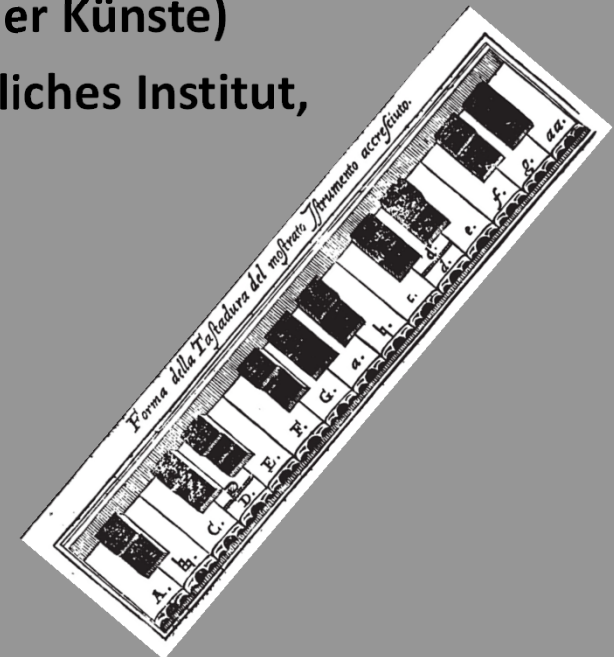


Musik und Musikforschung im digitalen Wandel –
Forum der Fakultät III HMT Leipzig
Freitag, 13. Nov. 2020

