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# Digital Classical Philology and the Critical Apparatus

**Abstract:** The critical apparatus has been trade mark for classical philology ever since the development of the genealogical method and the establishment of the historical-critical edition. Its purpose is to justify the *textus constitutus* by displaying all significant variations in the history of a classical text and thus making editorial decisions transparent. Within digital scholarship, the critical apparatus tends to be perceived as a sign of methodological inadequacy and technological backwardness. Conceptual achievements of digital textual scholarship and their prototypical implementation into digital scholarly editions and library projects – even if mostly concerned with Medieval Latin, vernacular or modern literature – have developed a range of innovative practices, formats and features. These may help not only to transpose and vindicate the role of the critical apparatus in a digital environment but also to enhance its original core functionalities.

## Introduction

In the past decade, several excellent studies have been published on the nature and appearance of digital scholarly editions, providing a broad overview and an in-depth analysis of the current state of the art regarding practices and theories in digital textual scholarship.<sup>1</sup> On the other hand, there is a century to look back on that produced highly instructive introductions into textual criticism and the art of critical editing.<sup>2</sup> This essay has nothing to share but some observations on the critical apparatus in a digital setting. It draws examples from my personal background that is informed by digital Medieval Latin critical editions, for the most part, due to the fact that there are still very few editions in digital classical philology that are both digital and critical. In doing so, this article

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1 E.g. Sahle (2013), Pierazzo (2015a), and here especially, Apollon et al. (2014).

2 From Stählin (1914, first ed. 1909), Havet (1911), Maas (1927) and Pasquali (1934); over Bieler (1947), West (1973), Huygens (2000); Bourgain and Vielliard (2002); up to Reeve (2011), Tarrant (2016) and Trovato (2017) – to name just a few. For a concise description of the most prominent concepts and protagonists, see, e.g., Driscoll (2010, 87–95); Greetham (2007).

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wants to address the question of what it means to be digital and critical. What is actually critical about a digital critical apparatus? And what is digital about it? What could be its use?

## “Oh, you read Aristophanes without a critical apparatus.” – What is textual scholarship, really?

The anecdote about Eduard Fraenkel’s revelatory encounter with his university teacher Friedrich Leo is often recalled as a prime example for illustrating the fundamental importance of what seems to be just some negligible textual feature to the common reader:<sup>3</sup> Invited for a Sunday lunch to his future mentor’s home in Göttingen around 1910, the young and enthusiastic Fraenkel had to confess that he read Aristophanes in the uncritical Teubner edition. Leo’s genuinely surprised reaction made Fraenkel feel deeply ashamed: “Oh, you read Aristophanes without a critical apparatus”, and it was at that moment that he realized “what textual scholarship really is”.

The critical apparatus is an essential part of any scholarly edition, philology’s most notorious feature, a manifestation of textual criticism itself. It provides the aura of a scientific, scholarly, reliable and authoritative text. The apparatus makes any text distinct to just ordinary texts, randomly published or passed on. In a way, the apparatus is to philology what the halo is to Christian iconography: an element to distinguish the saint from the sinner.

And just like the halo is vanishing in a secularized world, so does the critical apparatus seem to disappear in digital scholarship. While other areas within the domain of classical philology have taken advantage of new possibilities offered by the digital medium and even turned out to prosper (as demonstrated by the other contributions in this volume), the fate of the critical apparatus in digital classical philology has been mostly unfortunate so far.

A child of the print culture, the critical apparatus has been abandoned in digital corpora, regrettably removing all critical features of the original print publications (including introductions, *apparatus fontium* and indices), providing the plain text only, which, to make things even worse, is often not taken from the most recent scholarly edition for restrictive copyright reasons. As for those critical editions (of mostly vernacular works) that have been published in

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<sup>3</sup> “[...] was ordentliche Philologenarbeit bedeutet”. Recalled by Fraenkel himself in his introduction to the collection of Leo’s articles (1960, XL–XLI), retold by his pupil Martin Litchfield West (1973, 7) and again recently by Richard Tarrant (2016, 124–125).

a digital format, they seem to have turned the Holy Grail of textual criticism into some uncritical bag of variants, according to traditional philologists, automatically produced by collation software, incapable of adding any critical value. Yet from the other perspective, in the eyes of many digital and non-digital readers, the critical apparatus appears to be a graveyard of variants, with no bearing on the conditions of the living. Some have even gone so far as to express their contempt (or ignorance) by calling it outright “crapparatus” (as reported by Keeline 2017, 349).

