



Syntonic Experiments

Thomas Noll / Daniel Muzzulini

Art of Diagram (online)

24. June 2021

Boethius: just major thirds?

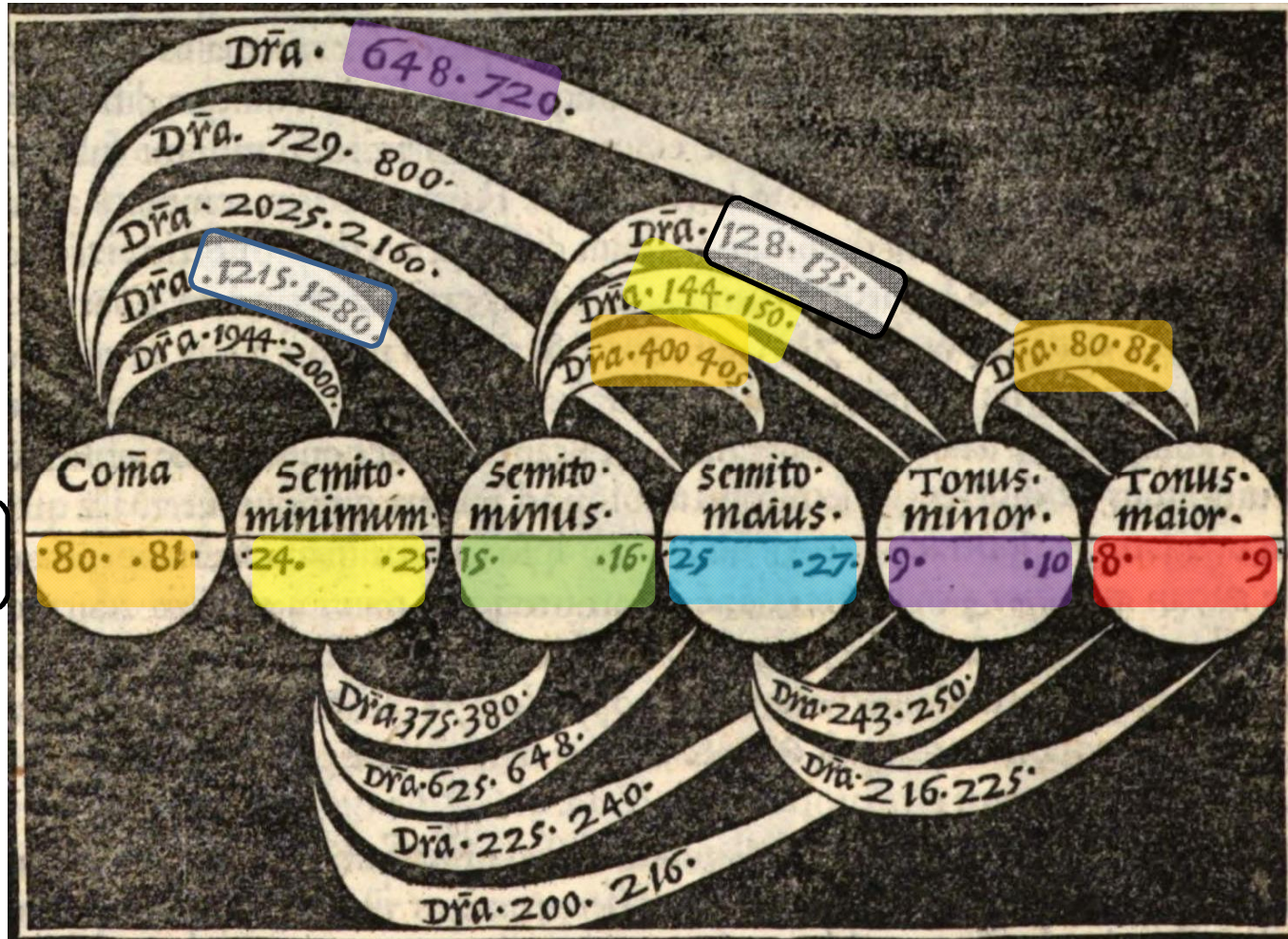
LATITUDO

i	iiii	xxvi	Lxxiiij	ccxlvi	ixxxiiij
v	xx	Lxxx	cccxix	icclxxx	
	xxv	c	cccc	īdc	
		cxv	d	īī	
			dcxv	īīd	
				īīccxv	