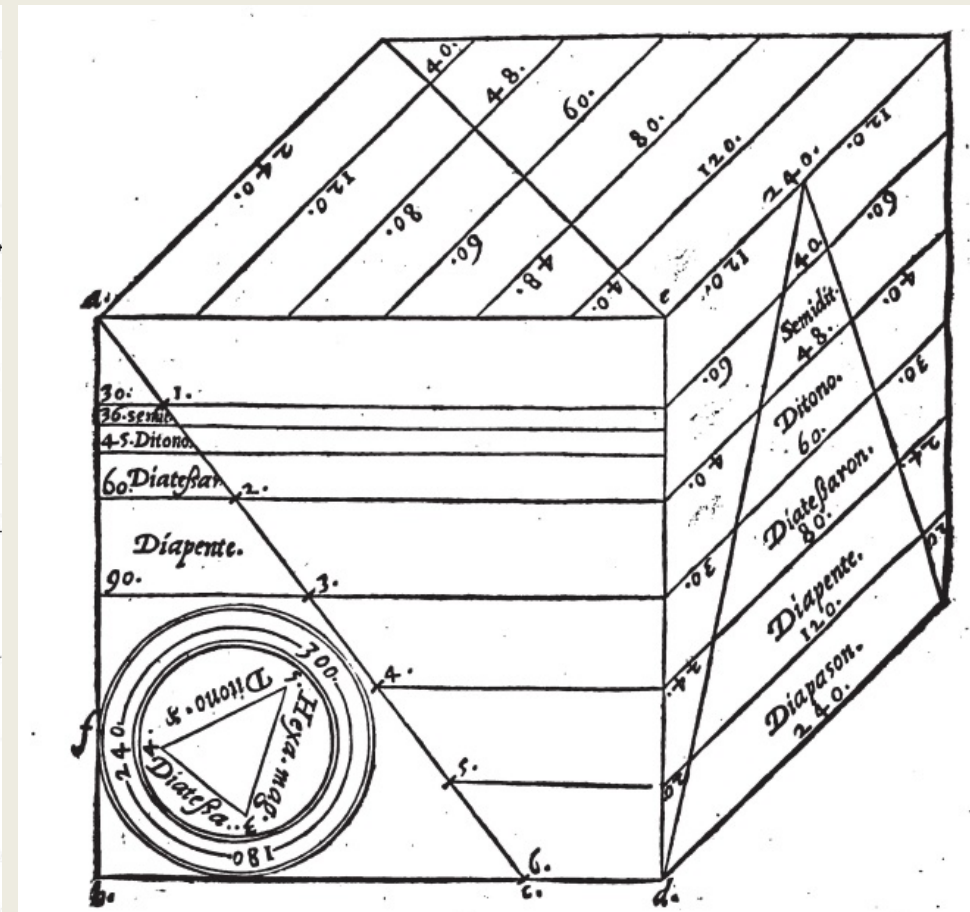
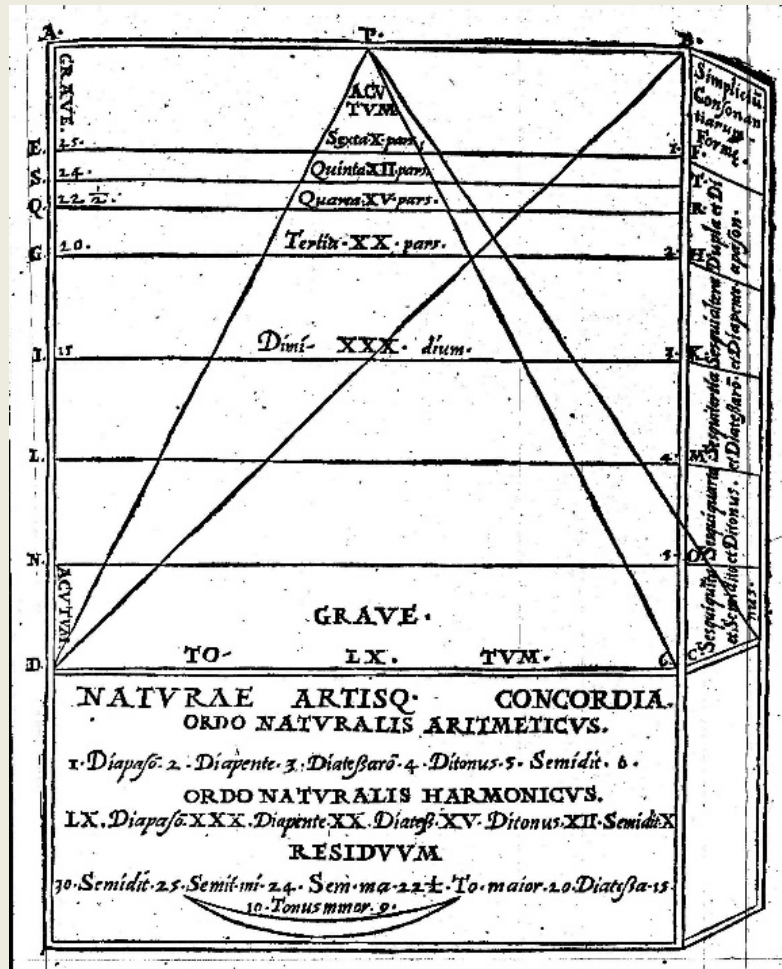
Zarlino Digital: Art of Diagram ars diagrammaticandi