## Lachmann, lost in the digital world

The birth of the critical apparatus has been dated to the mid 17th century: The notes on Lucretius by the Dutch Renaissance philologist Daniel Heinsius seemed to have had that typical format which then was going to be adopted by the mid 18th century grammarians.<sup>4</sup> The apparatus was then further developed as a means to enable the reader to retrace and verify all editorial decisions for the reconstruction of a historical text that is extant in various witnesses, tracing back its history of transmission down the pedigree of manuscript copies as closely as possible to a lost archetype (which philologists must never get tired to stress is not necessarily the author’s intended version). Notoriously, this genealogical or stemmatological method was established by the philologist Karl Lachmann (1793–1851) and spelled out by later philologists. In 1927, most influentially, Paul Maas defined a small set of rules for the reconstruction of the original and for the subsequent presentation of the critical text comprising the preface, the text itself and the apparatus criticus underneath.<sup>5</sup>

The stemmatological method has been criticized by scholars who did not share the idea of textual reconstruction, most notably the French scholar Joseph Bédier (1864–1934) and other philologists working with medieval vernacular text traditions such as the advocates of a Material or New Philology that gained traction with the publication of Bernard Cerquolini’s polemic essay *Éloge de la variante* (1989). That criticism eventually resulted in what has been

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<sup>4</sup> Flores and Tomasco (2002). The term itself, *apparatus criticus*, “may have been used for the first time in Bengel’s book title *D. Io. Alberti Bengelii Apparatus criticus ad Novum Testamentum, Tubingae 1763*” (Conti and Roelli 2015). On the genesis of Lachmann’s method, see Timpanaro (2005) (first ed. 1961); on its fate in the age of post-structuralism, see Trovato (2017).

<sup>5</sup> Maas already noted that the critical apparatus “is placed underneath the text simply on account of bookprinting conditions and in particular of the format of modern books” (§23).

called “Bédier’s schism” (Trovato 2017, 77) between those scholars abiding the genealogical analysis for establishing a critical text and those scholars giving priority to a single text that actually existed. As a consequence, the whole field of textual scholarship has been further advanced and diversified while classical philology seems to have remained completely unimpressed. Combining methodological efficiency with scholarly rigour, the general appropriateness of the genealogical approach to classical works has never been questioned although it has been contrasted and refined through the work of Giorgio Pasquali (1934) and other, mostly Italian, philologists in his succession who have focused on the history of transmission and taken contaminated traditions into account.

At the same time, in the digital humanities world, a wide range of new methods and formats for editing and analysing historical texts and documents has been developed in the past decades, taking advantage of the possibilities offered by digital technology and online publication that can provide digital facsimiles of manuscripts witnesses, overcome space restrictions and restrictions of accessibility. Other achievements seem too obvious to even warrant mention: search functionalities, copy & paste, and, most importantly, the whole world of hyperlinks and inter-linkage, internally, within the edition as a complex scholarly resource, and externally, to the wide and open field of linked open data, authority files, digital libraries and other knowledge resources.<sup>6</sup> Still, there are only very few critical editions of classical works available on the internet. The actual research of a classicist today is carried out more and more in the digital realm: mining digital text collections and corpora, databases and other resources, using search engines, tools and software applications. Meanwhile, the most important sources for the classicist’s work, critical editions of primary texts, are kept in libraries, on bookshelves, between the covers of costly print editions. Or, at the height of innovation, as PDF documents behind a pay wall of a publisher or illegally on some arcane server in no-man’s land.

