Interacting with Zarlino

A critical inspection of the digital editions of his treatises

Frans Wiering, f.wiering@uu.nl
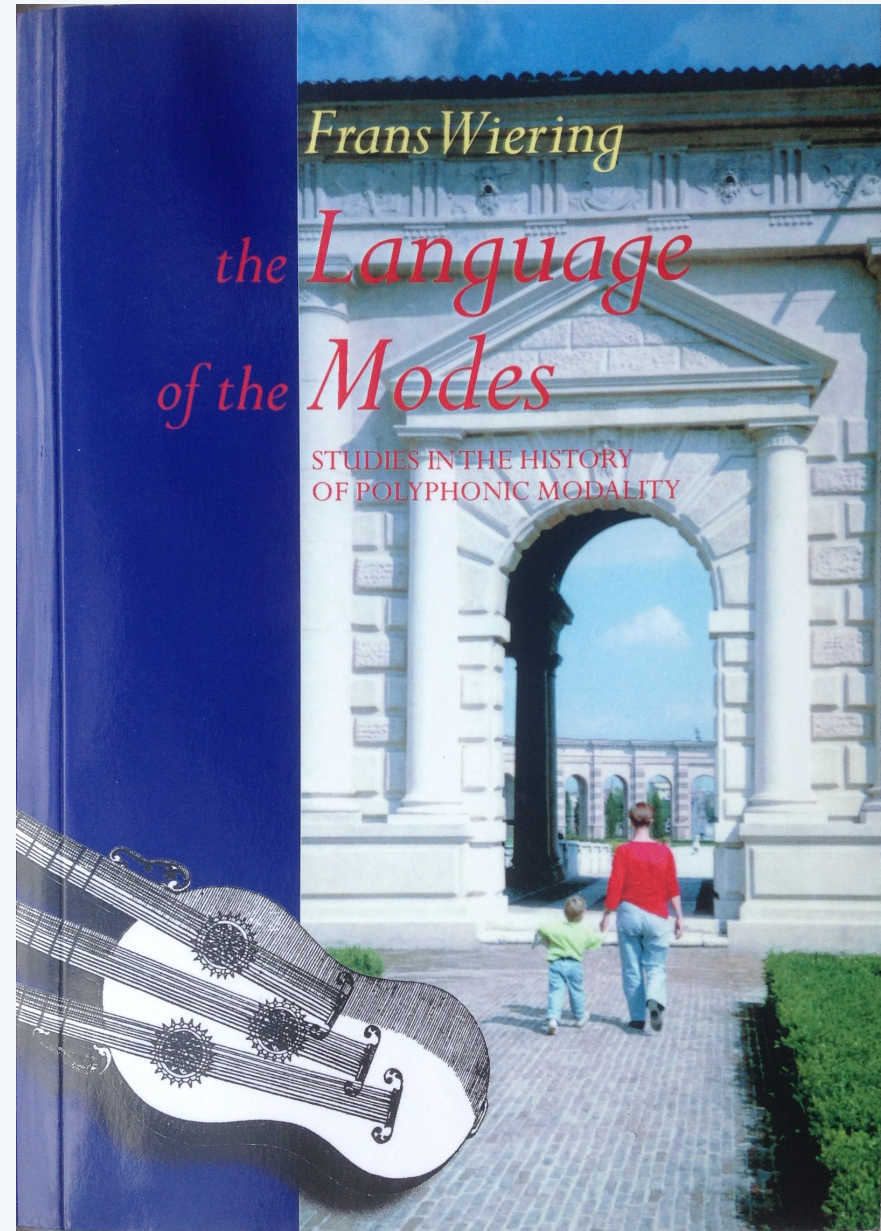Venice, 30 November 2017

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Abstract

Nearly twenty years ago I prepared digital editions of a selection of Zarlino's writings (Istitutioni harmoniche 1558, 1589; Dimostrationi 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

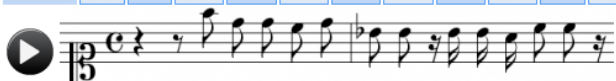## RISM search by Utrecht University

create melodies | query | matching method selection | results | about

Details of match

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

Notes 1	r	r	E	C#	C#	B	C#	A	A	r	C#	B	A	G#	r	B	B	B
Pitch 1	0	0	215	204	204	198	204	192	192	0	204	198	192	187	0	198	198	198
Score	0.5	0.5	1	1	1	1	1	1	1	0.5	-0.8	-1	1	1	-0.8	1	1	-0.5
Shifted 2	0	0	215	204	204	198	204	192	192	0		192	192	187		198	198	0
Pitch 2	0	0	220	209	209	203	209	197	197	0		197	197	192		203	203	0
Notes 2	r	r	F	D	D	C	D	Bb	Bb	r		Bb	Bb	A		C	C	r

