

Expanded Dreams on Early Chant and Computation

Examples of topics for computational chant research

Geert Maessen, www.gregoriana.nl

Inspired by: Charles M. Atkinson: 'I have a Dream': Future Projects in Computer-Aided Chant Research, MedRen, Granada, 2024: citations from this paper in italics below the paragraphs.

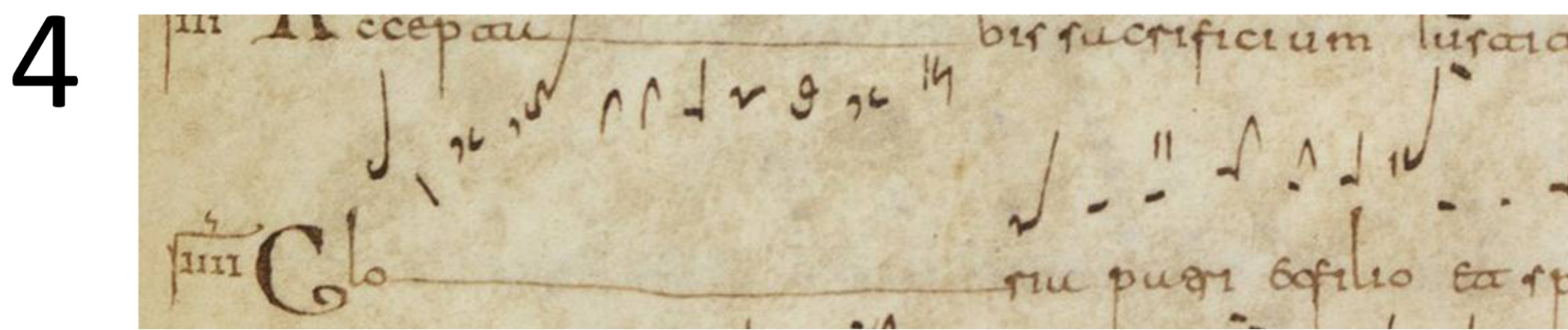
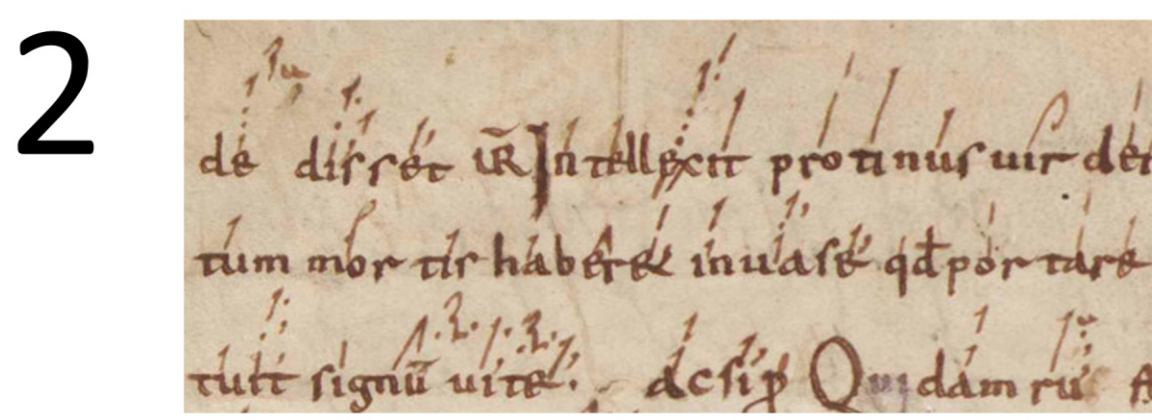
Second international conference on computational and cognitive musicology, Utrecht University, Netherlands, 16-18 October 2024; CCCM2

I. Re-envisioning / re-constructing

Virtual reconstruction of liturgical manuscripts from the myriad fragments that have been and continue to be discovered.

1. Bible parts combined online: <https://codexsinaiticus.org/en/>
2. Three Nonantola fragments combined (Stefania Roncroffi).
3. A parchment snippet aligned to León (Emma Hornby).
4. Melody generation for Mozarabic chant (Maessen/Conklin).
5. Re-envisioning Gallican chant (Fred Schneyderberg).