This is nothing new. And many a time the question has been raised: Why are there no digital editions of classical texts? Several explanations have been brought forward such as computer illiteracy among philologists, the lack of time and money, the lack of tools, or the lack of career perspectives in classics departments. But first and foremost, the reason seems to be that there is no need (Monella 2018): Classical philologists do not focus on documents and they

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<sup>6</sup> Suitable starting points for a systematic overview of the ever-growing field of digital scholarly editions might be the two online catalogues by Sahle (2008–) and Franzini (2012–); for critical reviews, the review journal for digital scholarly edition RIDE; and for a colourful snapshot, the volume on *Advances in Digital Scholarly Editing* edited by Boot et al. (2017).

do not focus on variance – both of which areas where digital philology is particularly strong. Instead, classical philologists are interested in canonical regularised text versions: in one text, in one language. Besides, they are not willing or able “to see, and embrace, the real potential of digital media”, for the fear of losing control “over the way in which ‘their’ texts are presented”.<sup>7</sup>

It does not take a prophet to realize that, eventually, even editors of classical works will have to go digital. But going digital, which editorial model should they follow? What are philologists today supposed to do? Paolo Monella (2018, 152–153) suggested to widen their research agenda, to embrace a plural and fluid concept of text, to join forces with post-classical philologists and historical linguists and to create comprehensively digital editions that provide transcriptions of all witnesses and apply digital tools for an automated creation of critical text versions – because only this, as has been proclaimed, would produce “truly digital editions”.<sup>8</sup> However, while broadening the agenda and embarking on truly digital edition projects, classical philologists must not give up on the ideal of a critical text and the ideal of some uniform editorial format for authoritative, critical text editions. In fact, in recent years a rather proactive international research group has reinforced the field of stemmatology as an integral part of digital textual scholarship resulting in the publication of the *Parvum Lexicon Stemmatologicum* and a handbook on *Stemmatology in the Digital Age*.<sup>9</sup> This brings us back to a very practical question.

## What to put in the critical apparatus?

Underneath the text, according to Maas (1927 §§ 23–24), deviations from the archetype should be noted: rejected variants, sub-variants and groups of variants from lower down in the stemma may or may not be indicated, as well as uncertainties, changes of witnesses and brief justifications of editorial decisions. The discussion about what exactly to put in the apparatus has always been vital among philologists ever since. Variance according to the Lachmannian approach is considered as merely instrumental to the goal of reconstructing the original text; minor and immaterial variants and mistakes of later scribes are considered insignificant and distracting. Historical evidence of textual transmission is seen

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7 (Driscoll 2010, 104).

8 (Andrews 2012).

9 (Roelli and Macé 2015); (Roelli, forthcoming).

as a tool – or a hindrance – in the business of textual criticism to produce a *textus constitutus*. In this regard, it has no meaning in itself.

Nowadays, the selection of variant readings for the critical apparatus can be categorized as two opposing editorial practices, the maximalist and the minimalist approach.<sup>10</sup> The minimalist approach aims at the establishment of a clear and legible apparatus as an elegant result of the editor's judgement and craftsmanship, often at the cost of transparency. The maximalist approach seeks to include a much wider range of variants and varying textual flavours from a multitude of manuscript witnesses and previous editors, thus creating an expansive, at times overcrowded apparatus. In practice, most publications series and textual scholars develop an individual "editorial style" that is somewhere in between those competing ideologies which has led Gilbert Murray to come up with his famously infamous dictum:

"An *apparatus criticus* [...] is a list of the MS. variations, with occasional remarks thereon. Only men of the highest moral character, religion, and social grace can produce one satisfactorily."<sup>11</sup>

This may or may not remain true. The distinctive properties of a good editor may be replaced by labels more adequate to present-day terminology. Without doubt, Murray's statement needs to be rephrased to gender-equitable language. Manliness as a supposedly scholarly virtue has long been abolished (even if gender-related biases and inequalities remain<sup>12</sup>). However, the problem of choosing remains. And for this all those handbooks and introductions by distinguished scholars and experienced editors are full of masterly advice how to avoid arbitrary choices about what information to include or exclude and how to balance accountability with readability, comprehensiveness with conciseness.

## The reconciliation of Bédier's schism

In digital philology, for one thing, the question of what to put in the apparatus has become less existential. Digital editions are able to combine both approaches, the maximalist and the minimalist. From the ability to combine the two contradictory convictions an obligation arises because the mutually excluding justification is no more valid. Digital editors should give both a record

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<sup>10</sup> (Bourgain and Viellard 2002, 79–86); (Tarrant 2016, 129–140).

<sup>11</sup> (Archer 1936, 37).

<sup>12</sup> Cf. Warren (2013).

of textual variance that is as full and complete as possible – or at least, if that burden is too high, provide the means that allow for a progressive completion of that record – and a critical assessment of it. How so?

