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

Zarlino digital: Art of Diagram ars diagrammaticandi

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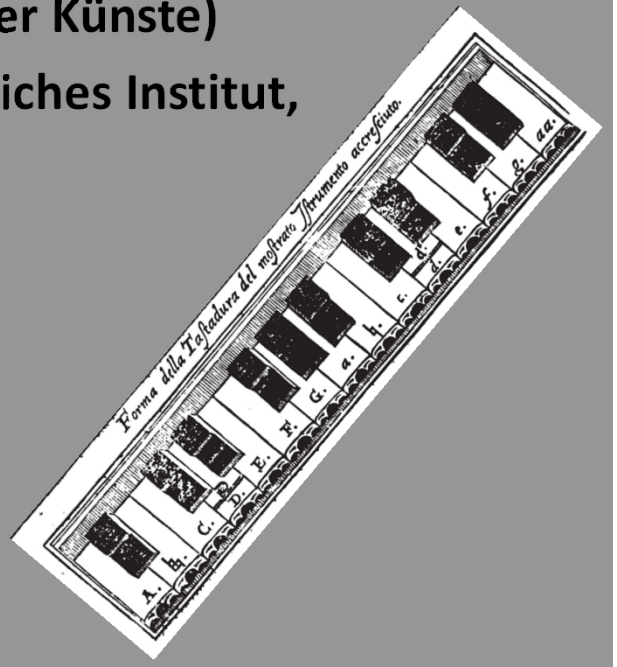
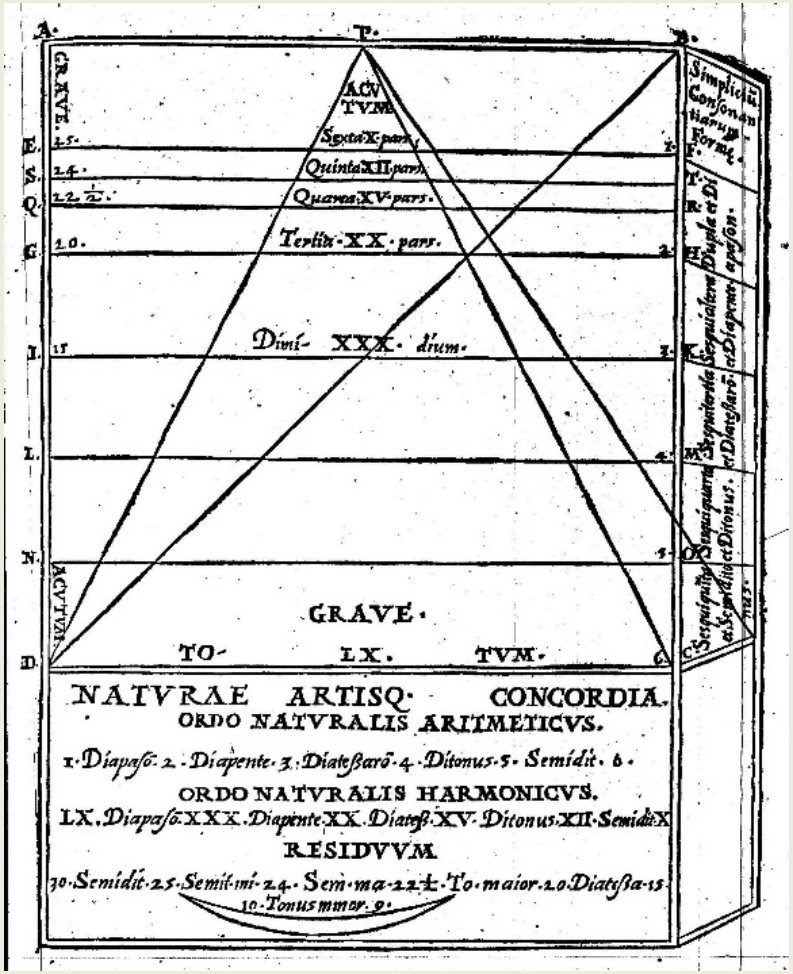
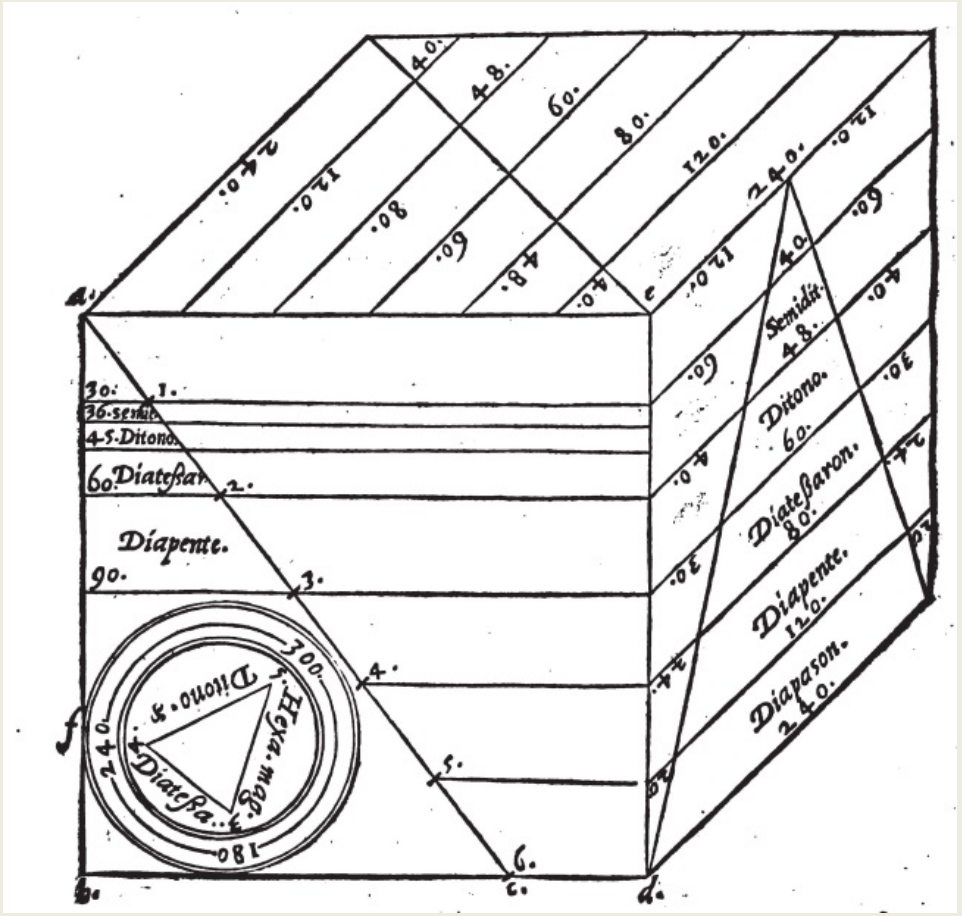
Christoph Reuter (Musikwissenschaftliches Institut, Universität Wien)