**Daniel Muzzolini (Institute for Computer Music and Sound
Technology, Zürcher Hochschule der Künste)**

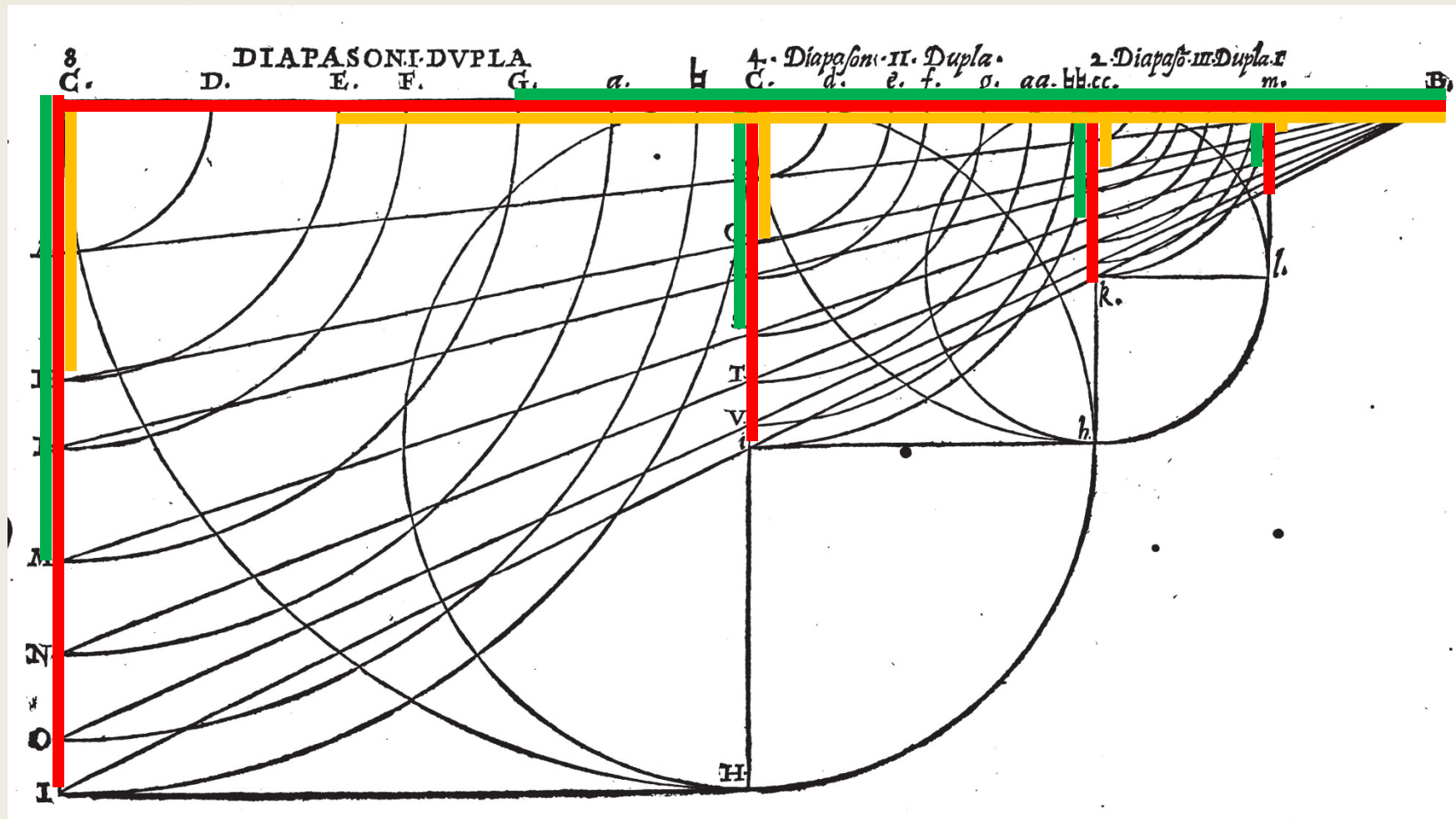
**Christoph Reuter (Musikwissenschaftliches Institut,
Universität Wien)**