Department of Information and Computing Sciences

Bachelor's Programme Information Science
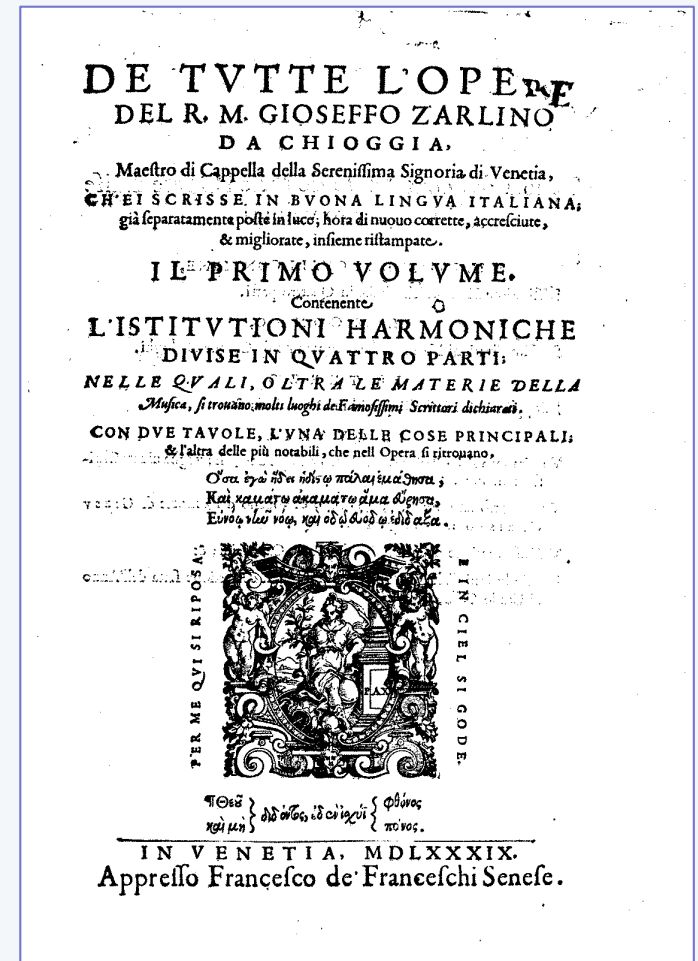
$$D(i,j) = \max \begin{cases} D(i-1, j-1) + S(x_i, y_j) \\ D(i-1, j) - \gamma \\ D(i, j-1) - \gamma \end{cases}$$
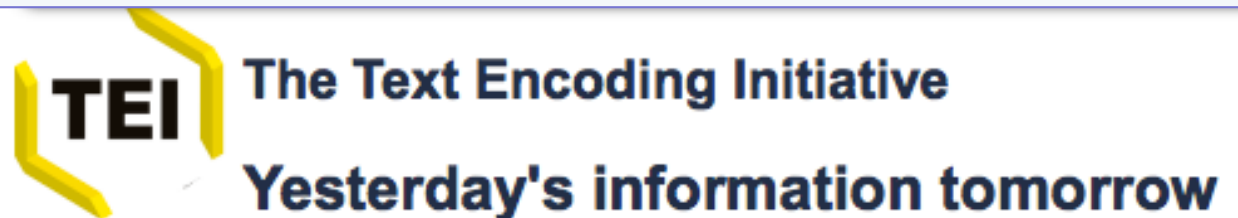
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My perspective

- 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?

DE TVTTE L'OPERE
DEL R. M. GIOSEFFO ZARLINO
DA CHIOGGIA,
Maestro di Cappella della Serenissima Signoria di Venetia,
CH'EI SCRISSE IN BVONA LINGVA ITALIANA;
già separatamente poste in luce; hora di nuouo corrette, accresciute,
& migliorate, insieme ristampate.
IL PRIMO VOLVME.
Contenente
L'ISTITVTIONI HARMONICHE
DIVISE IN QVATTRO PARTI:
NELLE QVALI, OLTRA LE MATERIE DELLA
Musica, si trouano molti luoghi de Famosissimi Scrittori dichiarati.
CON DVE TAVOLE, L'VNA DELLE COSE PRINCIPALI;
& l'altra delle più notabili, che nell Opera si ritrouano,

IN VENETIA. MDLXXXIX.
Appresso Francesco de Franceschi Senese.