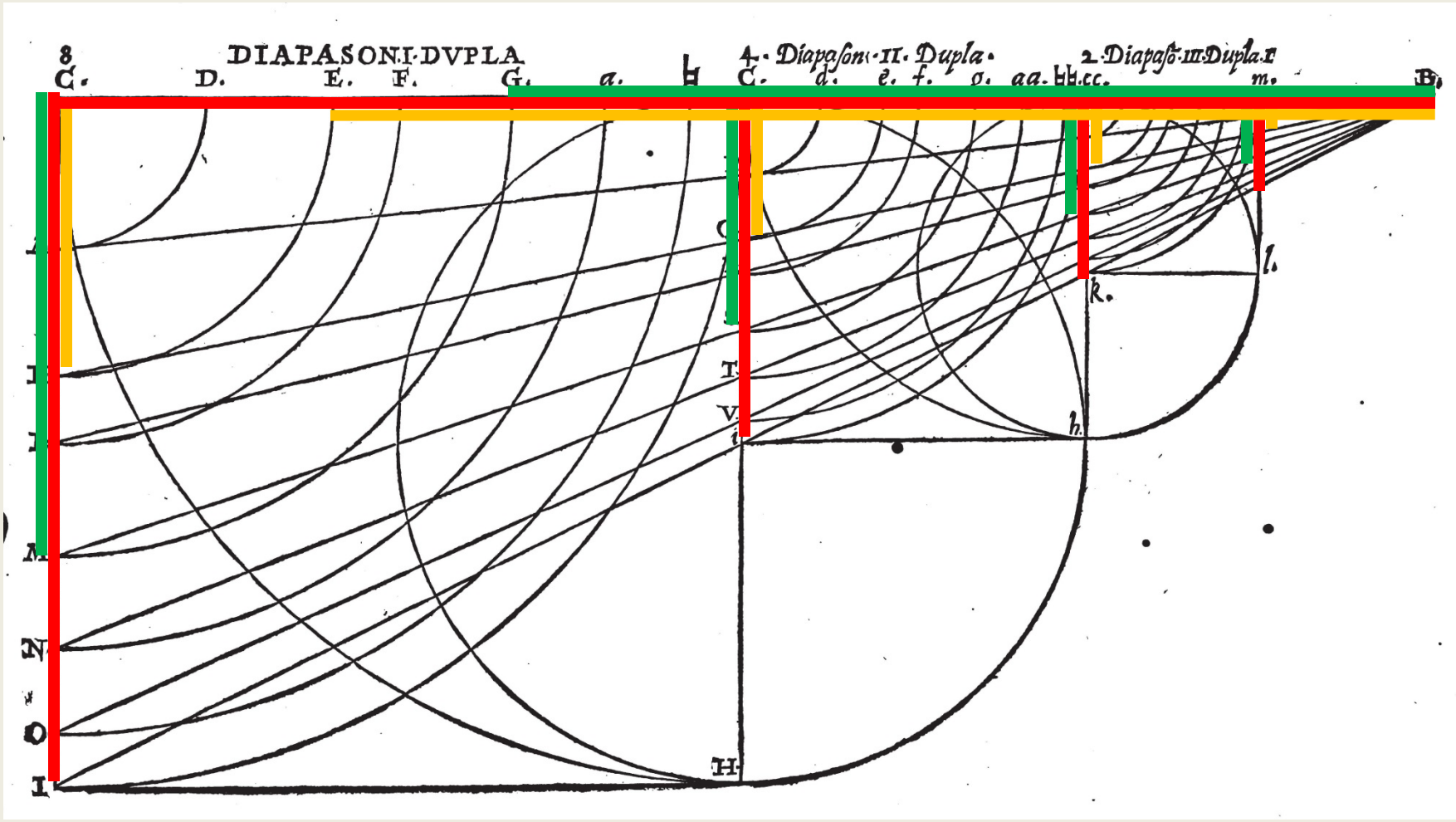


Zarlino Heliconae

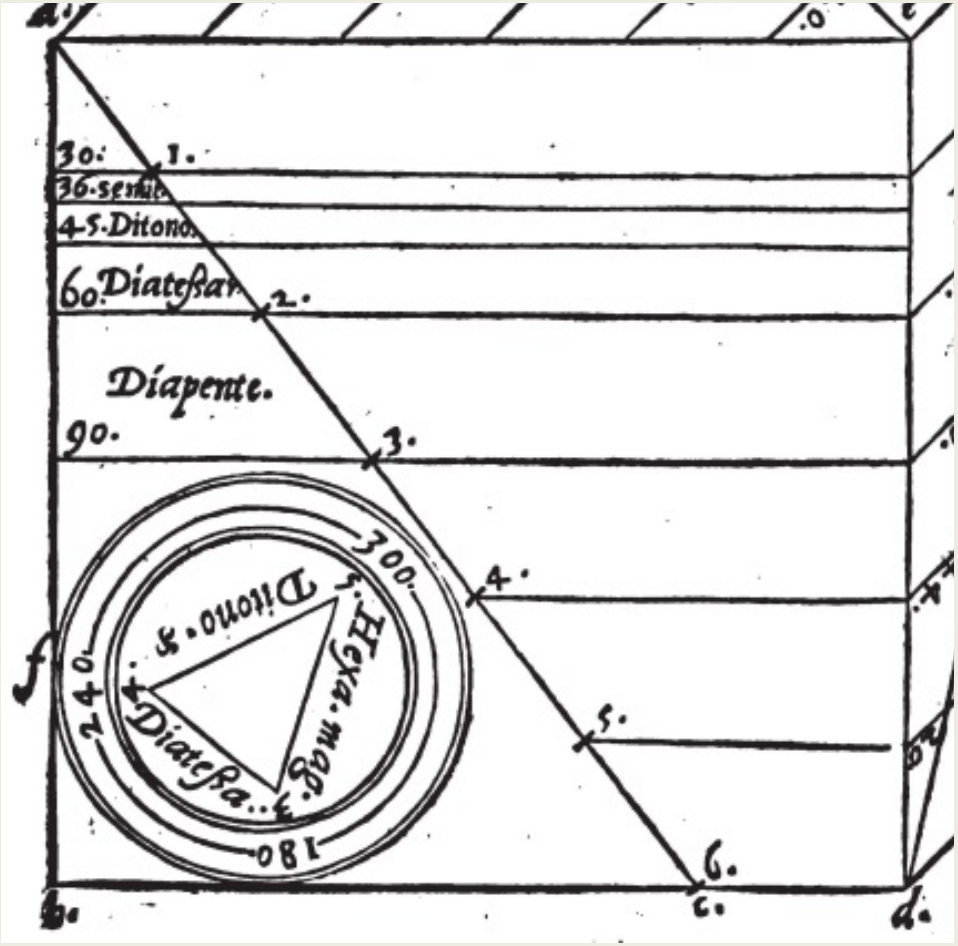




Oktavperidodizität Mono- vs. Polychord



Helicona/Volvelle: interactive



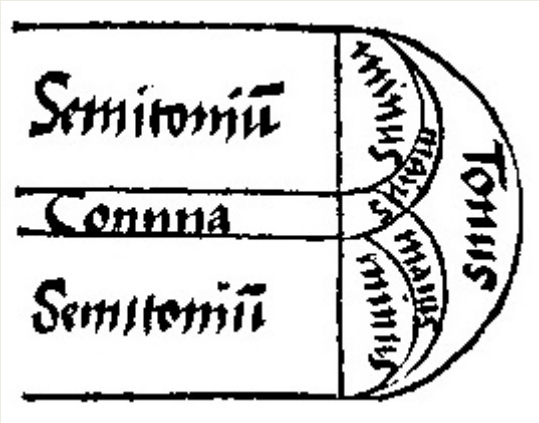
[Zarlino: Helicona/Volvelle: synthetic]
Daniel Muzzulini (2019)

[Zarlino: Helicona/Volvelle: analog]
Daniel Muzzulini (2020)

[Analoge Hellicona/Volvelles]
[2020 Klavier/53-EDO
Clavichord: lokal]

Enharmonic scales: symmetric division of the pythagorean tonus

Cochlaeus (1512)