In 2007, I published the online edition *Summa de officiis ecclesiasticis* of the Parisian Master William of Auxerre (†1231). This was not only the first-ever edition of William’s so-called “small *Summa*” (his big one is the widely acclaimed *Summa aurea*). It has also been considered the first-ever born-digital critical edition created of a Latin work, albeit Medieval Latin and even though the method is not strictly genealogical.<sup>13</sup> Full transcripts of all 15 manuscript witnesses (comprising some 75,000 words each) for full-automated collation were no option. Instead, three manuscript witnesses were chosen based on a preceding stemmatological analysis: two witnesses representing the two main branches of the textual transmission to be collated against the transcript of one principal manuscript witness, in this case a copy made by an especially distinguished scribe. An odd editorial decision in favour of the “maverick” one, owed to the spirit of Bédier and Cerquilini. Nevertheless, this transcript was only the starting point for establishing a critical text; a corrected and slightly normalised text version furnished with a threefold apparatus, presenting (a) all substantial variants of the three manuscripts, (b) all biblical references and other sources, and (c) references to the works of William Durandus of Mende’s *Rationale* and Jacobus de Voragine’s *Legenda aurea*, both of which borrowed passages from William’s *Summa*, and quite extensively so in the case of William Durandus. In addition, every chapter gives hyperlinked references to digital facsimiles of each manuscript page witnessing the present text passage.

The critical text including apparatus notes and references is generated from large data set of the critically enriched and marked up transcript of the principal manuscript. The set of variant readings in the chosen manuscripts is complete. Each variant is marked up as insignificant, significant or as the preferable lemma for the critical text. A pipeline of rule-based transformations then creates the intended presentation of a normalized, corrected and emended critical text and respective apparatus notes. All rule-based transformations draw upon the editor’s critical assessment of the variant readings.

Despite any methodological flaw one might observe, the key aspect here is that the editorial task of recording variance, its assessment and the decision if and how it should be displayed in the critical apparatus of the critical text to

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<sup>13</sup> See Fischer (2008; 2013). For a more complete picture of digital critical editions preceding the *Summa* (deliberately refraining from the constitution of a critical text), see my chapter on “The presentation of the critical text” in Roelli, forthcoming (ch. 7.3).

be, are encapsulated in distinct units of information. They can, in principle, be modified and reassessed according to the editor's preference and presented in different ways for different purposes. Conceived almost two decades ago, revised almost ten years ago, this digital edition lacks many widgets and functionalities, not least dynamic features for user interaction and progressive enrichment. Its prototypical chain of transformational scripts may not be reused in any other editorial enterprise. However, it marks an ontological shift of the critical edition and the critical apparatus in particular towards what has been coined "transmedialisation" (Sahle 2010). The current change from print to digital editions is not primarily a change in publication formats. Printed critical editions provide a text that is characterized by the unity of content and form. Usability and readability of the actual text and the apparatus are based on static presentation. The very essence of the critical text is set in print with a conventional and clearly designed page layout. In contrast, digital scholarly editions are characterized by the *separation of content and form*. Content is captured and maintained as data and metadata, that is, in the form of digital image files and encoded text. It is represented in data models and formats that are agnostic to and independent from any presentational format or medium. In that sense, they transcend mediality. Any publication of the content data as a fully-fledged and fully-functional edition accessible for the common reader or scholarly user is but an optional realization of an editorial perspective, a selective spin-off and visualization from the complete data set.

And even further, the actual critical text (as presented in the digital edition of William of Auxerre) does not exist in the code, nor do the entries of the critical apparatus exist in the code as such but only potentially, *in potentia, potentialiter*.

