

Next Steps for Measuring Polyphony – A Prototype Editor for Encoding Mensural Music

Karen Desmond, Andrew Hankinson, Laurent Pugin, Juliette Regimbal, Craig Sapp, Martha E. Thomae

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Project background

The thirteenth and fourteenth centuries saw an unprecedented increase in the production of manuscripts transmitting music repertoires with a new diversity of styles, genres, and subject matter, copied in both music-only anthologies, and in miscellaneous collections that interweave song, text, and illumination. At the same time, techniques for specifically notating rhythmic duration emerged: a notation called “mensural” or “measurable.” Almost all polyphonic music (music composed for two or more parts) from 1300–1600 is notated in mensural notation, the rules of which changed little from c. 1350. Yet modern print editions distance today’s readers from the original experience of this music: first, by translating the original notation into modern notation, and second, by sorting and classifying this repertoire according to conventions associated with the printed book (that is, presenting it in volumes or series ordered by composer, genre, or country), rather than its presentation in the original manuscript.

This poster presents an NEH-funded project to develop a prototype editor for encoding mensural notation (P: Karen Desmond, Brandeis University). It builds on the Measuring Polyphony project (measuringpolyphony.org), a website that presents digitizations of polyphonic notes copied in late medieval manuscripts in mensural notation. Coding of the editor prototype began in January 2020, and a workshop directly before the 2020 Music Encoding Conference evaluated the prototype in terms of its interface and design, accessibility, and interoperability, and advised on a plan for the project’s full implementation. This poster includes links to videos that outline the main functionality of the prototype and a summary of the project goals, impact, and next stages of development.

Project goals

An online mensural music editor will allow a variety of modern readers (students and experts, musicologists, music theorists, those interested in the history of music notation, the history of counterpoint, medieval paleography or manuscript studies in general) to both access and contribute transcriptions of polyphonic music directly linked to digital images of the medieval manuscripts. The GUI prototype will allow users with no expertise in music encoding to encode large amounts of music data in mensural notation directly linked to digital images of the medieval manuscripts, thereby rapidly increasing medieval music repertoires available for study.

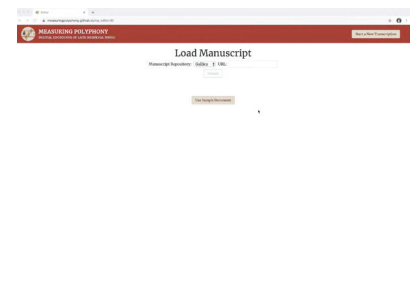
Currently there is no editor, either commercially available or available as an open-source web application, that allows users to notate music in its mensural form. This is a significant problem in general for scholars of early music. In order to produce music examples in mensural notation to include in publications, for example, images must be generated within graphics software such as Adobe Illustrator, a time-consuming and non-intuitive process. Graphics software cannot capture any data about the music’s sounding aspects, that is, what the graphics mean in terms of their pitch and duration. This project addresses this need through the development of an open-source web-based editor designed to capture the shapes and the meaning of the mensural notation, following the encoding standards developed by the Music Encoding Initiative.

Software and standards leveraged in this project



The Measuring Polyphony Mensural Editor (click to play)

measuringpolyphony.github.io/mp_editor



Project impact and next steps

One envisioned outcome of the next stages of this project is the development of pedagogical modules in which students could learn about medieval notations, perhaps eventually providing a collective space to work on collaborative editions directly from, and linked to, the manuscript images. One pressing research question is whether the MEI data that captures the graphic information on the note shapes should be formally separated from the data necessary for score alignment and audio rendering. In some cases, the interpretation of the mensural shapes has only one correct answer, and follows specific rules established for mensural notation. But in other cases, the interpretation may be dependent on notational dialects used in a particular geographic location, or on a particular scribal practice, or the interpretation may be unclear. Methods by which these “flavors” of notation might be abstracted in our data model and captured via the editor were discussed in the pre-MEC workshop.

The major music editing projects of the twentieth century divorced the musical text from its parchment and ink origins, segregating them into composer- and genre-ordered print collections, converting their notation to modern equivalents, and secreting away detailed philological considerations into cryptic appendices. Since the late 1990s, the availability of high-resolution images of most manuscript sources of medieval polyphony, in particular through the groundbreaking open-access DIAMM initiative (Digital Image Archive of Medieval Music, diamm.ac.uk) and through library-based repositories such as Gallica (gallica.bnf.fr), has prompted new investigations of medieval music within its original material contexts, as is also the case within medieval studies in general (the “new” philology). It is envisioned that the final implementation of this project will allow experts and non-experts to move seamlessly between manuscript image and hear audio realizations of the compositions found there (for projects that do similar things, but which are focused on text rather than music, see the projects French Renaissance Paleography, paleography.library.utoronto.ca and Digital, digital.eu). Users will learn how to directly contribute transcriptions of the hundreds of as yet unedited (or poorly edited) pieces, facilitating new corpus studies of musical style. In addition, since the mensural notation will be digitally encoded, this project will inform new understandings of regional and scribal notational practices, and how changes in notation and representation engender changes in musical style.