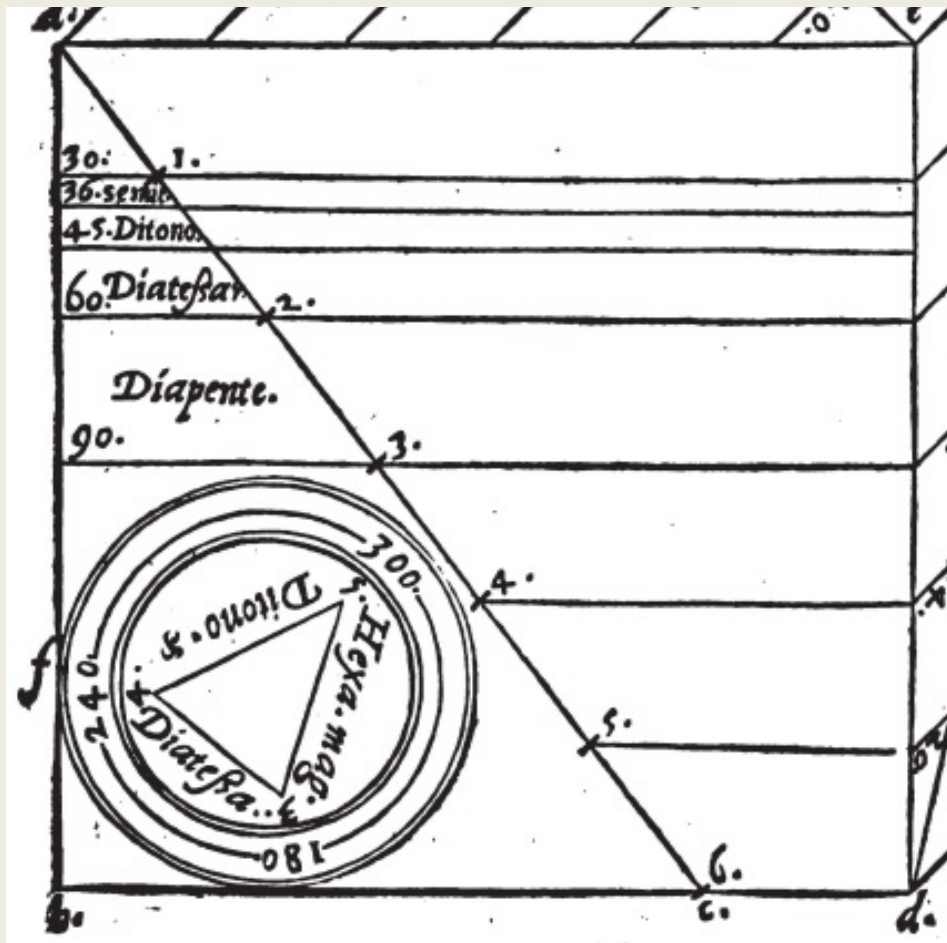
Zarlino Heliconae



Oktavperiodizität Mono- vs. Polychord



Helicon/Volvelle: interactive



[Zarlino: Helicon/Volvelle: synthetic](#)

Daniel Muzzolini (2019)

[Zarlino: Helicon/Volvelle: analog](#)

Daniel Muzzolini (2020)

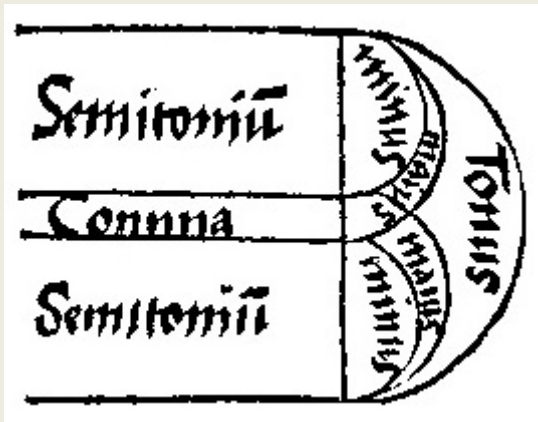
[Analoge Hellicona/Volvelles](#)

[2020 Klavier/53-EDO

Clavichord: lokal]

Enharmonic scales: symmetric division of the pythagorean tonus

Cochlaeus (1512)