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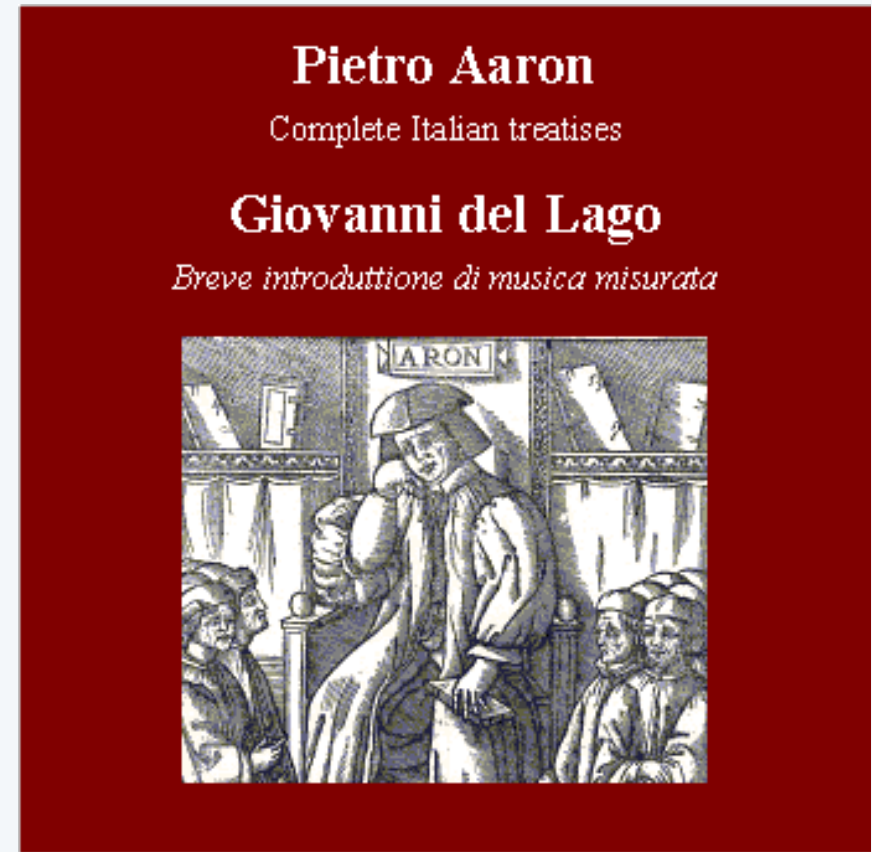
Thesaurus musicarum italicarum

- 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

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CHET ENSIGN

CHARLES F. GOLDFARB SERIES ON OPEN INFORMATION MANAGEMENT

TEI The Text Encoding Initiative

Yesterday's information tomorrow

CD-ROMs

Zarlino *Istitutioni* (1558, 1589), *Dimostrationi* (1589*), Sopplimenti* (1589). CD-ROM published 1997

ed. Anne-Emmanuelle Ceulemans and Paloma Otaola, 2003

TmiWeb (2000)
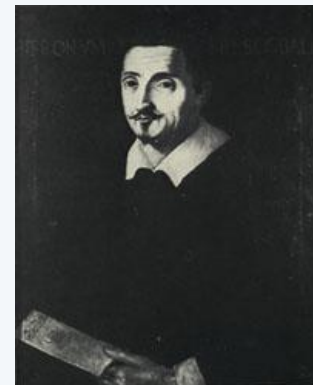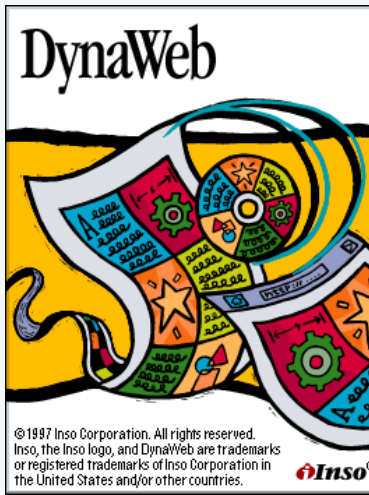
Valerio Bona
Giovanni Del Lago
Pietro Pontio
Rocco Rodio
Orazio Vecchi
1 treatise each