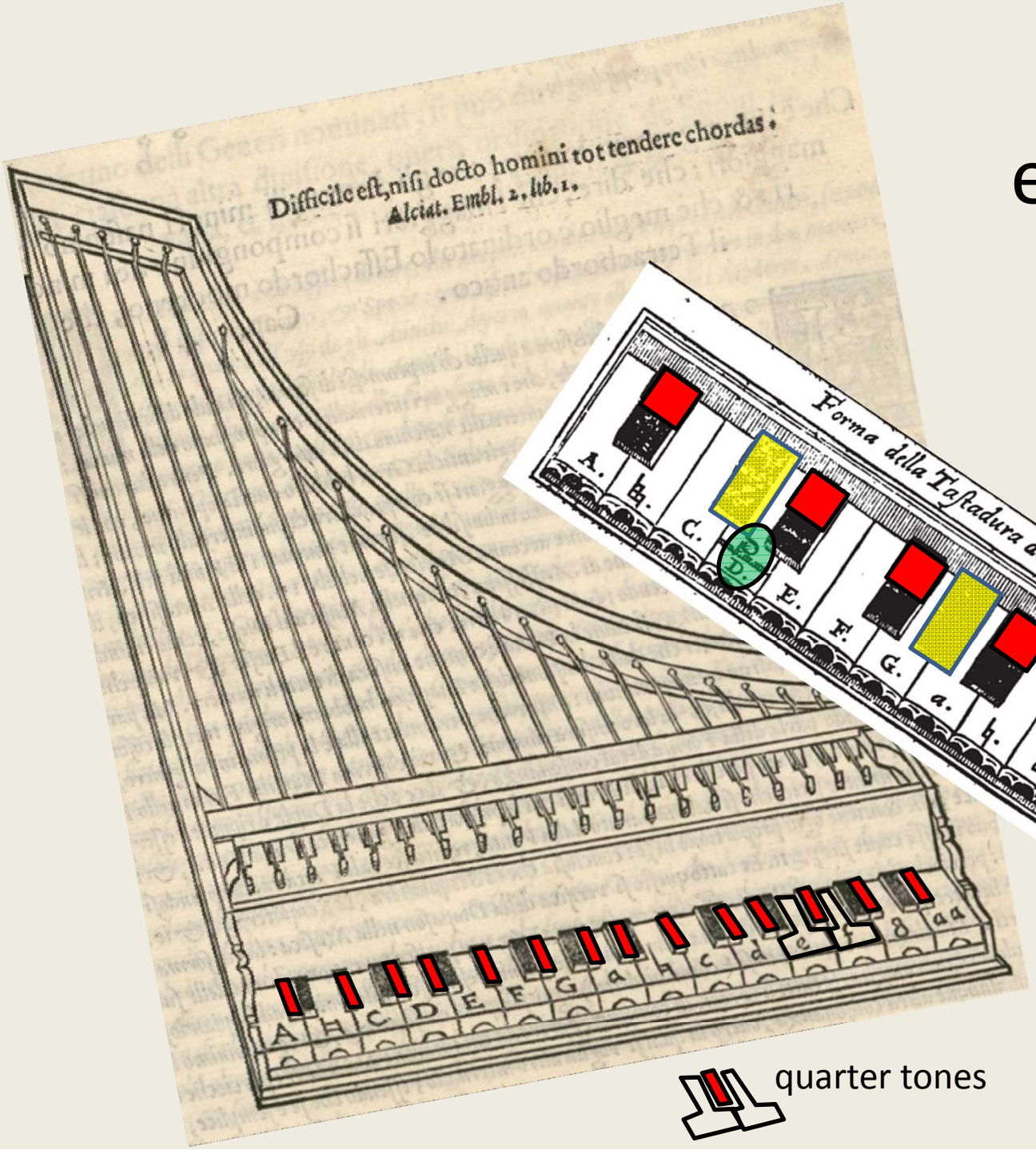


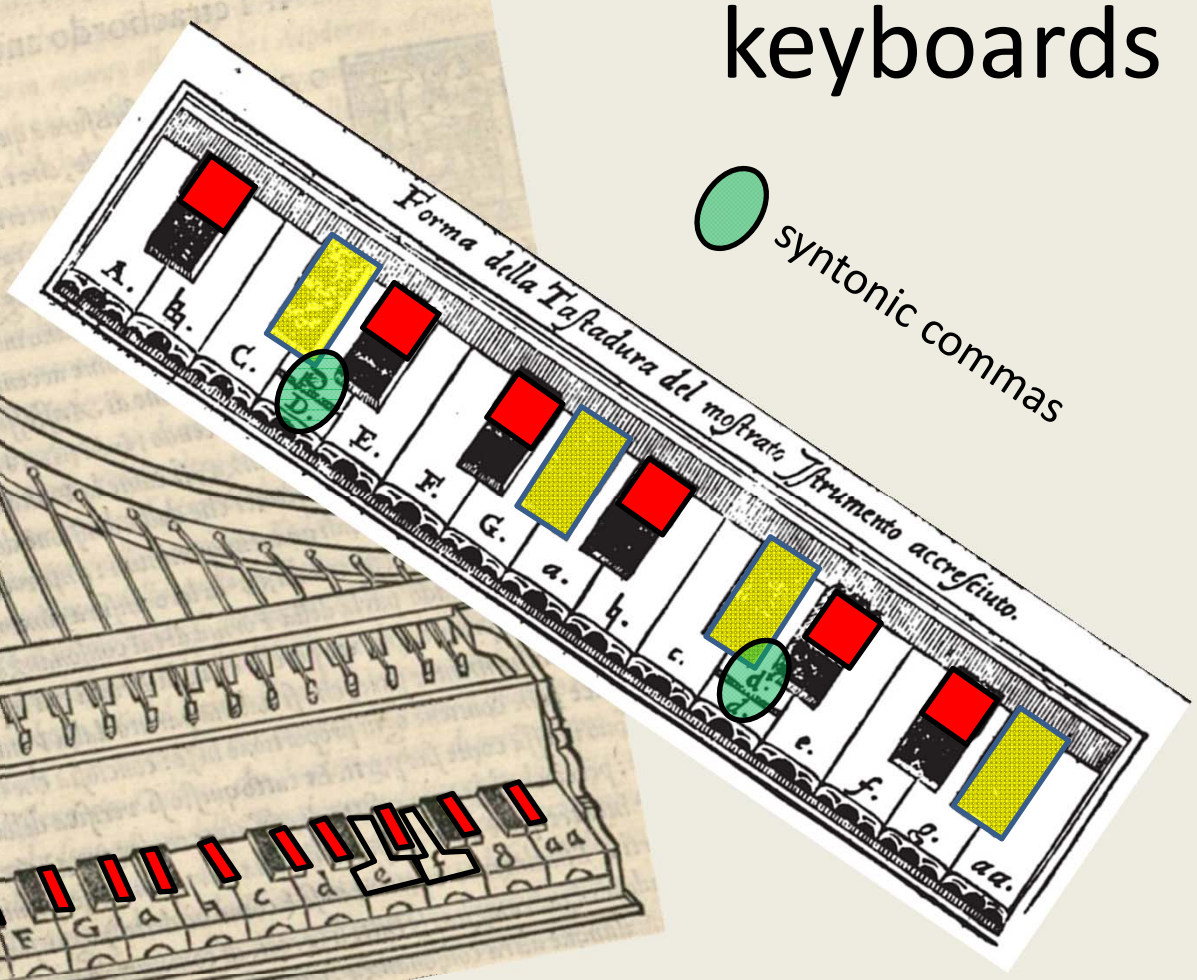
Tonus = 2 kleine Halbtöne
+ 1 pythagoreisches Komma

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

Ugolino di Orvieto (14. Jh.)