## Apparatus amplificatus

A very different digital approach has been taken for the digital edition of Saint Patrick's *Confessio*, an open apologetic Latin letter from the 5th century and the oldest text written in Ireland – in any language – that has survived. The text of the *Confessio* already existed in a "well crafted" edition of "canonical" status with a "balanced" apparatus (to use the words of traditional philologists) reflecting all variants of a conveniently small set of only eight extant manuscript witnesses, provided by the "distinguished" philologist Ludwig Bieler in 1950. The digital edition was conceived as a digital stack of textual layers of manuscript facsimiles, relevant prints and facsimile editions, translations, paratexts and other additional content. *At the centre* of the stack is the critical text with

the threefold apparatus, closely connecting all textual layers passage by passage via extensive use of hyperlinks, hence the term *HyperStack* in the project's title. Hovering over an apparatus entry, for example, will highlight the referenced lemma in the base text. In the apparatus entry itself, all sigla of individual witnesses are linked to the digital facsimile of the relevant page; abbreviations and sigla of witness families are resolved by a mouseover effect. All keys and symbols are linked to a list of definitions and descriptions; bibliographical references are linked to a comprehensive bibliography; biblical references are linked to external, online versions of biblical books; and testimonia are linked to the texts of Patrick's two earliest biographies which are also included in the edition.

All these features have been implemented by means of a deeply encoded text and apparatus, making explicit to the machine what otherwise, in print editions, gets implicitly understood (or not) by readers (in effect a small number of peer scholars) through their interpretation of the (often idiosyncratic) conventions of such editions. One idea behind these efforts is to draw readers (scholars and laypersons alike) into what Patrick actually wrote, from translation to original Latin to manuscript and back again. Continuously evaluated user statistics – not least around Saint Patrick's Day each year – seem to indicate that this intention has actually succeeded.

Readability and usability of the apparatus have been significantly increased by digital amplification, encouraging readers to immerse themselves in the history of the texts. This development would be welcomed by philologists even as distant as Paul Maas, who claimed: “Our *apparatus critici* have too little life in them” (1927, §24) and Richard Tarrant, stating that “the apparatus should be an invitation to the reader to engage in a dialogue with the editor”, and encouraging editors to give their critical notes “a more personal voice” (2016, 141). Tom Keeline envisages an even more dynamic apparatus that allows readers to take an active role in constituting their own texts: “The dream for a digital apparatus is to record everything, but to tag each piece of the material with metadata so that all available information is placed on permanent record, but the user can pick what is actually displayed” (2017, 351).

In addition, mark-up of critical notes can include information about types and categories of each apparatus entry.<sup>14</sup> With textual annotation it can be specified whether it is about variant readings and if variance is substantive or just orthographical; other textual categories could indicate if they concern conjectures, deletions, corruptness, transpositions, lacunae, marginal or interlinear additions, punctuation, speaker attribution or structural differences regarding

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<sup>14</sup> In a couple of editorial projects it does; for references see Fischer (2017, 278–279).

boundaries between books, chapters, paragraphs, poems, stanzas, verses etc. Intertextual annotation could make explicit if it refers to sources, parallels, testimonia, later usage, or *nachleben*, i.e. modern allusions and imitations. Other type attributions for critical annotation can be exegetical, metrical, and rhetorical, or even more specifically, figure of speech, trope or style. Options and possibilities are endless. The actual benefit of the explicitness of such categories in the mark-up depends on the analytical potential of the data and functional presentation formats – besides the encoder’s technical and philological ability.

## The primacy of the data model

The few digital editions of classical texts that exist are meritorious for being both scholarly and online. However, they are based on a flat data model<sup>15</sup> or, rather, on a print-oriented data model, such as those exported from the widely used Classical Text Editor.<sup>16</sup> This is why they cannot yet live up to the great expectations of content and feature rich, truly digital editions. In fact, these editions would fall short of Sahle’s restrictive definition of being digital: “A digital edition cannot be given in print without a significant loss of content and functionality” (2016, 27). Because they can.

The creation of intuitive and powerful interfaces for reading digital critical editions and their integration into larger collections and publication frameworks mainly depends on a suitable data model that is maintained and accepted by a wider community of digital philologists. For this, Hugh Cayless (2018) advocated the primacy of the data model in connection with the efforts by the Digital Latin Library (DLL; cf. Samuel J. Huskey in this volume) to create a practical editing environment and publication venue for digital critical editions of Latin texts that are supposed to combine intelligent design with a wide range of features and functionalities. Cayless and with him many other digital textual scholars even go so far as to maintain that the data is the “actual” edition – beyond any presentation or user interface.