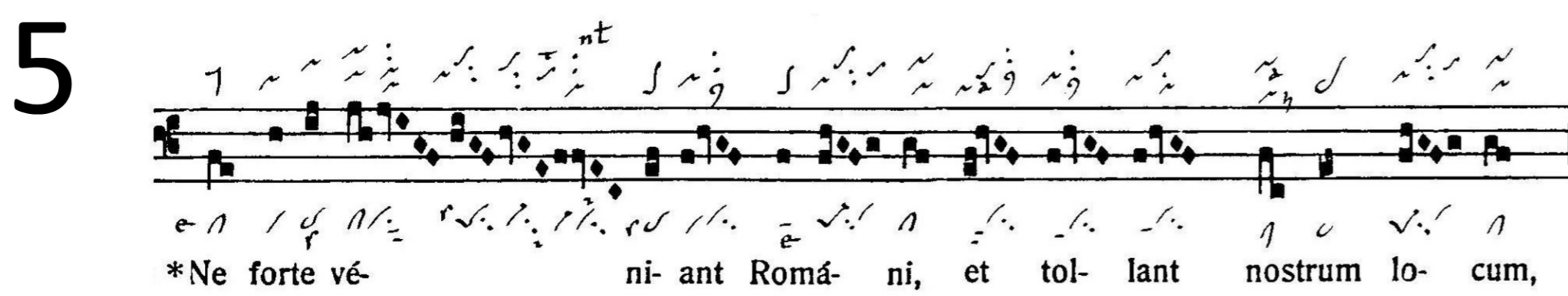
3



allel
lieni ge
montes
[M]ontes
Electi
Exulta[b]
Canta
[a]llel
Ego
tibi a
am a
simo
dant
capit
ore ei



III Glo- ri- a Pa- tri et Fi- li- o



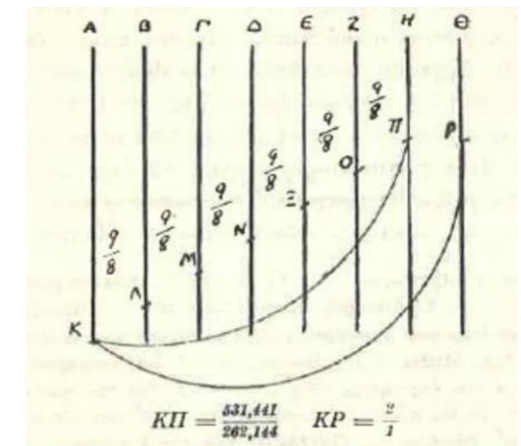
*Ne forte vé- ni-ant Romá- ni, et tol- lant nostrum lo- cum,

III. Models / concepts

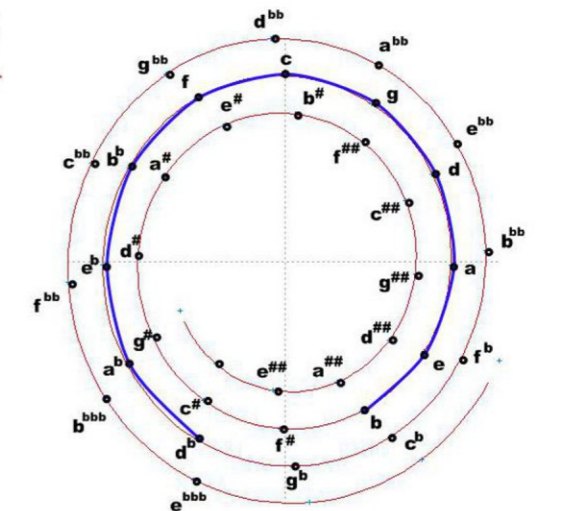
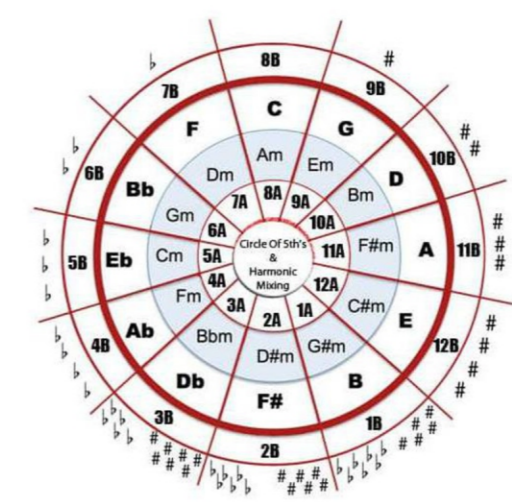
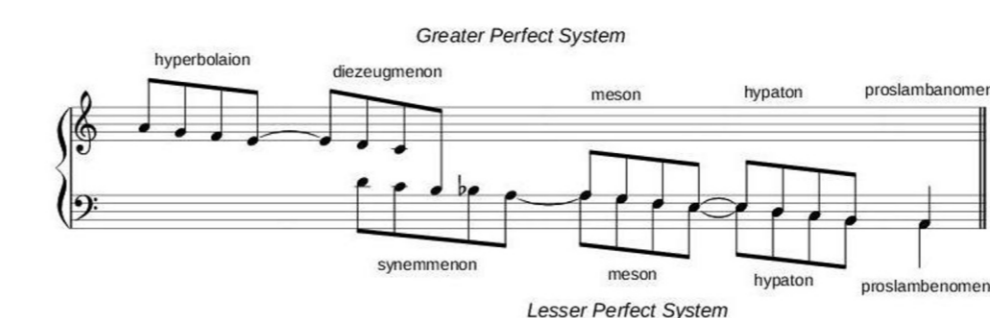
Creating a universal index of music-theoretical diagrams in all notated traditions (e.g. ancient Greek, Arabic, Chinese) showing both diagrams and the texts they illustrate.