Zarlino's enharmonic keyboards



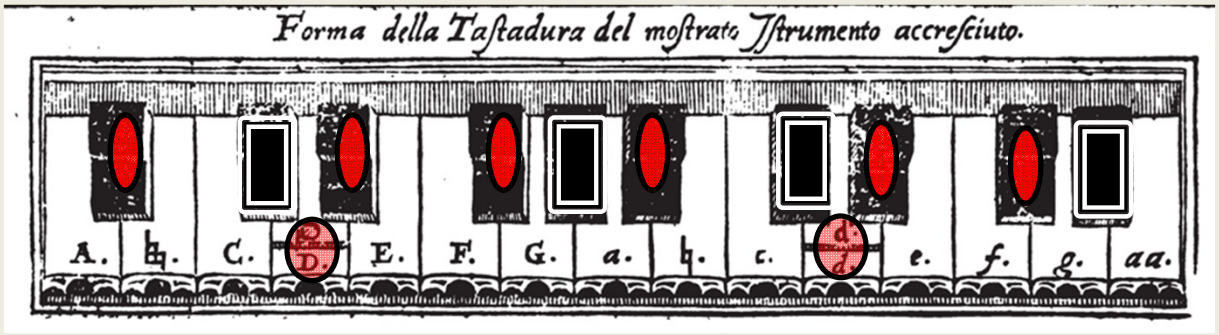


syntonic commas

quarter tones

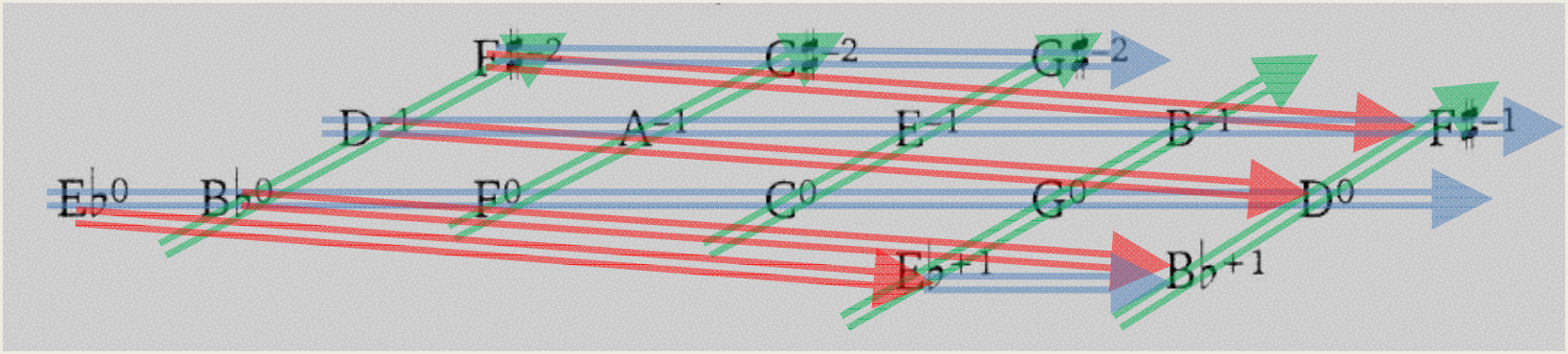
enharmonic changes

Keyboard mit 16 Tönen pro Oktave

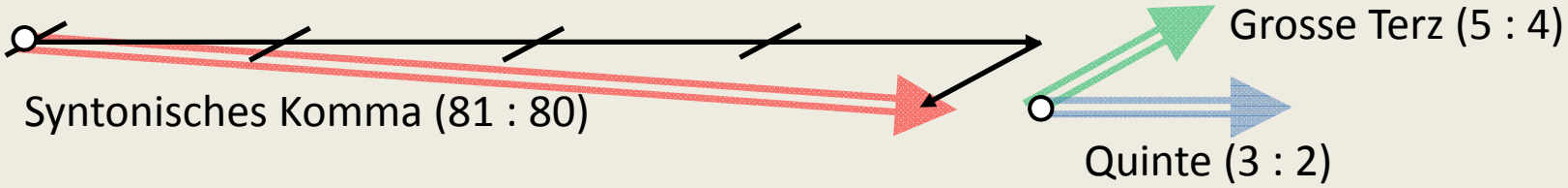


Syntonisches Komma (81:80)