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

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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

tmiweb.science.uu.nl

TmiWeb

More texts   Search

Aaron, Pietro

Agazzari, Agostino

Aiguino, Illuminato

Artusi, Giovanni Maria

Baldi, Bernardino

Bona, Valerio

Bottrigari, Ercole

Del Lago, Giovanni

Fenaroli, Fedele

Galilei, Vincenzo

Mei, Girolamo

Pontio, Pietro

Rodio, Rocco

Tigrini, Orazio

Vecchi, Orazio

Vicentino, Nicola

Zacconi, Lodovico

Zarlino, Gioseffo

Enter TMI
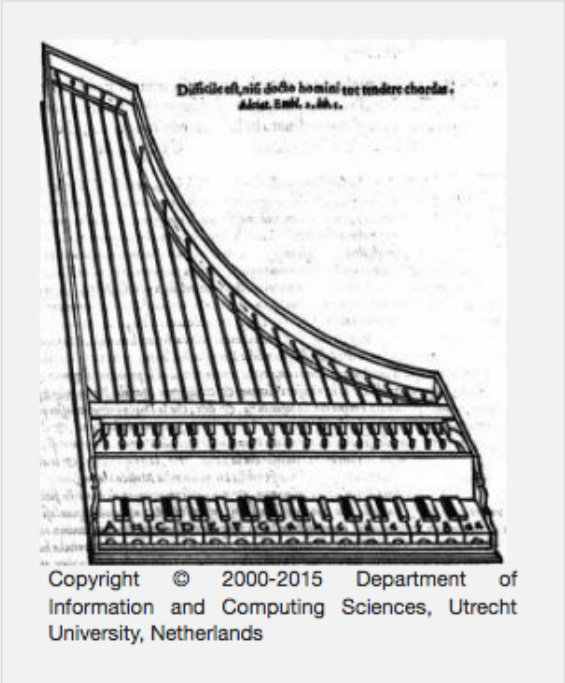
What is TmiWeb?

TmiWeb is the online version of Thesaurus
corpus of Italian music treatises from the Re
contains the works of two of Italy's most im
Aaron (c. 1480-c.1545) and Gioseffo Zarlino
writings by their contemporaries.

Nearly 30 works are online on TmiWeb in a
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.

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University, Netherlands

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Demo outline in Chrome

- zarins58, http://localhost:9999/text/reading-edition/zarins58.html
  - 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 , ò Principii , che dire li vogliamo, Euclide, & anche Boetio nel Cap.8. del Secondo libro della Muſica manifeſta no. Et li Muſici nella Prolatione delle figure cantabili ſegnano i Numeri delle proportioni di Maggiore inequalità in tal modo; che'l maggior termine della proportione, che uogliono moſtrare , pongono ſopra'l minore; come uolendo moſtrar la Prolation del la Dupla, la ſegnano in queſto modo ⌔ . & quella della ſeſquialtera coſi ⅓ . Ma in quel-

me di sopra si è mostrato, & come nel <ref target="euclid-ele#bk7">Lib. 7. de i su
Principii, che dire li<lb break="yes"/>
vogliamo, <persName key="euclid">Euclide</persName>, & anche <persName key="boet.a
<ref target="boet.anic-ins.mus#ch208">Cap. 8. del Secondo libro della Musica</ref> man
no. Et li Musici nella Prolatione delle figure cantabili segnano i Numeri delle propor
orig><reg/></choice><lb break="no"/>
tioni di Maggiore inequalità in tal modo; che 'l maggior termine della proportione, ch
uogliono mostrare, pongono sopra 'l minore; come uolendo mostrar la Prolation del<lb b
la Dupla, la segnano in questo modo 2/1. & quella della Sesquialtera cosi 3/2. Ma
orig><reg/></choice><lb break="no"/>