ALY G U L T A I S

Et octavae ratione u. eundem solum solum solum

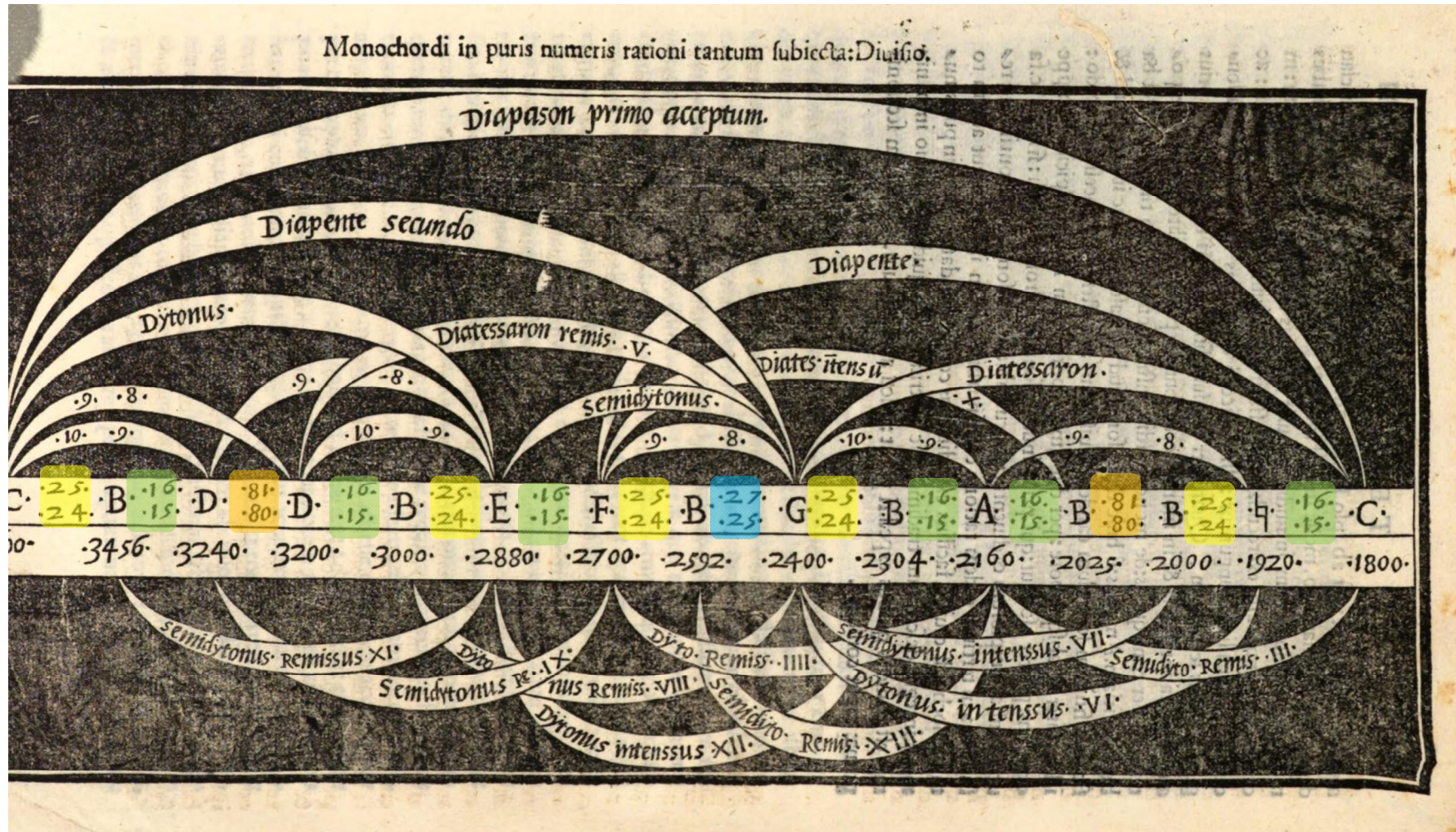
Fogliano (1529): A complete graph for syntonic interval differences



LIMMA
243:256

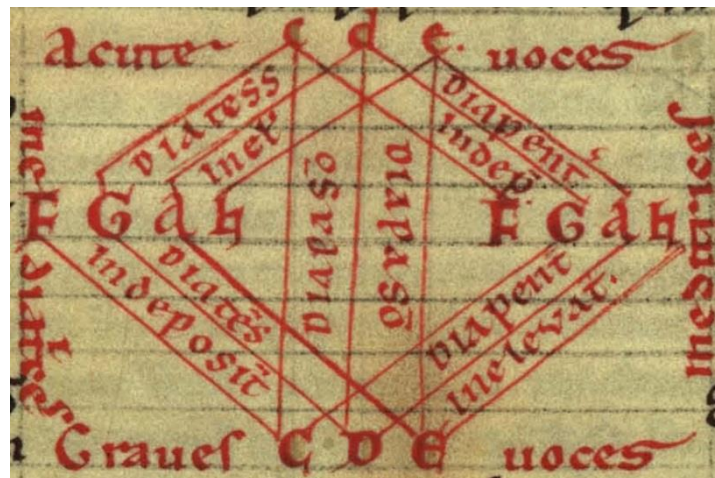
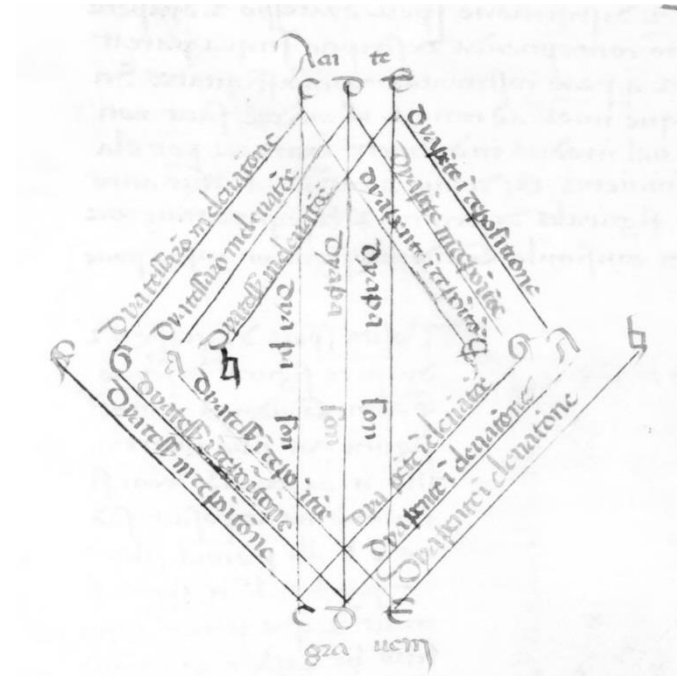
Chr. Semi
128:135