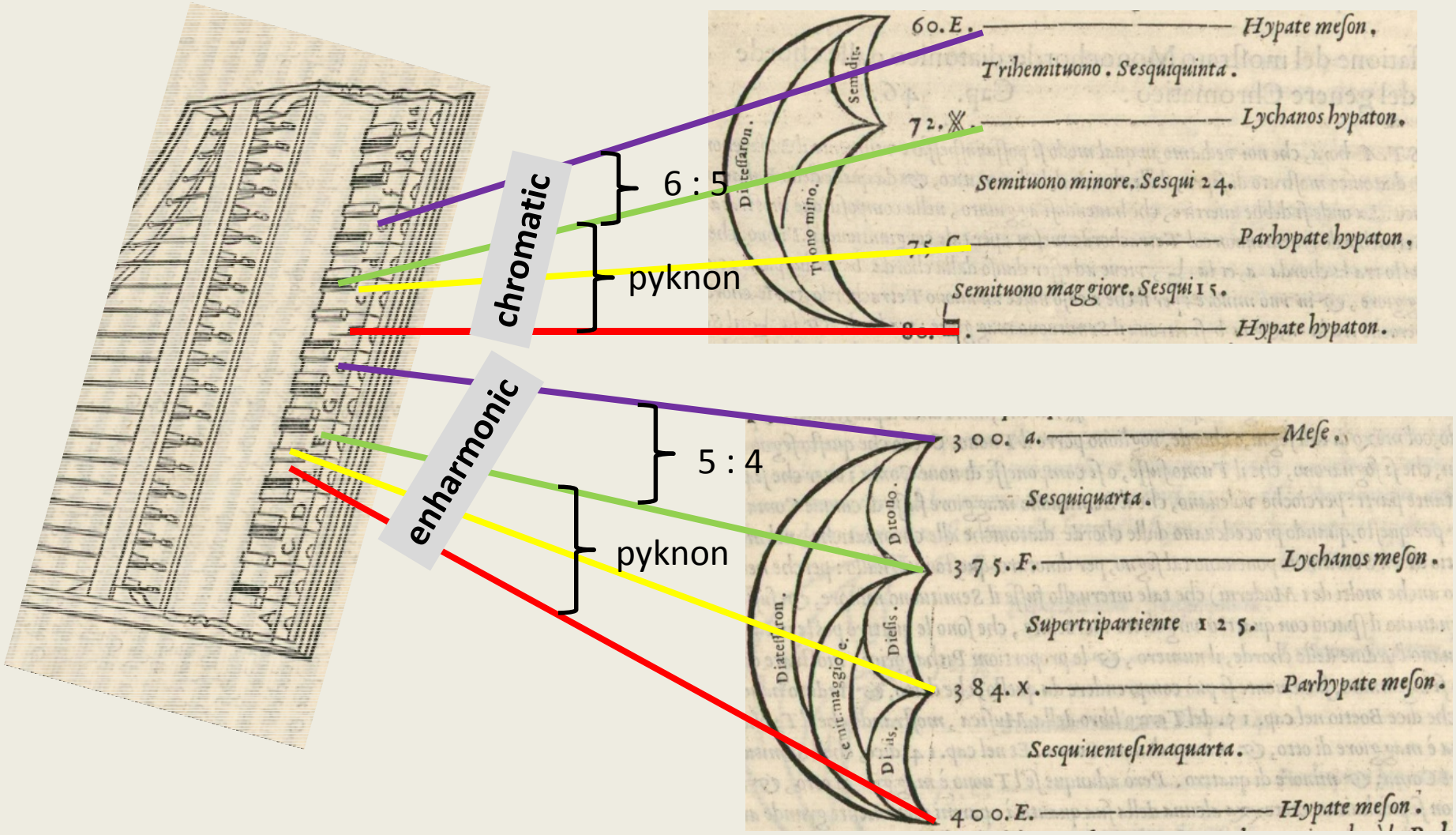
Singleton (1 : 1)



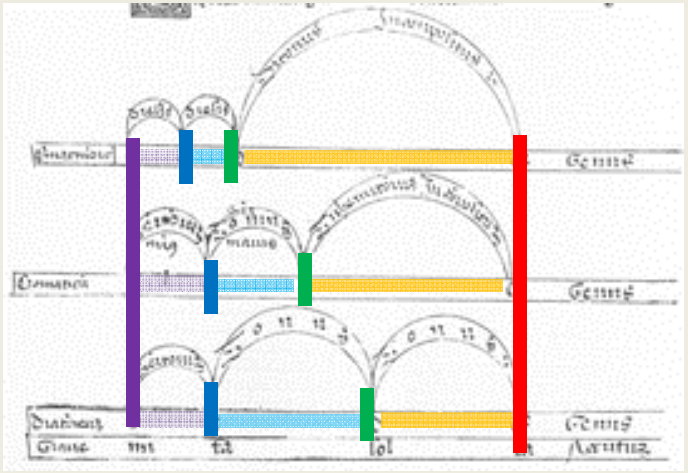
Deutung im diagonalen Quint/Terz-Gitter gemäss Barbieri (2002, p. 161))



