of the zooming process: one can choose to restrict the displayed variant readings of a widespread text to witnesses from one monastery, one religious order, one country, or one century. Thus, with the help of the historically, geographically, or socially layered contextual data, the reader might be able to unfold a specific reading and a subsequent meaning that is completely different from that constructed from a traditional critical edition.[14]

6. *Creating an open text*

A user interface is crucial for engaging with complex and composite textual traditions. Texts in Latin as well as in a variety of vernacular languages raise challenges and offer rewards similar to the variants of an edition. Again, the possibilities that arise from merging, rather than separating the two, are numerous. The close proximity of variant languages, a hover or a click away, supports an in-depth engagement with multiple languages simultaneously, even for newcomers to the field. It presents an immediate notion of different languages in relation to a central text, in a way similar to the interlinear bilingual manuscripts

of the Middle Ages. This is most common in Psalters, as for example in BL, Arundel MS 230 (twelfth century, probably Peterborough), or Oxford, St John's College, MS 143 (thirteenth-century England); the former combines French and Latin, the latter Hebrew and Latin.[15] These manuscripts reveal that our efforts are similar to those of twelfth- and thirteenth-century scribes and scholars, whose commentaries engaged in dialogue with key texts (primarily the Decretals and the Bible) and necessitated establishing a link—in graphic means—between text and its commentary. This led to the creation and development of tie-marks, foliation, running titles, and chapter divisions. It perpetuated the work of reading and writing into a process that was never closed down.

Beyond appearance and user interface, digital means provide an opportunity to transform a publication of an edition from a singular occurence into an ongoing process, and from a concentrated effort of a closed group of editors to a communal enterprise, thus creating an open text. A controlled wiki environment as in the Simon online (Zipser), or the Wode Psalter creates a forum for discussion and enables external editors to take part in the development of an edition. This mode of engagement is especially pertinent for large projects, for complex texts whose interdisciplinary nature befits collaborative analyses, for texts that survive in numerous manuscripts, and for tracing the reception of a given text.

Comparing the possibilities of textual presentation in a digital environment with the practices of medieval transmission, it is possible to see a number of shared characteristics: there is not one correct text but rather a multiplicity of texts and variants; the reader/scribe takes part in adjusting the text (or creating a new one out of it); texts are not simple linear sequences of words, but instead they operate within complex networks, each with a number of other texts in connection with images (often reliant upon a mental image, as well). These aspects bring manuscripts and digital editions together, separated from the notion of a printed text, which is linear and closed, one that forces the reader or multiplier of the text to create identical copies. Both medieval and digital texts are open and fluid, they are not an occasion but a process: in each case, the work survives by making more or less personalized copies. Similarly, digital editions provide the means to modify a given environment to accommodate personal taste or scholarly engagement. The text remains elusive and protean: the individual versions are often personal and difficult to grasp, but, at the same time, they allow the reader to become much more active in the creation of meaning. Thus, not only does the creation of an edition become a process rather than

an act with a clear result, but reading is transformed as well (and along similar lines). The illusion of the existence of a text as a definable and stable entity disappears: meaning is constantly being created and recreated during the complex process of reading, in the minds of individual readers and through their cooperation, just as it happened in the monasteries, *studia*, and universities of the Middle Ages.

Notes

Research leading to this study was supported within a project "Medieval Latin Manuscripts in a Digital Environment" (part of a Mellon Foundation supported project "Innovative Scholarship for Digitized Medieval Manuscripts Delivered in an Interoperable Environment"), as well as by two Research Developmental Programs: "University Centre for the Study of Ancient and Medieval Intellectual Traditions" and "Phenomenology and Semiotics" (PRVOUK 18) both undertaken at the Faculty of Humanities, Charles University in Prague.

1. See Rudolph; and Sicard for the discussions around the Mystic Ark of Hugh of Saint Victor; see Evans 32–55 about the role of diagrams in transmitting knowledge; and see Smalley for the English friars' use of images in the fourteenth century.

2. This has happened in the case of many editions, see, e.g., the *Genealogiae deorum gentilium* of Giovanni Boccaccio: the earlier critical edition of Vincenzo Romano (1951) reproduced a single, autograph manuscript, to which the Renaissance readers had no access at all, and disregarded the extremely influential "vulgate" tradition (Boccaccio 1560–66).