Tonus = 2 kleine Halbtöne
+ 1 pythagoreisches Komma

Oktave = 5 Tonus +
2 kleine Halbtöne =
12 kleine Halbtöne
+ 5 Kommata



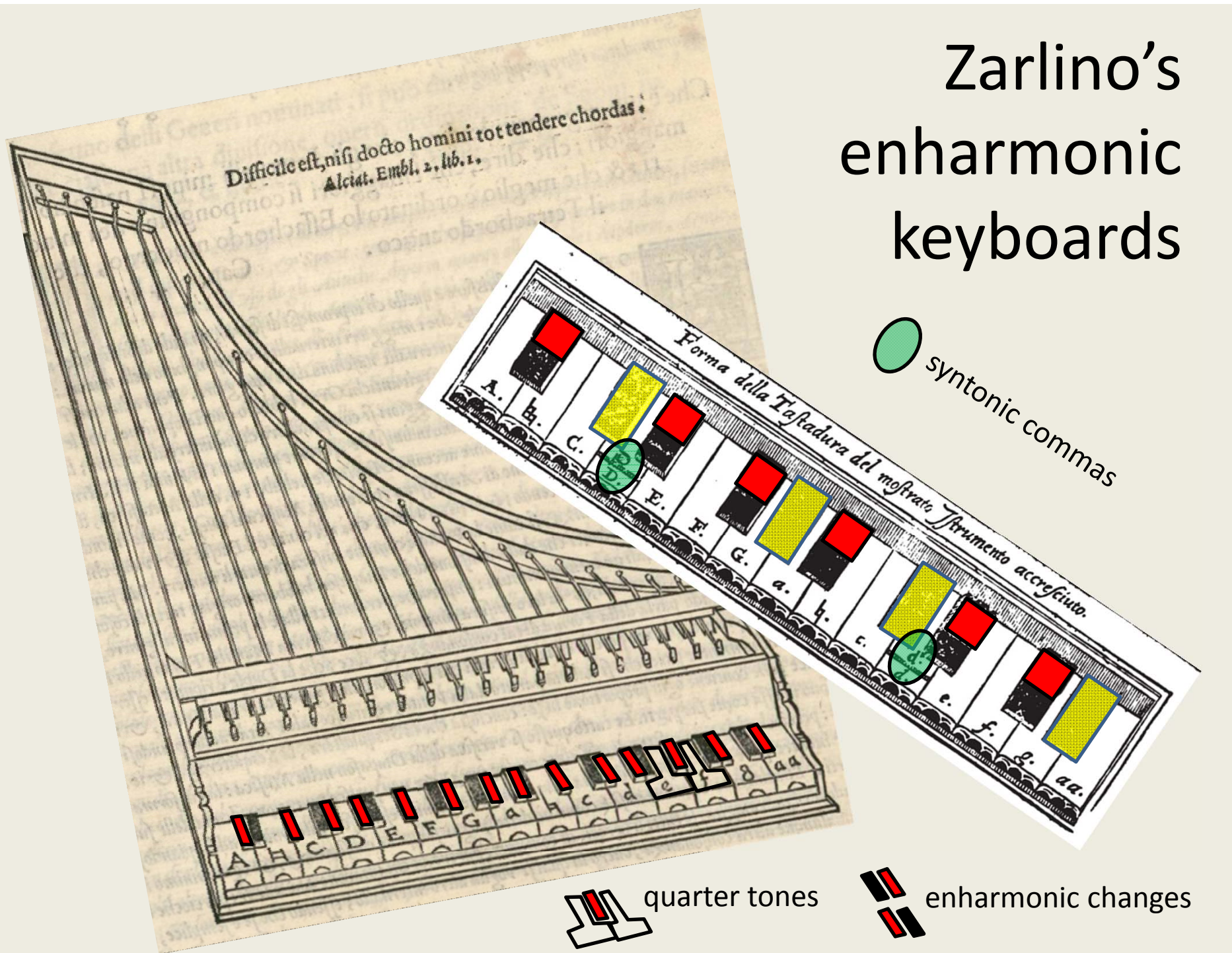
Ugolino di Orvieto (14. Jh.)