This assertion goes hand in hand with the other reason for privileging the data model over any presentational format: the sobering awareness that every presentation will pass. Any digital edition published on CD-ROM or on the internet will break at some point. All software *is grass*, so to speak, *and all its beauty is like*

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<sup>15</sup> E.g. the editions published on the Curculio portal by Michael Hendry (cf. Monella 2018, 142, fn. 4) or the Euripides Scholia edited by Donald Mastronarde.

<sup>16</sup> E.g. the digital edition of *Kleine und fragmentarische Historiker der Spätantike*; cf. Fischer (2017, S267–S268).

*the flower of the field: The grass withers, the flower fades* (Isaiah 40, 6–7). If anything, only the data will survive, or has a potentially long half-life at least, and only from the data any scholarly edition can be brought to new life. The guidelines of the Text Encoding Initiative are a most impressive testimony of that belief.<sup>17</sup> As of today, almost two thousand printable PDF pages are the result of four decades of an intense and continuous scholarly discourse about a data model capable of creating a record of textual information that is as accurate and complete as possible, and at the same time machine-readable, interoperable and reusable in other contexts or formats. The TEI offers a full arsenal of tags, attributes and tools for a consistent encoding of all of those above stated phenomena. The guidelines dedicate a full chapter (ch. 12) to the encoding of the critical apparatus, suggesting three different methods how to link the apparatus to the text. Symptomatically, as it seems for the relationship of classical and digital philology, the chapter is not the TEI's favourite child. The proposed data model owes its design to the traditional apparatus and can be seen as a physical embodiment of traditional textual criticism more so than a coherently formulized abstraction of textual criticism itself – if there is such thing. So far, several attempts of a dedicated working group to revise the chapter have faded without notable effect.

## More innovative aspects

The development of a standard data model is also the basis for another innovative concept of digital scholarly editions: the idea of a distributed architecture. Most recently, Joris van Zundert made a case for digital editions that are conceived as a network of resources as opposed “to the architectural nature of the majority of current digital scholarly editions, which are still mostly monolithic data silos” (2018). The critical edition of Petrus Plaoul by Jeffrey C. Witt (2011) can be seen as a prototypical implementation of that concept. The edition queries facsimiles of manuscript witnesses from external databases and repositories. The technical framework operates on the reference standard IIF (International Image Interoperability Framework) adopted by a growing number of archives and libraries that provide digital surrogates of their manuscript collections online. That way, editions or any dedicated software applications are able to retrieve and embed the image data.<sup>18</sup>

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<sup>17</sup> Maybe, or maybe not fatefully ensnared by XML technology; cf. Pierazzo (2015b); Cummings (2018).

<sup>18</sup> (Witt 2018).

One can easily imagine that such distributed architectures could be further complemented by other types of external or outsourced repositories: those collecting and analysing variants from a defined set of manuscripts (e.g. from the three copies of Dante's *Commedia* written by Boccaccio; see Tempestini and Spadini 2015–2018) or those compiling conjectures on the work of a given author (e.g. on the work of Catullus; see Kiss 2013–2017) or those collectively accumulating transcripts, collations and other data related to a massive manuscript tradition (e.g. of the Greek New Testament as gathered in New Testament Virtual Manuscript Room) – always provided that the relevant data is accessible in a predictable way to the edition as a “data consuming application”.<sup>19</sup> Feeding distributed data into networked resources, the work of a critical editor – *Philologenarbeit* (according to Fraenkel), grammarian's craft (according to Bieler), *ars edendi* (according to Huygens) – might become the work of a critical synthesizer.

Witt's edition is pioneering in two further respects. First, the edition is “progressive” which means that it was published in a pre-critical stage. Text and apparatus are a draft. Readers are invited to register and improve the text by leaving comments or by suggesting additions or corrections of variant readings from relevant witnesses. Second, in order to facilitate the critical engagement with the text, a collation tool has been implemented into the edition: As soon as transcripts of the witnesses for a particular passage are available, they can be automatically compared against each other and textual differences can be highlighted.

## Concluding remarks

Despite a somewhat troubled relationship, digital philology has wrought a number of technical and methodological innovations concerning the critical apparatus that may help to overcome some of the shortcomings of printed critical editions. Integrated into an array of further critical features of a digital edition,<sup>20</sup> the critical apparatus can become a powerful tool connecting the *textus constitutus* to the evidence of the manuscript witnesses, thus enabling readers to verify editorial decisions or otherwise make their own hypotheses – which are, in fact, core functions and *raison d'être* of any critical apparatus.