3. A good example of such an edition is the invaluable critical edition of the works of Friedrich Nietzsche.

4. Here and below, we are dealing only with digital editions that are available online. As it is argued further, we consider openness a fundamental feature of medieval textual tradition, and suggest the modern digital editions should likewise allow the readers to express their opinion, and alter the arrangement of the text according to their own preferences. This is not possible in a CD-ROM edition.

5. Recently, Dot Porter has called attention to the need of terminological nuancing between different types of digital editions (Porter).

6. Solutions such as the Versioning Machine, where a single XML file contains all the information about the variants, and all the links to the reproductions, seem superior to those experimental editions, where every textual witness is encoded in a separate HTML file (e.g., in the case of the above mentioned *Parzival Projekt*). Even though the two solutions might seem similar at first glance, a single XML file with a style sheet obviously provides much more flexibility for display, and it might be much easier to handle even for a semi-XML-literate philologist.

7. A notorious case is that of the late medieval *Lumen anime*: see Rouse and Rouse, "The Texts"; Harris.

8. Just to quote a few examples of Polish Passion narratives from the late Middle Ages: *Pasja połocka*, *Fragment pasji*, *Rozmyślania dominikańskie*, *Sprawa chędoga o Męce Pańskiej*, *Męka Pana Yesusowa*. For lives of Christ, see *Rozmyślanie przemyskie* (*Rozmyślanie o żywocie Pana Jezusa*) and *Żywot Pana Jezu Krysta* by Baltazar Opec.

9. Moreover, there is significant evidence that even those texts, which are read in a linear way in modern times, had been read in a non-linear, excerpting manner. For the importance of non-linearity for medieval mnemonics, see Carruthers 99–113.

10. On lists in general, see Belknap; Eco; Spufford; and Doležalová, *The Charm of a List*.

11. The bibliography on the topic is vast as well as elusive. A few prominent publications include Bolzoni; Murray; and Alford.

12. The *IHN* has been in print until the seventeenth century, with varying degrees of accuracy. For a discussion of the use of the *IHN* with bibliography, see Poleg, "The Interpretations of Hebrew Names."

13. We would like to thank Marjorie Burghart for having shared her extensive knowledge of the subject with us.

14. For a different approach, see *Juxta Software*, a digital edition program working with parallel transcriptions of a text.

15. Similarly, the so-called *Florentine Psalter* (*Psałterz floriański*) from the fourteenth or fifteenth century combines Latin and vernaculars (Polish and German) line after line. In the fifteenth-century Hungarian chant on King Ladislas (*Szent László-ének*), we find the same couplets alternately in Latin and Hungarian, and the entire poem was probably conceived as a bilingual text.

Works Cited

Adams, Robert. "The R/F MSS of Piers Plowman' and the Pattern of Alpha/Beta Complementary Omissions: Implications for Critical Editing." *Text* 14 (2002): 109–37. Print.

Alford, John A. *Piers Plowman: A Guide to the Quotations*. Binghamton: SUNY P, 1992. Print.

Arundel Psalter. MS Arundel 230. British Library, London. Web. 15 Oct. 2012.

Belknap, Robert E. *The List: The Uses and Pleasures of Cataloguing*. New Haven and London: Yale UP, 2004. Print.

Boccaccio, Giovanni. *Genealogie deorum gentilium*. Ed. Vittorio Zaccaria. Vols. 7 and 8 of *Tutte le opere di Giovanni Boccaccio*. Ed. Vittore Branca. Milan: Mondadori, 1998. Print.

Bolzoni, Lina. *The Web of Images: Vernacular Preaching from its Origins to St Bernardino da Siena*. Trans. Carole Preston and Lisa Chien. Aldershot: Ashgate, 2004. Print.

Burghart, Marjorie, and Malte Rehbein. "The Present and Future of the TEI Community for Manuscript Encoding." *Journal of the Text Encoding Initiative* 2 (2012). Web. 15 Oct. 2012.

De Caulibus, Iohannes. *Meditaciones vite Christi olim S. Bonaventurae attributae*. Ed. Mary Stallings-Taney. Turnhout: Brepols, 1997. Print.

Carruthers, Mary. *The Book of Memory: A Study of Memory in Medieval Culture*. 2nd ed. Cambridge: Cambridge UP, 2008. Print.

Carruthers, Mary, and Jan M. Ziolkowski, eds. *The Medieval Craft of Memory*. Philadelphia: U of Pennsylvania P, 2002. Print.

Cerquiglini, Bernard. *Éloge de la variante: Histoire critique de la philologie*. Paris: Seuil, 1989. Print.

