Interacting with Zarlino

A critical inspection of the digital editions of his treatises

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Abstract

Nearly twenty years ago I prepared digital editions of a selection of Zarlino’s writings (Istitutioni harmoniche 1558, 1589; Dimostrazione harmoniche 1589; Sopplimenti musicali 1589). They form one of the cores of the Thesaurus musicarum italicarum (http://tmiweb.science.uu.nl/) containing over 30 digitised music treatises from the 16th-18th centuries. Three years ago we migrated the entire corpus to a new publication environment, with surprisingly little effort. Even though the present environment is officially ‘experimental’, it provides decent though basic access functionality. In my talk I will give a short demonstration of the resource, in order to open up a dialogue about how such resources could enrich musicological research, and what additional functionality this would require.
Disclaimer

This is what I used to do 20 years ago
What I do today

RISM search by Utrecht University

Details of match

Method: Exact Pitch
Result id: 778132
Score: 9.4
Pitch shift: -5

\[
D(i, j) = \max \left\{ \begin{array}{c}
D(i - 1, j - 1) + S(x_i, y_j) \\
D(i - 1, j) - \gamma \\
D(i, j - 1) - \gamma 
\end{array} \right. 
\]
My perspective

• no substantial research in renaissance music for last 20 years
  – strongly interested in connectedness of sources and ideas

• digital humanities
  – how to enhance humanities with digital resources, software and online services?

• interactive systems design
  – what is the optimal collaboration between humans and technology?
Thesaurus musicarum italicarum

- founded in 1996
- aim was to create ‘multimedial’ editions of Italian-language music treatises
  - searchable hypertext
  - illustrations, music, facsimile
  - textual criticism, linking, enrichment, annotation, collaboration
- use state-of-the-art technology of 1990s
- Zarlino’s works as guinea pigs
CD-ROMs


Pietro Aaron
Complete Italian treatises

**Giovanni del Lago**
*Breve introduzione di musica misurata*

ed. Anne-Emmanuelle Ceulemans and Paloma Otaola, 2003
TmiWeb (2000)

Valerio Bona
Giovanni Del Lago
Pietro Pontio
Rocco Rodio
Orazio Vecchi
1 treatise each

Agostino Agazzari
Illuminato Aiguino
2 treatises each

Gioseffo Zarlino
3 treatises

Vincenzo Galilei
2 treatises

Giovanni Maria Artusi
6 treatises

Hercole Bottrigari
1 treatise

Orazio Tigrini
1 treatise

Pietro Aaron
5 treatises

Bernardino Baldi
2 treatises

Girolamo Mei
1 treatise

Fedele Fenaroli
1 treatise

Nicola Vicentino
1 treatise
TmiWeb2 (2014)

• Dynaweb server broke down in 2013
• Small data project sponsored by DANS in 2014
• all treatises converted to modern TEI P5 (XML)
• experimental online publication
  – Kiln (by KCL Department of Digital Humanities)
    • Cocoon, Apache, Open Source
  – basic functionality
• extensible

www.tmiweb.science.uu.nl
What is TmiWeb?

TmiWeb is the online version of Thesaurus Musicorum Italianorum, a corpus of Italian music treatises from the Renaissance. It contains the works of two of Italy's most important composers, Aaron (c. 1480-c.1545) and Gioseffo Zarlino. It is possible to search the writings by their contemporaries.

Nearly 30 works are online on TmiWeb in a searchable format. A list of texts can be found here.

All texts are encoded using a slightly-extended variant of the TEI P5 standard. TmiWeb employs the Kiln publication environment developed at King's College, London.
Demo outline in Chrome

  – title page, afbeelding; grieks
  – scroll to TOC
  – go to ch 343
  – show music example; MIDI—downloaded in Chrome
  – gegenereerde TOC, ga naar 4.18
  – search within page, e.g salmod – zie ook rechterbar voor verdeling– soggetto (Philippe C)
  – diapente/quinta diatessaron/quarta diapason/ottaua
    • NB we get this for free from Chrome
  – search over corpus using search field, e.g. salmo; diap*
A critical inspection

- many improvements could be imagined
- content
  - small set of treatises, notable omissions
    - e.g. IH 1573, DH 1571
  - various levels of enrichment
  - illustrations and examples often unavailable
- presentation and interaction
  - organisation and navigation of treatises could be improved
  - not so intuitive search
  - no linking to other (Latin) sources (yet)
- utility
  - how could it (be made to) help your research?
Scholars reading sources

- common behaviours
  - close reading
  - complex reading
  - exploratory search

- distant reading
  - there is just too much to read
  - discover patterns computationally

- could TMI support distant reading?
  - TMI source files can be processed with any XML-aware software
TMI and distant reading

me di sopra si è mostrato, & come nel Lib. 7. de i suoi Elementi, o Principii, che dire li vogliamo, Euclide, & anche Boetio nel Cap. 8. del Secondo libro della Musica manifestano. Et li Musici nella Prolazione delle figure cantabili segnano i Numeri delle proporzioni di Maggiore inegualeità in tal modo, che 'l maggior termine della proporzione, che vogliono mostrare, pongono sopra 'l minore; come volendo mostrare la Prolazione della Dupla, la segnano in questo modo $2/1$. & quella della Sesquialtera così $3/2$. Ma in quel-

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Zarlino reading the classics
Zarlino reading Boethius’ Musica
Chapters Zarlino was interested in
Chapters Zarlino was interested in

1.1 Introduction: Music forms a part of us through nature

1.20 Concerning the additions of strings and their names

1.23 Which ratios are between pitches in each genus
Chapters Zarlino was interested in

4.3-4: note names and diatonic monochord partition

4.13-17 species of consonances and modes

5.11 The manner in which Ptolemy set out the consonances
Moving on with TMI

• currently unfunded
• no resources for data creation/curation

• what we can do (to a certain extent)
  – make this resource better fit to your research
  – improve interaction
  – creating suitable analytical tools

• feedback is welcome at f.wiering@uu.nl