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<sup>19</sup> (Witt 2018).

<sup>20</sup> Cf. Fischer (2017, S278–S280).

It has been demonstrated by some prototypical realisations of digital critical apparatuses that a major achievement of digital philology is the separation of content and form, data and presentation. As a consequence, large amounts of visual and textual data can be included: manuscript facsimiles, transcripts, collations and further exhaustive documentation. On the content side, this data can be categorized and qualified by the critical encoder-editor in order to create a critical representation of the textual transmission. In the code, all critical assessments and editorial decisions can be made explicit and formalized with the goal of creating consistency and ultimately – the philologist’s dread or dream – of automatizing the editorial process, at least in parts.<sup>21</sup> On the presentational side, this data can be made accessible through digital editions providing the critical text and apparatus in alternative, readable and functional formats. Advanced digital publication frameworks may integrate dedicated tools and features to search, visualize, analyse and progressively enrich this data and to enable various other forms of user interaction.

There are many ways, rules and tools for critically assessing textual evidence in order to create and provide a critical representation of historical text. With the digital transformation of the critical edition and with the emergence of novel features and manifestations in a digital setting, does the nature of textual criticism change? – If we loosely define textual criticism as making sense of textual transmission by applying a methodology that transparently and consistently assesses textual evidence as documented by textual witnesses and by the whole complex of textual transmission – what, then, is *digital* textual criticism? Digital textual criticism is (or should be) just the same – the same, but better. It is (or should be) about making sense of textual transmission by applying a methodology that is to a certain degree computer-assisted and therefore *more* transparent, *more* consistent and *better* documented. However, the critical assessment itself, as for now, is still in the domain of the editor<sup>22</sup> – but grounded, ideally, in a better understanding of textual transmission which, ideally, can be better or more effectively shared with other scholars.

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<sup>21</sup> (Barabucci and Fischer 2017).

<sup>22</sup> This seems to be the point Barbara Bordalejo (2018) is making against any revolutionary fuss, supposedly propagated by Peter Robinson and other digital humanists, claiming instead that “the revolution is only in the title” and that nothing has really changed – disregarding, however, the ontological implications of applying digital methods, and mistaking the concept of transmediality (as a central component of the digital paradigm shift proclaimed by Sahle 2016, 28) for multimediality.

## Epilogue: the swords of textual criticism

One more time, what is digital philology, really? An extreme form of textual criticism can be physical, even. The most extreme physical method of textual criticism is probably sword fighting – as applied by a community of enthusiasts of historical martial arts in order to create digital variorum editions of fencing books from the 15th century. Using an easy-to-use editor based on Wiki technologies they transcribe the various and variant versions of the works of the old fencing masters. The developer of the Wiki software, Ben Brumfield, calls them “accidental editors” (2017). They never planned or decided to become editors. They just wanted to exercise martial arts according to the instructions of the old masters. And for this reason, as a matter of fact, these “editors by accident” have become critical editors. They create critical texts tracing the textual transmission to an archetype and going beyond, emending the text if necessary according to the original intention of the master and the original practice taught some 700 years ago. The re-enactment of that practice informs their reading of the text. They fight, and the physicality of trying out moves is their method of textual criticism: If a reading or interpretation concerning the instructions how to wield your weapon is wrong the fighter will immediately experience the mistake.<sup>23</sup>

There are two conclusions to be drawn from this curious and rather unusual case. First, digital philology is about enabling people – scholars, philologists or sword fighting enthusiasts. Digital philology has the capacity to record, structure and present textual data and information in ways that empower the reader or rather user to critically engage with the material, impossible to achieve in print. It can thus respond to a natural need, because, and that is the other conclusion, textual criticism is in our human nature. In the pursuit of knowledge and truth, people will always adapt and refine efficient methods and tools to comply with their desire for a reliable text.

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<sup>23</sup> Brumfield gave an inspiring pub lecture on the topic in Cologne in 2016 (see <https://youtu.be/7X6rj35rE1k>; last access 2019.01.31) followed by a frightening demonstration by a group of sword fighters (<https://youtu.be/ruptpz0Xrg>; last access 2019.01.31).

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