Doležalová, Lucie. "'Biblia quasi in saculo': *Summarium Biblie* and Other Medieval Bible Mnemonics." *Medium Aevum Quotidianum* 56 (2007): 5–35. Print.

———. "Mémoriser la Bible au Bas Moyen Âge ? Le *Summarium Biblicum* aux Frontières de l'Intelligibilité." *Cahiers électroniques d'histoire textuelle du LAMOP* 3 (2010): 1–45. Web. 15 Oct. 2012.

———. *Obscurity and Memory in Late Medieval Manuscript Culture: The Case of the* Summarium Biblie. Krems: Institut für *Realienkunde* des Mittelalters und der frühen Neuzeit, 2012. Print.

———, ed. *The Charm of a List: From the Sumerians to Computerised Data Processing*. Newcastle: Cambridge Scholars, 2009. Print.

Dué, Casey, and Mary Ebbott. *The Homer Multitext Library*. Version 1. The Center for Hellenic Studies, Washington, DC. Web. 15 Oct. 2012. <http://chs75.chs.harvard.edu/manuscripts/index.html>

Eco, Umberto. *The Infinity of List: An Illustrated Essay*. Trans. Alastair McEwen. New York: Rizzoli, 2009. Print.

Eisenstein, Elizabeth. *The Printing Press as an Agent of Change*. Cambridge: Cambridge UP, 1979. Print.

Evans, Michael W. "The Geometry of the Mind." *Architectural Association Quarterly* 12 (1980): 32–55. Print.

Febvre, Lucien, and Henri-Jean Martin. *L'apparition du livre*. Paris: Albin Michel, 1958. Print.

Fletcher, Alan J. "Variations on a Theme Attributed to Robert Holcot: Lessons for Late Medieval English Preaching from the Castle of Prudence." *Mediaeval Studies* 66 (2004): 27–98. Print.

Florentine Psalter. MS 8002 III. Biblioteka Narodowa/National Library of Poland, Warsaw. Web. 15 Oct. 2012.

Foys, Martin K. *Virtually Anglo-Saxon: Old Media, New Media, and Early Medieval Studies in the Late Age of Print*. Gainesville: UP of Florida, 2007. Print.

Galen of Pergamum. *Kommentar zu Hippokrates, Über die Gelenke: Die Einleitung und die ersten sechs Kommentarabschnitte von Buch I*. Ed. Christian Brockmann. Web. 15 Oct. 2012.

Harris, Nigel. *The Light of the Soul: The Lumen anime C and Ulrich Putsch's Das licht der sel*. Bern: Peter Lang, 2007. Print.

Juxta Software. Version 1.7. DMG/EXE/SH file. 15 Oct. 2012. <http://www.juxtasoftware.org/download>.

Kiss, Farkas Gábor. "Memory, Meditation and Preaching: A 15th Century Memory Machine in Central Europe (The Text 'Nota Hanc Figuram Composuerunt Doctores...' / 'Pro Aliquali Intelligentia...')." *The Making of Memory in the Middle Ages*. Ed. Lucie Doležalová. Leiden: Brill, 2010. 49–78. Print.

Kiss, Farkas Gábor, and Lucie Doležalová. "Le Pouvoir des Mots dans l'Art de la Mémoire à la Fin du Moyen Age." *Le Pouvoir des Mots au Moyen Age*. Ed. Nicole Bériou and Irène Rosier-Catach. Turnhout: Brepols, forthcoming.

Murray, Stephen. *A Gothic Sermon: Making a Contract with the Mother of God, Saint Mary of Amiens*. Berkeley and Los Angeles: U of California P, 2004. Print.

Nichols, Stephen G. "Introduction: Philology in a Manuscript Culture." *The New Philology*. Spec. issue of *Speculum* 65.1 (1990): 1–10. Print.

Nietzsche, Friedrich. *Digital Critical Edition of Nietzsche's Works and Letters*. Ed. Paolo D'Iorio. Web. 15 Oct. 2012. <http://www.nietzschesource.org/documentation/en/eKGWB.html>.

Pinder, Ulrich. *Speculum Passionis: Mit Kommentaren von Helmar Junghans und Christa-Maria Dreissiger: Neudruck der 1663 in Salzburg erschienenen Ausgabe mit kompletter Wiedergabe der Holzschnitte aus der 1507 in Nürnberg erschienenen Ausgabe*. Wiesbaden: L. Reichert, 1986. Print.

