Workshop

"The Quotable Musical Text in a Digital Age:

Modeling Complexity in the Renaissance and Today"

The allusiveness of musical discourse is so fundamental to the Western tradition that it is hard to imagine a work that does not in some way make reference to some other composition, type or topic. Indeed, music that refers to other music has been a constant in the European tradition of the last 1000 years. Thanks to the advent of new technologies for encoding and addressing symbolic music scores, we can now begin to explore these complex cultures of citation with both new scope and precision. *Citations: The Renaissance Imitation Mass* (CRIM) (https://dev.crimproject.org) focuses on one important but neglected part of this allusive tradition: the so-called Imitation or Parody Mass of the sixteenth century, in which a composer transformed a short sacred or secular piece into a long five-movement cyclic setting of the Ordinary of the Catholic Mass: Kyrie, Gloria, Credo, Sanctus, and Agnus Dei. The resulting works are far more than collections of quotations. The sheer scope of the transformations–in which a work that lasted perhaps five minutes was recast as a cycle lasting thirty minutes or more–required the composer to thoroughly re-think the model, adapting pre-existent melodies to fit new words, and shifting, extending, or compressing them to new musical contexts and expressive purposes. Indeed, if counterpoint is a craft of combinations (as two or more vocal independent melodies come together in a polyphonic weave), then the Imitation Mass involves the art of *recombination* on a massive scale.

Musicologists have considered the intertextual relationships of these Masses from a number of vantage points. But the chief challenge of measuring the genre has been dampened by two basic factors: the sheer number of possibilities for contrapuntal elaboration, and the

idiosyncratic ways in which individual scholars have sought to explain and exemplify them. The CRIM Project, with its digital capacities for managing citations, claims, and counter-claims in a collaborative environment, answers both of these key challenges in ways that will transform our understanding of the repertory, and set the stage for the investigation of related corpora as well.

In this half-day workshop, participants will dig into the thinking behind the music and the technology behind scenes of the project itself. We will look closely at some selected passages from models and their derivative Masses to learn how they make use of basic patterns that we have identified in our Thesaurus of Musical Types, which draws heavily on current scholarship about the commonplaces of Renaissance polyphony (see https://bit.ly/2Caf48N). We will also learn how models and Masses are connected through an equally systematic set of Relationship Types (see https://bit.ly/2UHfiv1).

Participants will then turn these analytic insights into data using a novel 'citation engine' that allows anyone to build durable musical quotations consisting of any combination of notes in any digital score (which in turn can be deployed in any electronic publication, without special software). Along the way we will also look at some of the hundreds of citations already compiled in the course of the CRIM project, and learn how--taken together--they offer a new kind of collaborative space for teaching and research in which our insights always remain our own, but can still take part in a broader collaborative project.

We will also spend time learning about the technologies that make work like CRIM possible. It is an "all MEI" project, of course, and we will take note of the methods we use to allow anyone familiar with Sibelius to build valid MEI files. We will also explain how we use Laurent Pugin's *Verovio* (http://www.verovio.org) together with Raffaele Viglianti's Music Addressability API to make durable "citations" of any combination of notes, in any combination of staves or measures

of an MEI score. Such digital citations inaugurate a new kind of durable, quotable text for musical scores that we invite others to use.

In the final portion of our workshop we would like to begin work on a set of Ontologies for Musical Analysis. Within the confines of the CRIM project itself we have defined various controlled vocabularies that describe the workings of Renaissance counterpoint as it migrates from one work to the next, and also preserve information about the motivation and author of each claim. But we would like to work with colleagues to define schemes for preserving (and sharing) such information in the context of Linked Open Data, specifically according to the Web Annotation Data Model (also known as: Open Annotation) (https://www.w3.org/TR/annotation-model/), in ways that will advance music scholarship in the digital environment. We view the MEI community as the ideal forum in which to expand the reach of these technologies, and to continue the collaborative spirit of our work.

- Duration of Workshop: 3 hours
- Technical Requirements: Internet and Projector
- Logistical Requirements: Materials to be shared in advance via URL in the program. Participants encouraged to bring laptops. Paper copies of scores provided by presenters. Desks or tables helpful for work in small groups or teams.

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[1] Richard Freedman and David Fiala, directors, *Citations: The Renaissance Imitation Mass* (CRIM). URLs: https://dev.crimproject.org/about/CRIM/. See also Freedman and Raffaele Viglianti, “MEI as Quotable Text,” Poster presented at Music Encoding Conference 2017 (Tours, France): URL: https://goo.gl/EEeqVt

[2] *The Music Encoding Initiative*. url: https://music-encoding.org/

[3] Laurent Pugin, *Verovio*. url: http://www.verovio.org

[4] Raffaele Viglianti, “The Music Addressability API: A draft specification for addressing portions of music notation on the web,” Proceedings of the Third International Digital Libraries for Musicology Workshop (DLfM 2016), New York, USA — August 12 - 12, 2016, pp. 57-60. URL: http://dl.acm.org/citation.cfm?id=2970044.2970056.

[5] Sample relationship at: https://dev.crimproject.org/relationships/135/

[6] http://www.openannotation.org/

[7] Linked Open Data. url: http://linkeddata.org See also Tobias Kuhn et al. *Nanopub* URL: http://nanopub.org/wordpress/