Help videos (click to play)



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Software and standards leveraged in this project



divajs

humdrum.org

The Measuring Polyphony Mensural Editor (click to play)

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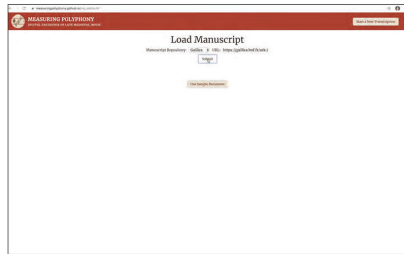
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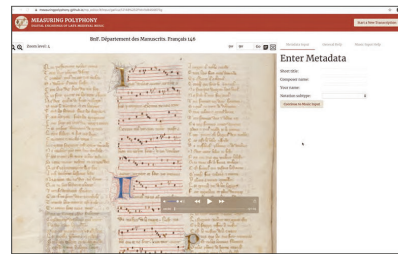
Brandeis
UNIVERSITY

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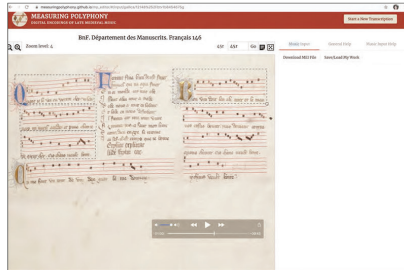
Help videos (click to play)



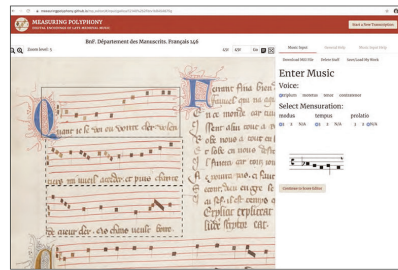
Load a Manuscript into the manuscript viewer



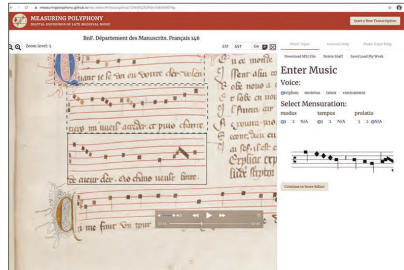
Enter some basic metadata



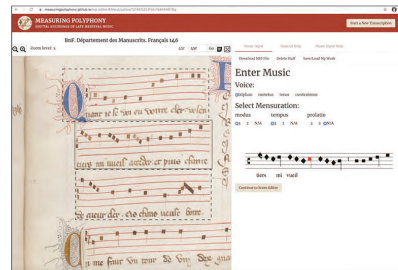
Define staves by drawing around them



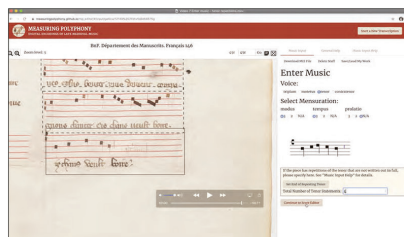
Enter the pitches and rhythmic values



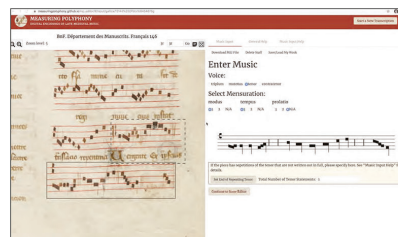
Add ligatures while adding pitches



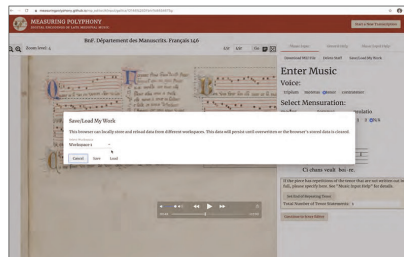
Enter underlaid text



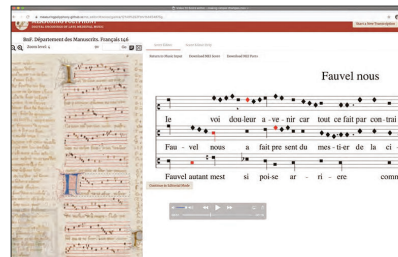
Add a repeating tenor



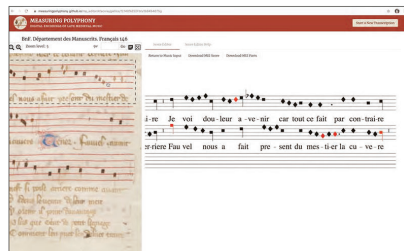
Add a more complex repeating tenor



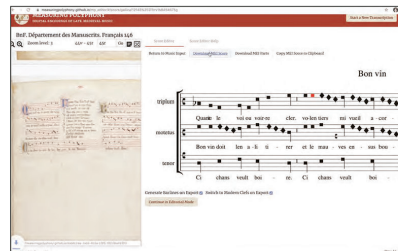
Save your work as you go



Score up the parts and make corrections



Simple editing of the score



Downloading the MEI files