There are many topics that could be clarified using computational modeling.

1. Ptolemy/Boethius diagrams.
2. Hexachords (Cornelissen/Collamore).
3. Tetrachords / Greater perfect system.
4. Circle/spiral of fifths.
5. Variation in the size of the semitone.
6. Development of tonality/modality.
7. Development of music notation.
8. ...

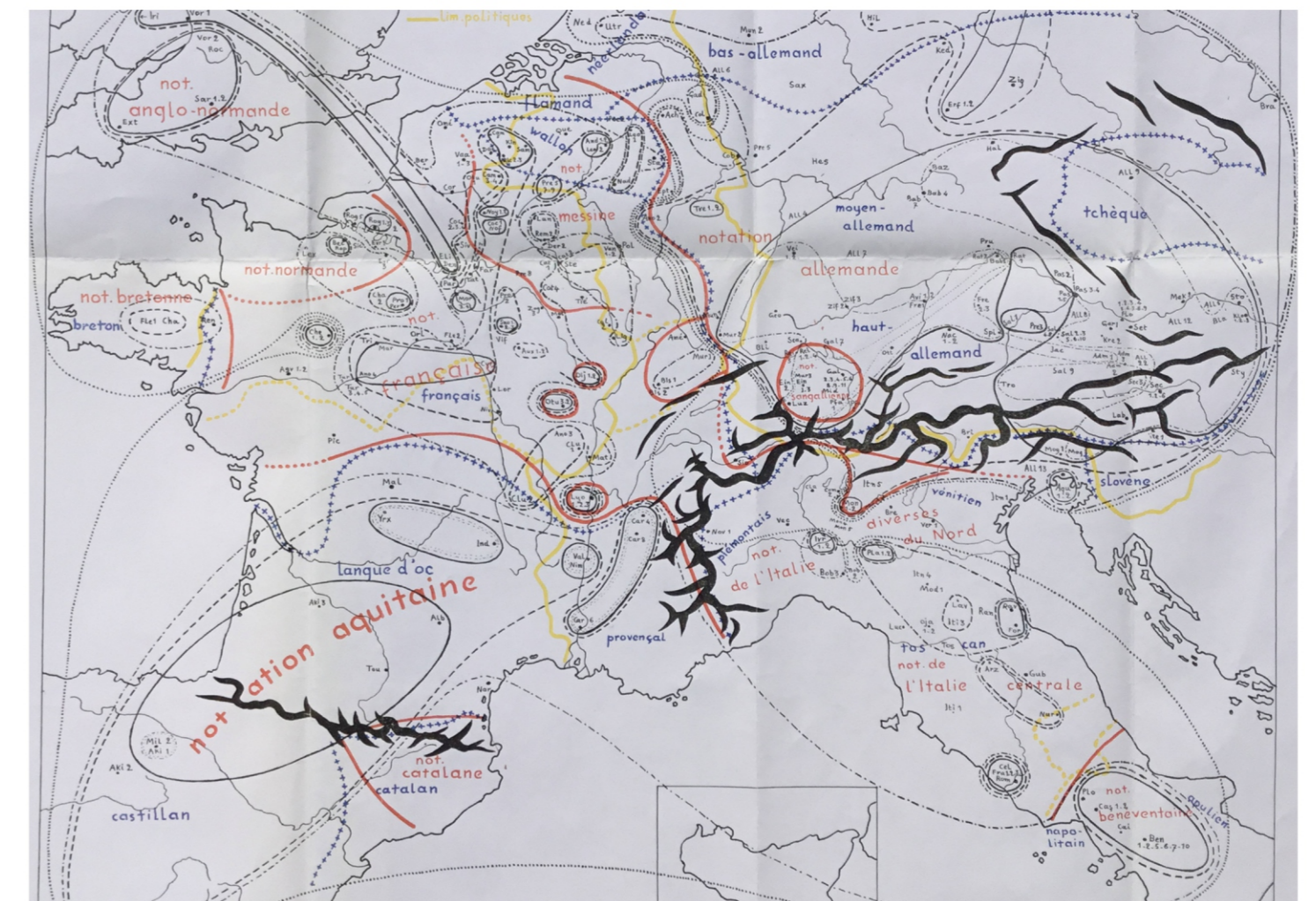


ancient Greek: Perfect Immutable System
diatonic genus



the semitone

90 cent
100 cent
112 cent
126 cent
144 cent

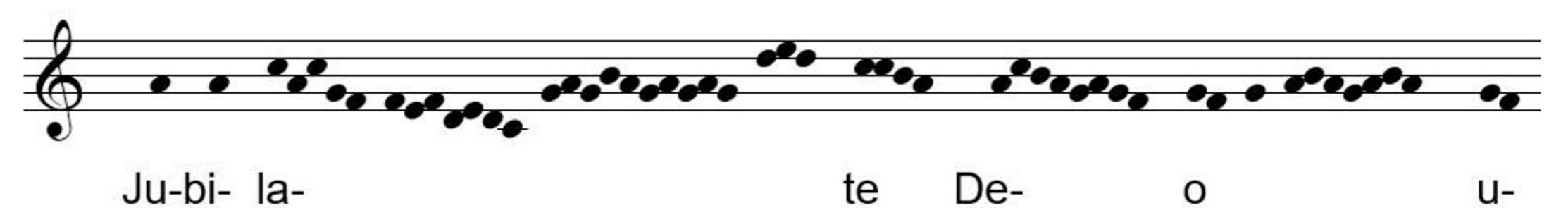


II. Relations / influence