Zarlino's enharmonic keyboards

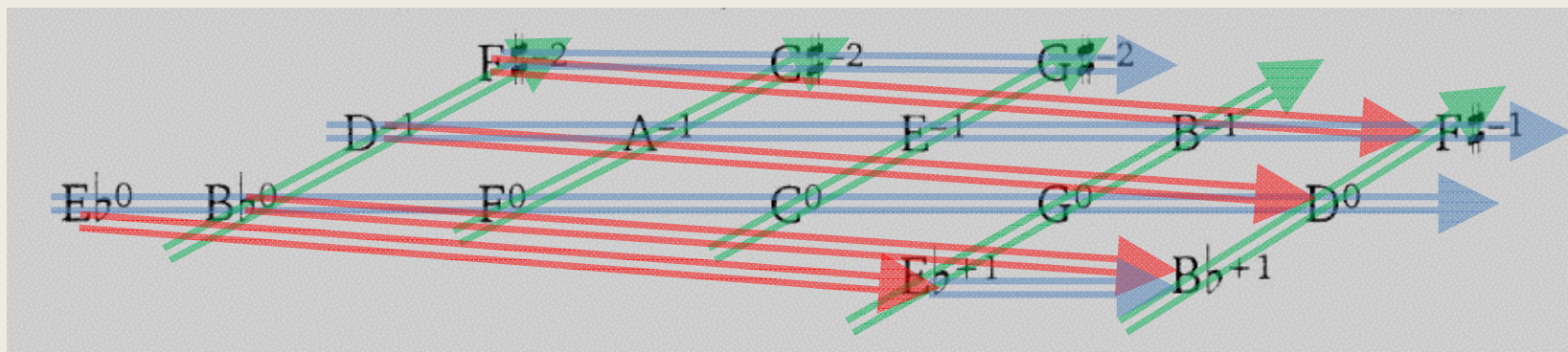
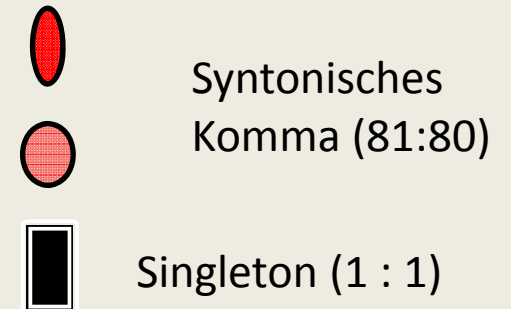
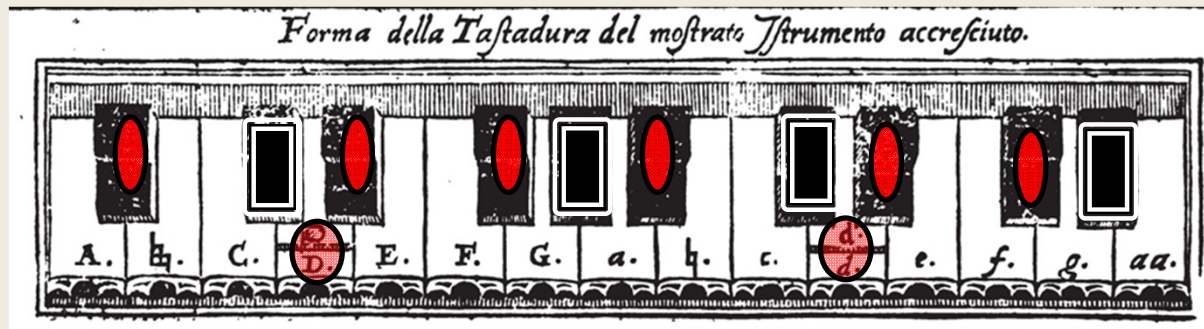
 syntonic commas