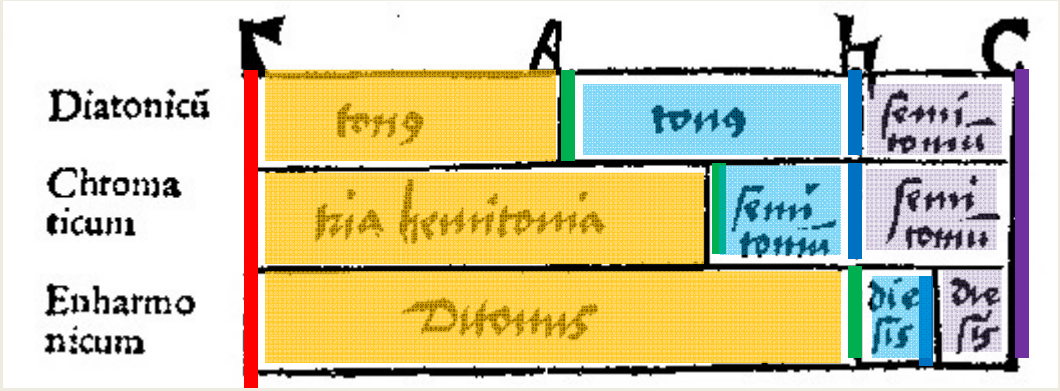
Zarlino_19: syntonic tetrachords



Grieek Tetrachords in the Renaissance



Guillermo de Podio (1495)



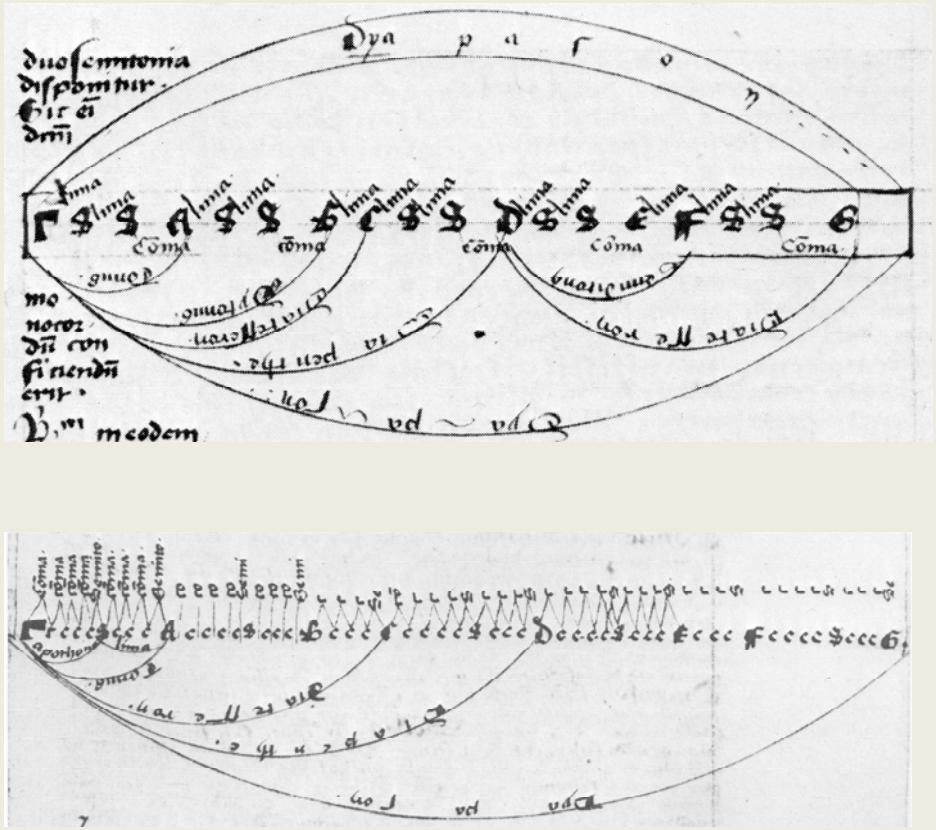
Johannes Cochlaeus

Mapping: Zarlino_16 <–> 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