Developing tools to compare Western and Eastern chant (including Byzantine, Georgian, and other traditions) allowing reciprocal text and music searches between symbol and content among all notated sources.

1 Gregorian - Old Roman

Most texts are the same / most melodies are related



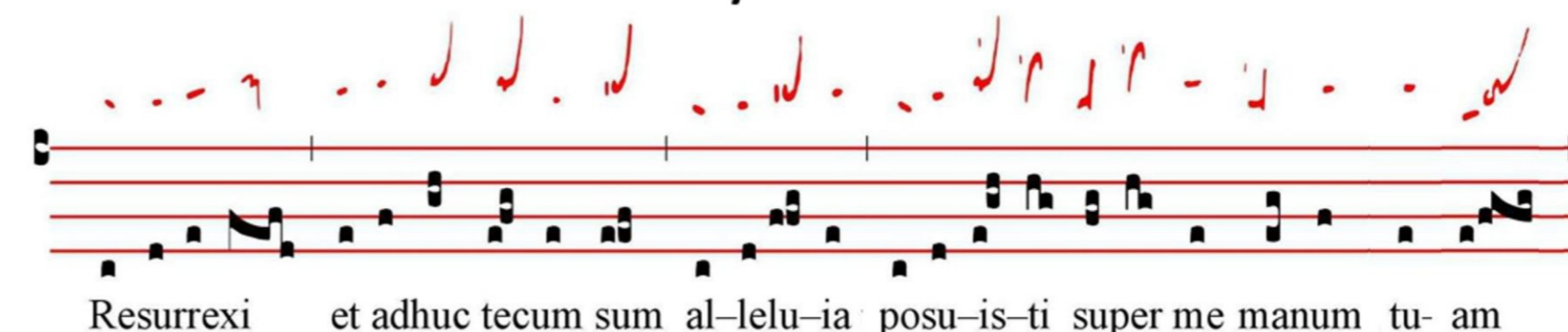
2 Gregorian - Ambrosian (Milanese)

Many texts are the same / many melodies are related



3 Gregorian - Mozarabic (Old Hispanic)

Some texts are the same / some melodies are related



4 Gregorian - Byzantine

Some texts are the same / some melodies may be related