 quarter tones

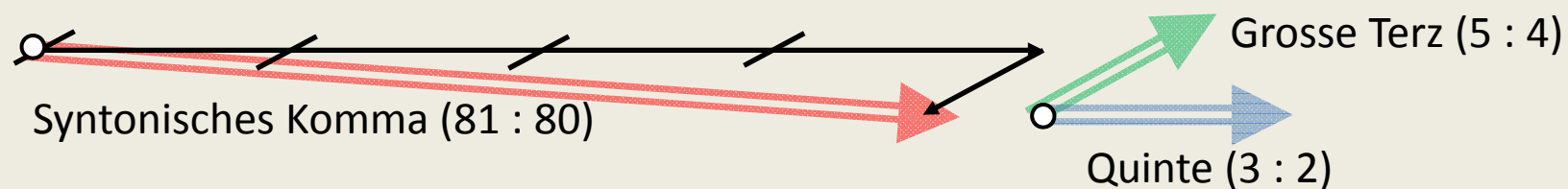
 enharmonic changes



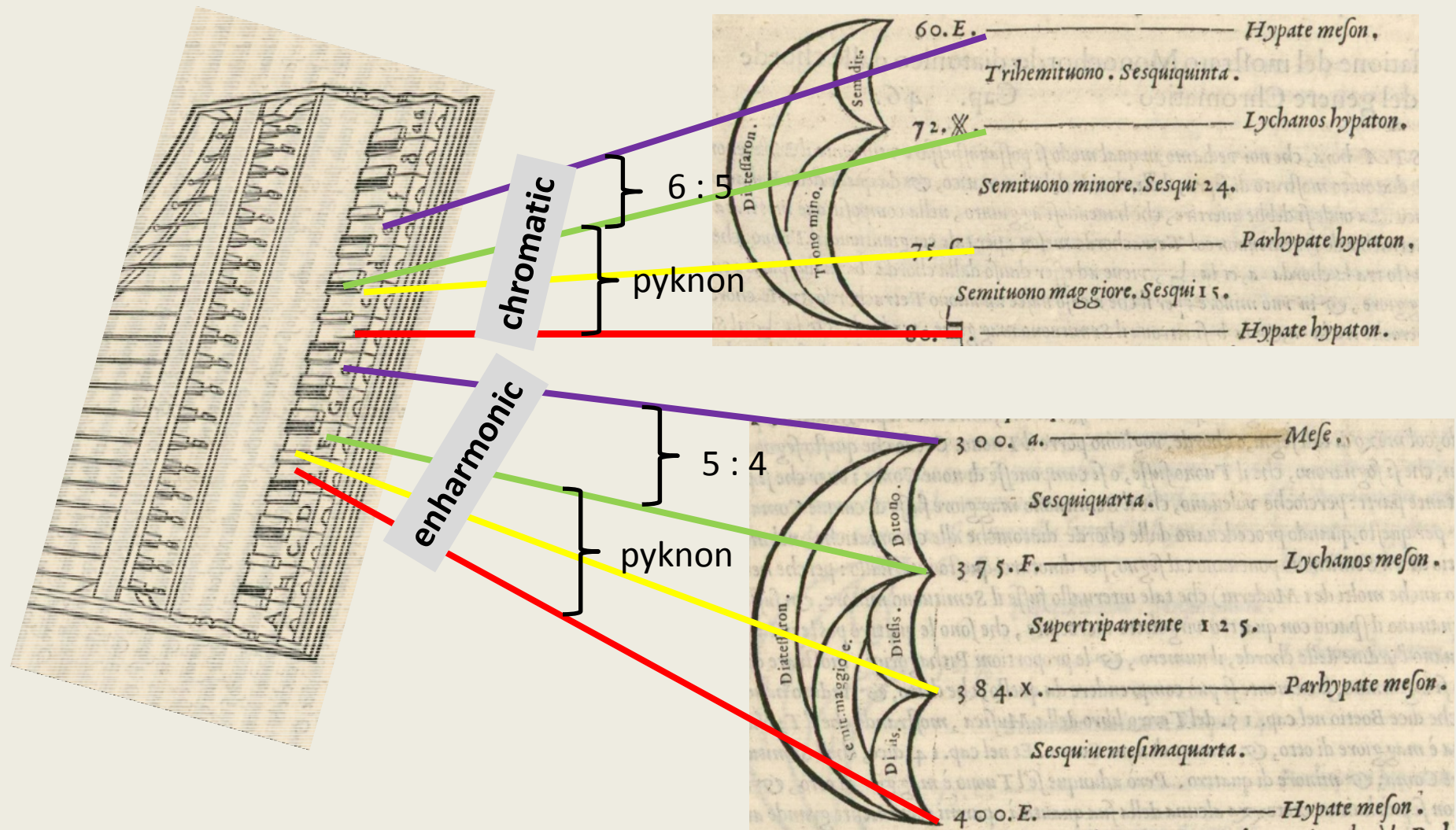
Keyboard mit 16 Tönen pro Oktave



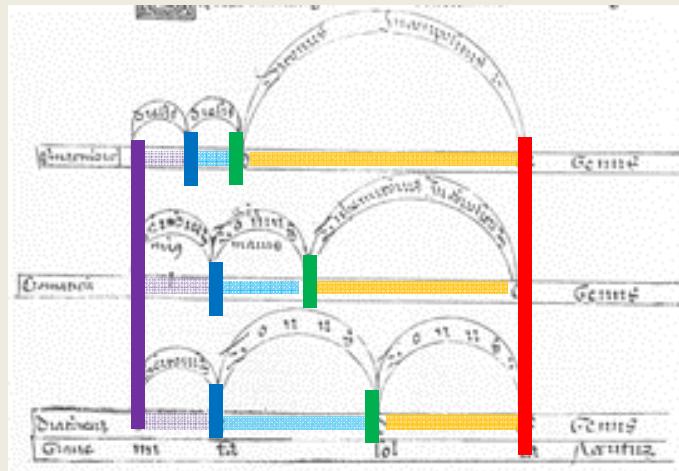
Deutung im diagonalen Quint/Terz-Gitter gemäss Barbieri (2002, p. 161))