Zarlino reading the classics
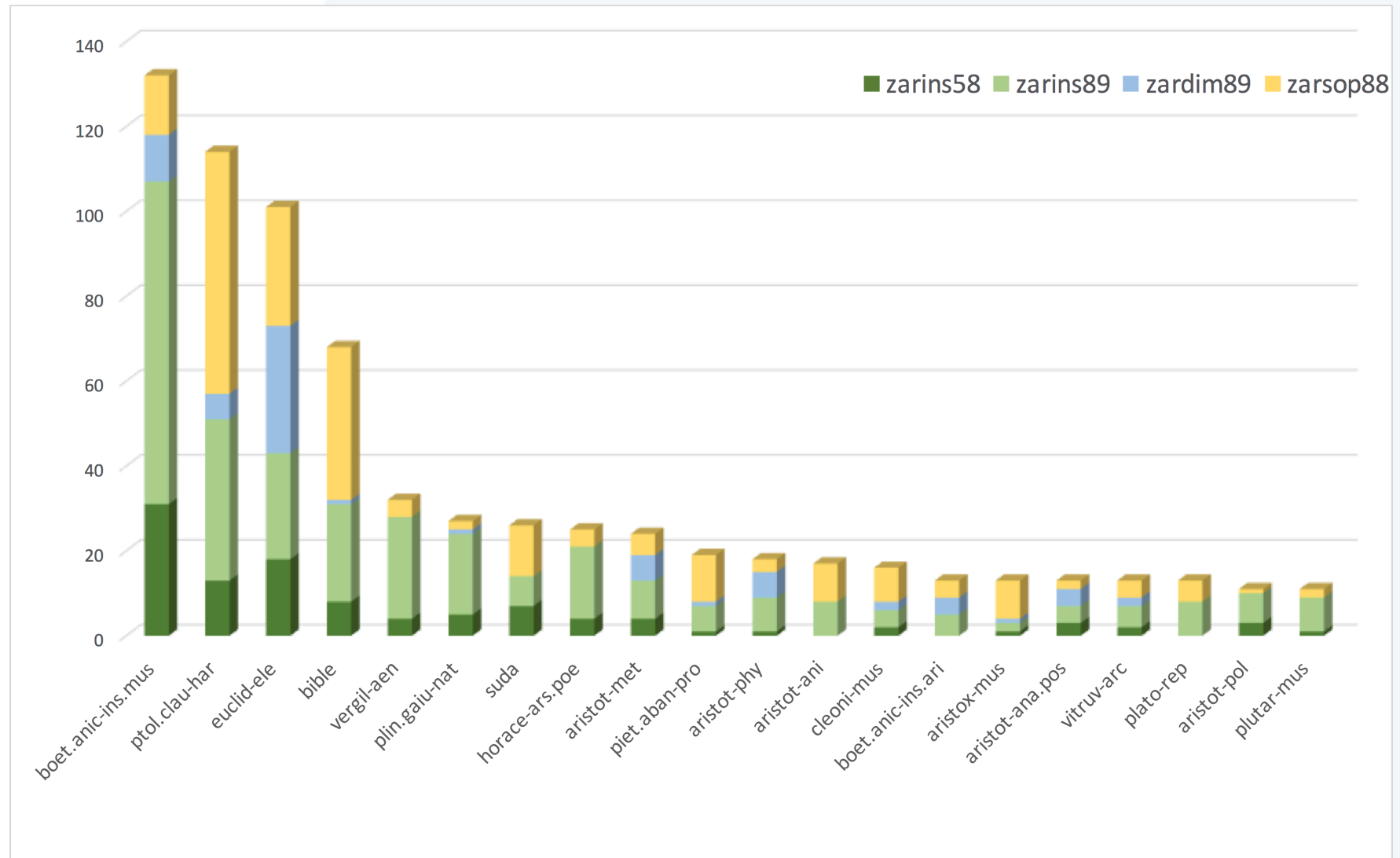
Zarlino reading Boethius' Musica
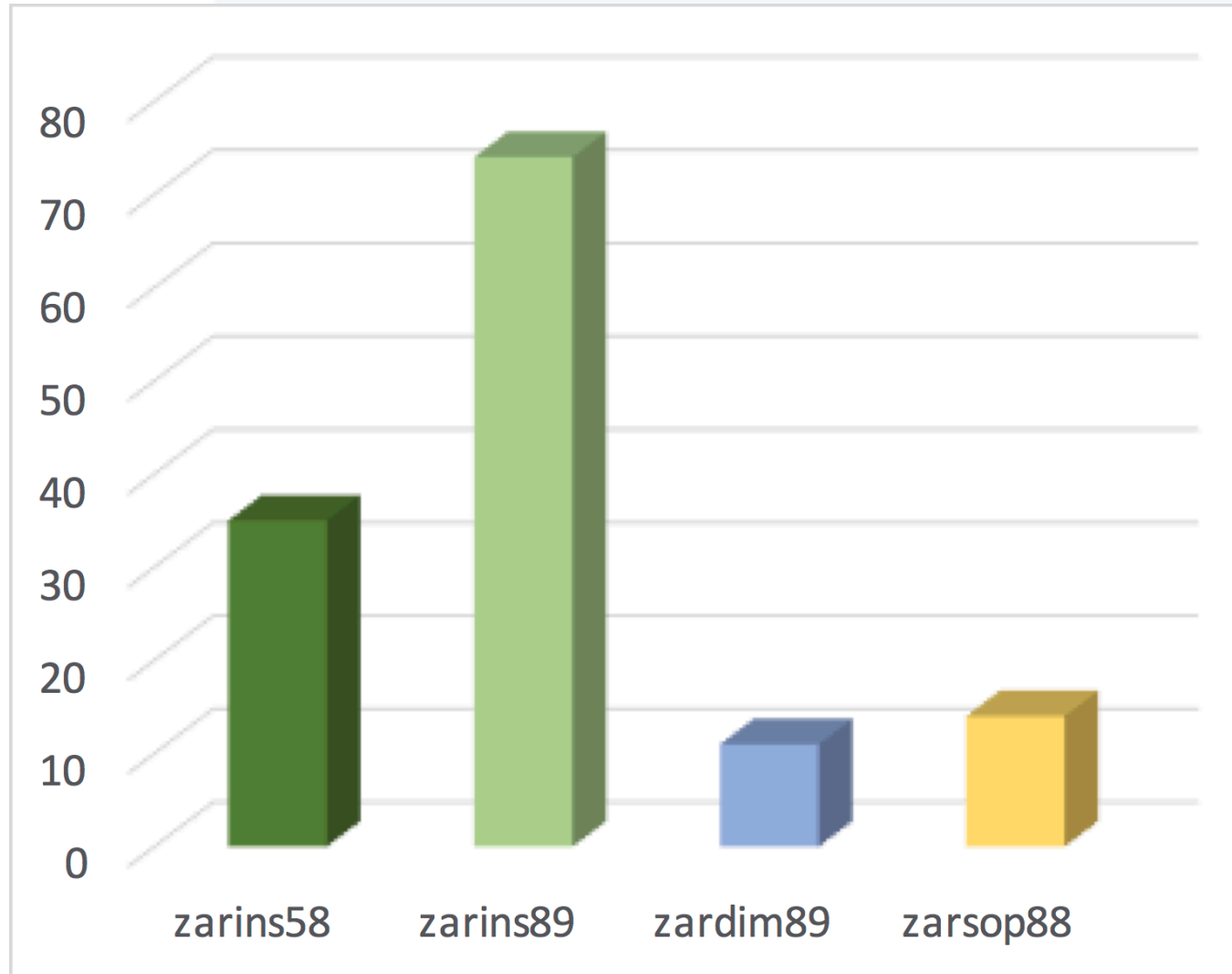
