

Creating an Ontology for the Critical Edition of Variant Text

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Presented here is an ontology that arises from work on the “Stemmarest” text tradition repository (Andrews et al. 2019); more precisely, it is a report on an attempt to render a functioning data model into an ontological framework, and a discussion of when and how this ontological modelling falls short of the original data modelling activity. The purpose is to propose an initial formalisation of the components of a critical edition-in-progress and the logical relations that necessarily exist between them, and particularly the nature of the constraints on those relationships. Note that there is no attempt to provide complete answers to questions such as “What is a witness, and what forms can a witness take?” Rather, we define the components of an edition only according to the functions that they have with respect to the whole, particularly during the editorial process itself.

The topic might seem to stray perilously close to the question, “what is a digital edition?” Many forms of answer have already been proposed for this question along all sorts of different lines: some according to the steps that should be followed in order to create one (Robinson 2012; Andrews 2012), some according to the nature of the text that results (McGann 2010; Pierazzo 2017), sometimes according to the function(s) it should fulfil and the affordances it should provide (Sahle and Vogeler 2014; Sahle 2016). Some approaches have led to the conclusion that, for all that the new medium has been embraced, there is not (yet) any such thing as a digital edition (Bordalejo 2018). We do not approach that question directly here, but we do take some steps toward an alternative avenue of approach, connected directly to software.

In tandem with the philological debates about digital editions, there is an ever-growing collection of software produced for their publication and, in some cases, preparation (e.g. Hagel 2007; Dekker and Middell 2011; Turco et al. 2014; Kahle et al. 2017; Dumont and Fechner 2019). These tools have been built with assumptions that overlap each other but also differ in several respects, not just about what an edition is, but what the components of an edition are, how they interact with each other, and what constitutes a process of critical edition. A compelling case has been made that these works of software development are, themselves, scholarship (Zundert 2015). The creation of an ontology gives us an opportunity to explore where there is scholarly consensus on what (digital) editing seems to entail, from the perspective of those are carrying out substantial portions of that scholarship in code.

We can take the concept of “witness” as an example. Witnesses can come in a great many forms: written or oral, fragmentary or whole, direct or indirect, handwritten or printed. These characteristics are all essential ingredients in the formation of an editorial judgment about the text, but not all of them have a functional role in a data model. Thus, in our ontology, a witness is necessarily a more abstract entity. It is a carrier of one or more versions of the text (generally one, though this version usually incorporates corrections, marginal notes, or other pertinent alterations). If the version of the text has come down to us, we speak of an *extant* witness; otherwise we speak of a lost or *hypothetical* witness. In a few cases we might speak of a *historical* witness, when we have certain knowledge that a particular version of the text once existed, but is no longer available.

We limit ourselves to these distinctions because they are the ones most logically relevant to a few other sorts of objects in our model, primarily the *stemma* and the *reading*. A stemma (or stemma hypothesis) is a graph that purports to describe the transmission of the text over time, and will almost always refer to a combination of extant and hypothetical witnesses. Stemmatic theory holds that (barring evidence to the contrary) hypothetical witnesses should not be treated as though they ever had a historical existence (this follows from the example of West 1973, 39–40). Ontologically speaking, therefore, they do not have a direct relation to the tradition or any of its readings, but can only be properties of a particular stemma; equally, a hypothetical witness labelled α in one stemma must not be considered identical to a hypothetical witness bearing the same label in another stemma. Extant witnesses to a tradition, on the other hand, are extant exactly because they contain a sequence of readings belonging to that tradition; here there is a direct relationship between the tradition and the witness, and here the witness is the same witness regardless of the stemma in which it appears.

Although this sort of ontological reasoning is well-suited to expressing the logical and consequential relationships between components of an edition, it does have its limits. An example is readily found, again, in stemmatics. Insofar as ontological reasoning is concerned with proving the logical consistency of a single universe of facts, it follows that there is only one correct historical transmission of a text, and therefore only one correct stemma should exist, in which one witness text may descend from another witness text but not vice versa. In textual philology, however, competing stemmata (where, for example, one scholar proposes that witness A descends from witness B, and another scholar proposes the opposite) can be proposed, analysed, and debated. and our software can (and must) reflect this scholarly reality despite the obstacle it would pose to a reasoner. This difficulty highlights another fruit of the modelling exercise, which is to explore not only the affordances, but also the limits, of our usual means of expressing logical models.

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