———. *Speculum Passionis domini nostri Jesu Christi*. Nürnberg: Pinder, 1507. Print.

———. *Speculum Passionis domini nostri Jesu Christi*. Nürnberg: Peypus, 1519. Print.

Poleg, Eyal. "'A Ladder Set Up on Earth': The Bible in Medieval Sermons." *The Practice of the* Bible in the Middle Ages: Production, Reception, and Performance in Western *Christianity*. Ed. Susan Boynton and Diane J. Reilly. New York: Columbia UP, 2011. 205–27. Print.

———. "The Interpretations of Hebrew Names in Theory and Practice." *Form and Function in the Late Medieval Bible*. Ed. Eyal Poleg and Laura Light. Leiden: Brill, 2013. 217–36. Print.

Porter, Dot. "Medievalists and the Scholarly Editions." *Scholarly Editing: The Annual of the Association for Documentary Editing* 34 (2013). Web. 15 March 2013.

Rico, Francisco. "Scholarly Editions and Real Readers." *Variants* 5 (2006): 3–14. Print.

Roelli, Philipp, and Dieter Bachmann. "Towards Generating a Stemma of Complicated Manuscript Traditions: Petrus Alfonsi's Dialogus." *Revue d'histoire des textes* 5 (2010): 307–21. Print.

Rouse, Richard H., and Mary A. Rouse. *Preachers, Florilegia and Sermons: Studies on the* Manipulus florum *of Thomas of Ireland*. Toronto: Pontifical Institute of Mediaeval Studies, 1979. Print.

———. "The Texts Called Lumen Anime." *Archivum fratrum praedicatorum* 41 (1971): 5–113. Print.

Rudolph, Conrad. *"First, I Find the Center Point": Reading the Text of Hugh of Saint Victor's* The Mystic Ark. Philadelphia: American Philosophical Society, 2005. Print.

Salomon, David A. *An Introduction to the* Glossa Ordinaria *as Medieval Hypertext*. Cardiff: U of Wales P, 2012. Print.

Schreibman, Susan. *Versioning Machine*. Version 4.0. Digital Humanities Observatory, Dublin, Ireland. Web. 15 Oct. 2012. <http://www.v-machine.org>.

Scott, Ian W., ed. *The Online Critical Pseudepigrapha*. Society of Biblical Literature. Web. 15 Oct. 2012. <http://ocp.tyndale.ca>.

Sicard, Patrice. *Diagrammes médiévaux et exégèse visuelle: Le* Libellus de formatione arche *de Hugues de Saint-Victor*. Turnhout: Brepols, 1993. Print.

Smalley, Beryl. *English Friars and Antiquity in the Early Fourteenth Century*. Oxford: Blackwell, 1960. Print.

Spufford, Francis. *The Chatto Book of Cabbages and Kings: Lists in Literature*. London: Chatto and Windus, 1989. Print.

Strutwolf, Holger, et al., eds. *New Testament Transcripts Prototype*. University of Münster Institute for New Testament Textual Research. Web. 15 Oct. 2012. <http://nttranscripts.uni-muenster.de/>.

Szent László-ének. MS MNy 12. Országos Széchényi Könyvtár/National Library of Hungary, Budapest. Web. 15 Oct. 2012. <http://nyelvemlekek.oszk.hu/adatlap/szent_laszloenek>.

Timpanaro, Sebastiano. *The Genesis of Lachmann's Method*. Ed. and trans. Glenn W. Most. Chicago: U of Chicago P, 2005. Print.

Vandendorpe, Christian. *From Papyrus to Hypertext: Toward the Universal Digital Library*. Trans. Phyllis Aronoff and Howard Scott. Urbana and Chicago: U of Illinois P, 2009. Print.

Von Eschenbach, Wolfram. *Parzival*. Ed. Michael Stolz et al. Web. 15 Oct. 2012. <http://www.parzival.unibe.ch/editionen.html>.

Wode Psalter Project. University of Edinburgh, School of Divinity. Web. 15 Oct. 2012. <http://www.ed.ac.uk/schools-departments/divinity/research/projects/wode-psalter/research-forum>.

Zipser, Barbara, ed. *Simon Online: A Collaborative Edition of Simon of Genoa's Clavis Sanationis*. Royal Holloway University of London, Department of History. Web. 15 Oct. 2012. <http://www.simonofgenoa.org>.