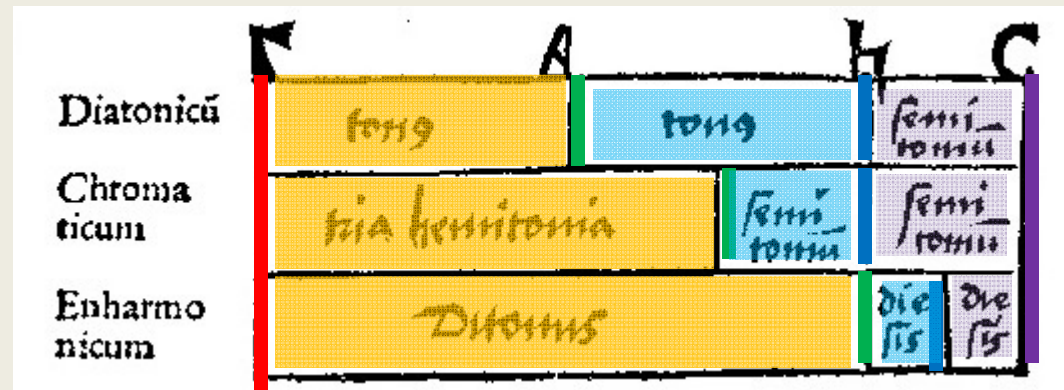
Zarlino_19: syntonic tetrachords



Greek Tetrachords in the Renaissance



Guillermo de Podio (1495)



Johannes Cochlaeus

Mapping: Zarlino_16 $\leftrightarrow$ 19 via 53-EDO

[Keyboard mapping: Zarlino 19 => Zarlino 16](#)

[Keyboard-Vergleich zweier Tastaturen bei Zarlino]

<https://muwiserver.synology.me/zarlino/>

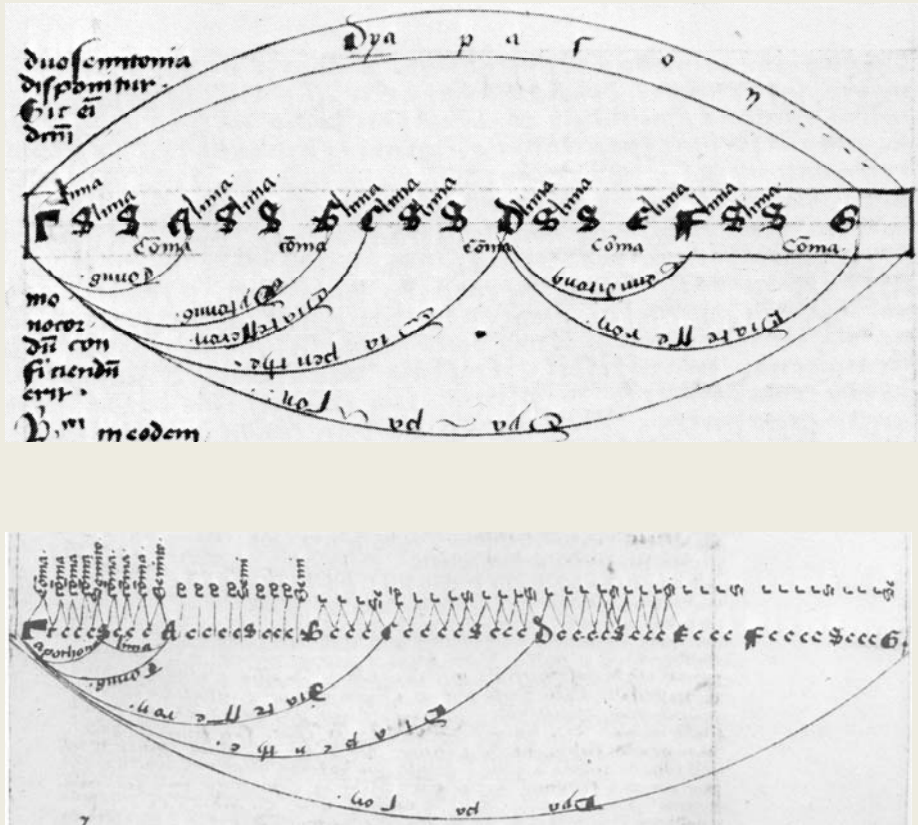
Christop Reuter 2020 Polyphones

Clavichord mit 19 Tasten pro Oktave -

Limit-5 (reine Stimmung) approximiert

durch 53-EDO

Why 53? – Pythagorean Answers



Jakobus von Lüttich (14. Jh.)



Guillermo de Podio (1495)

END