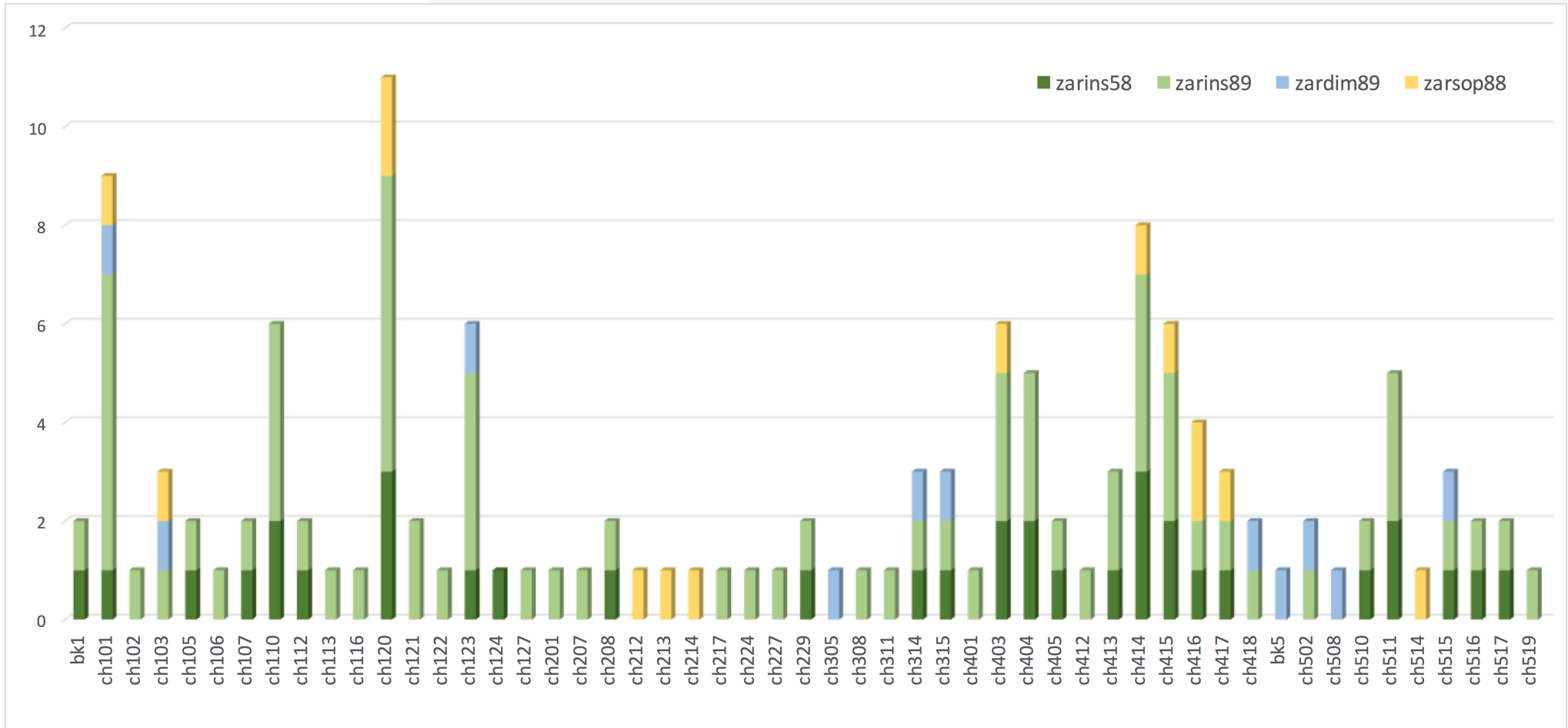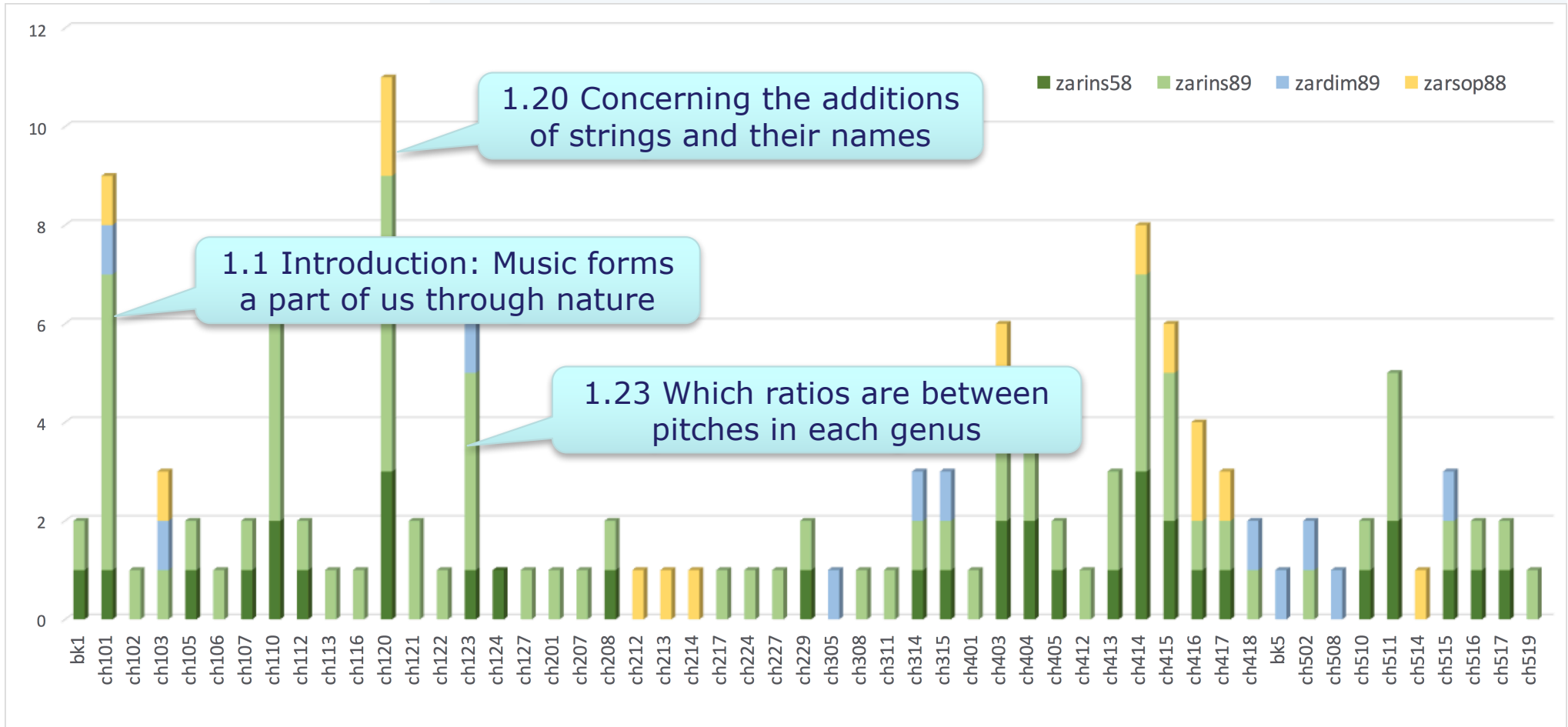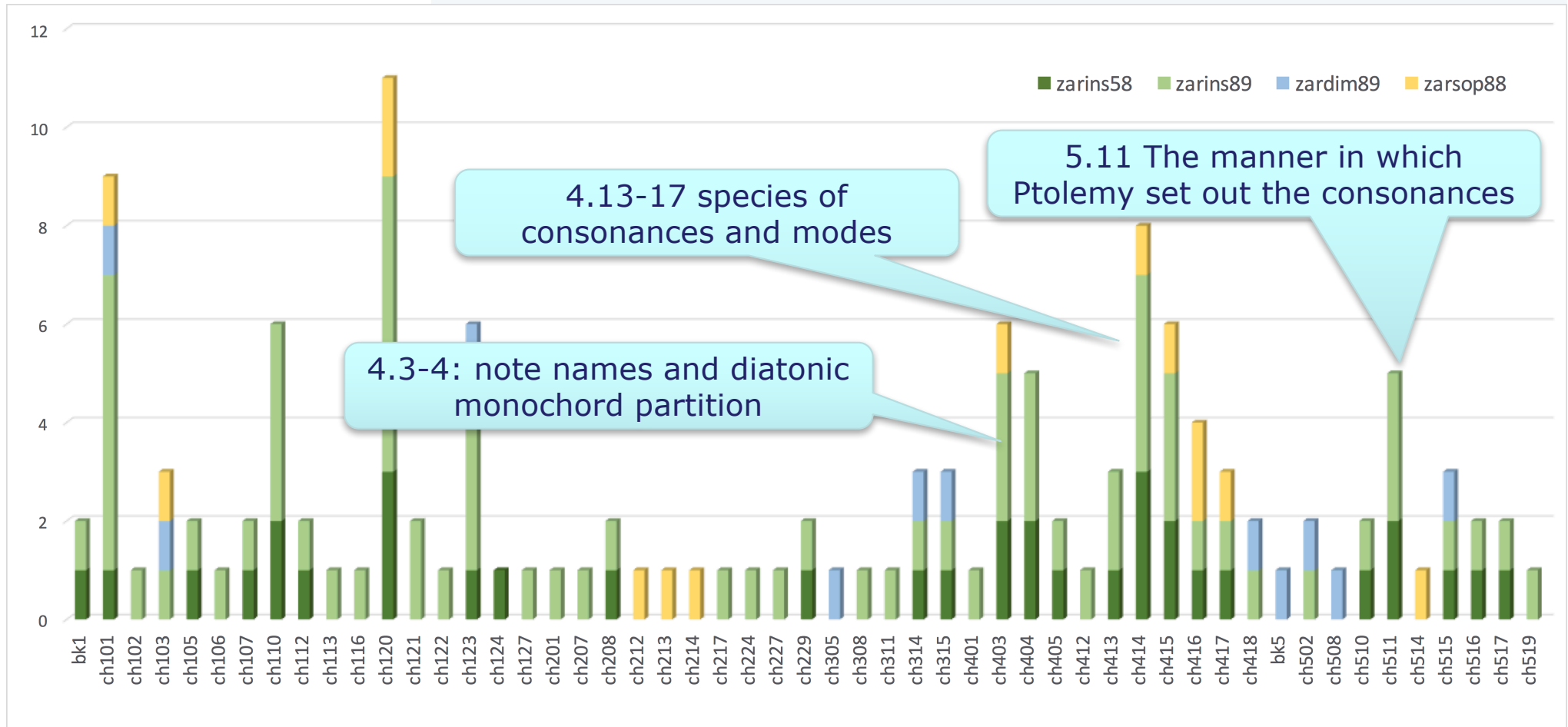Universiteit Utrecht

Chapters Zarlino was interested in

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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

tmiweb.science.uu.nl

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