Fogliano (1529)



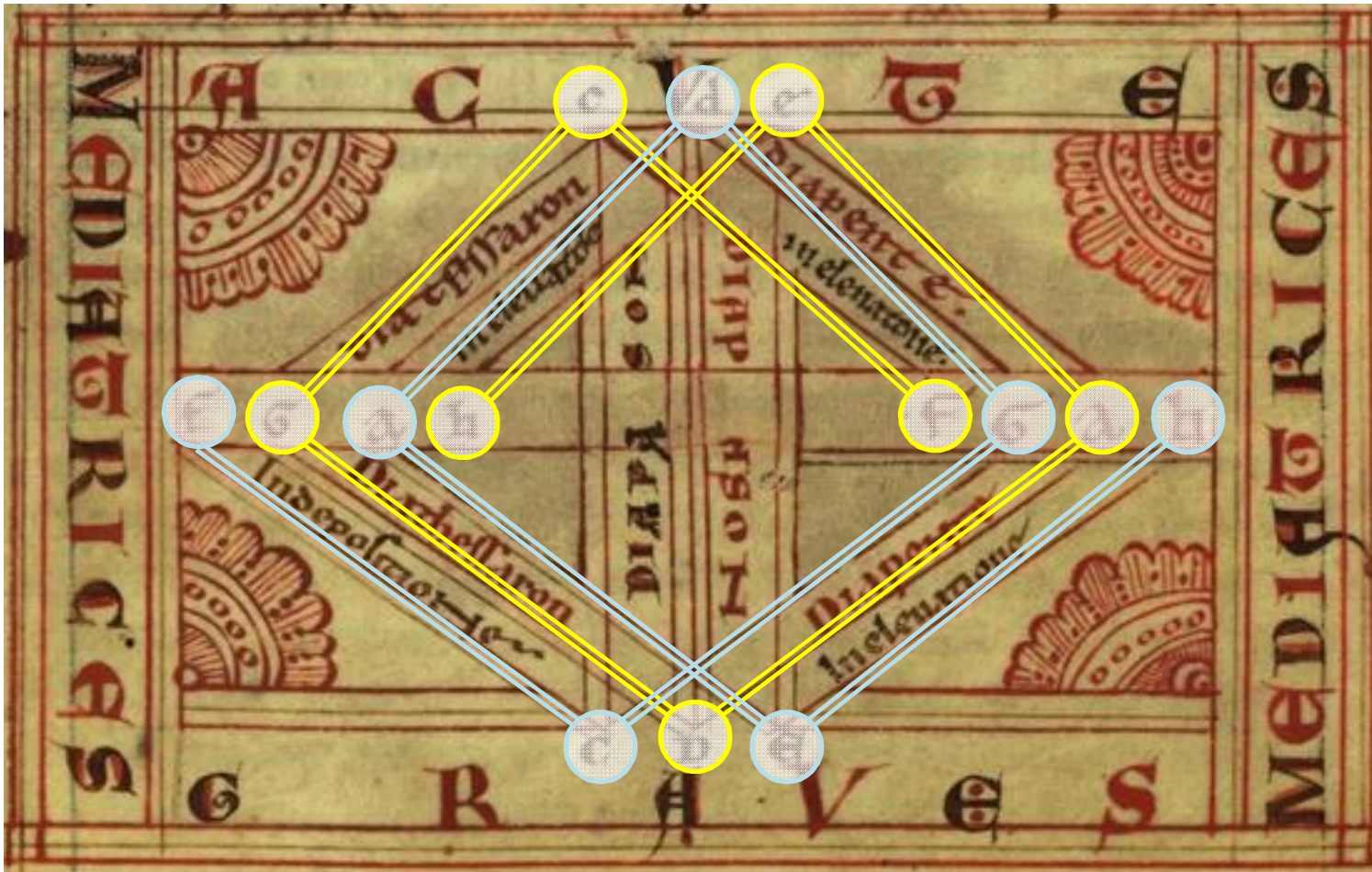
Just intonation chromatic scale with two syntonic commas

Spiraling fifths and fourths

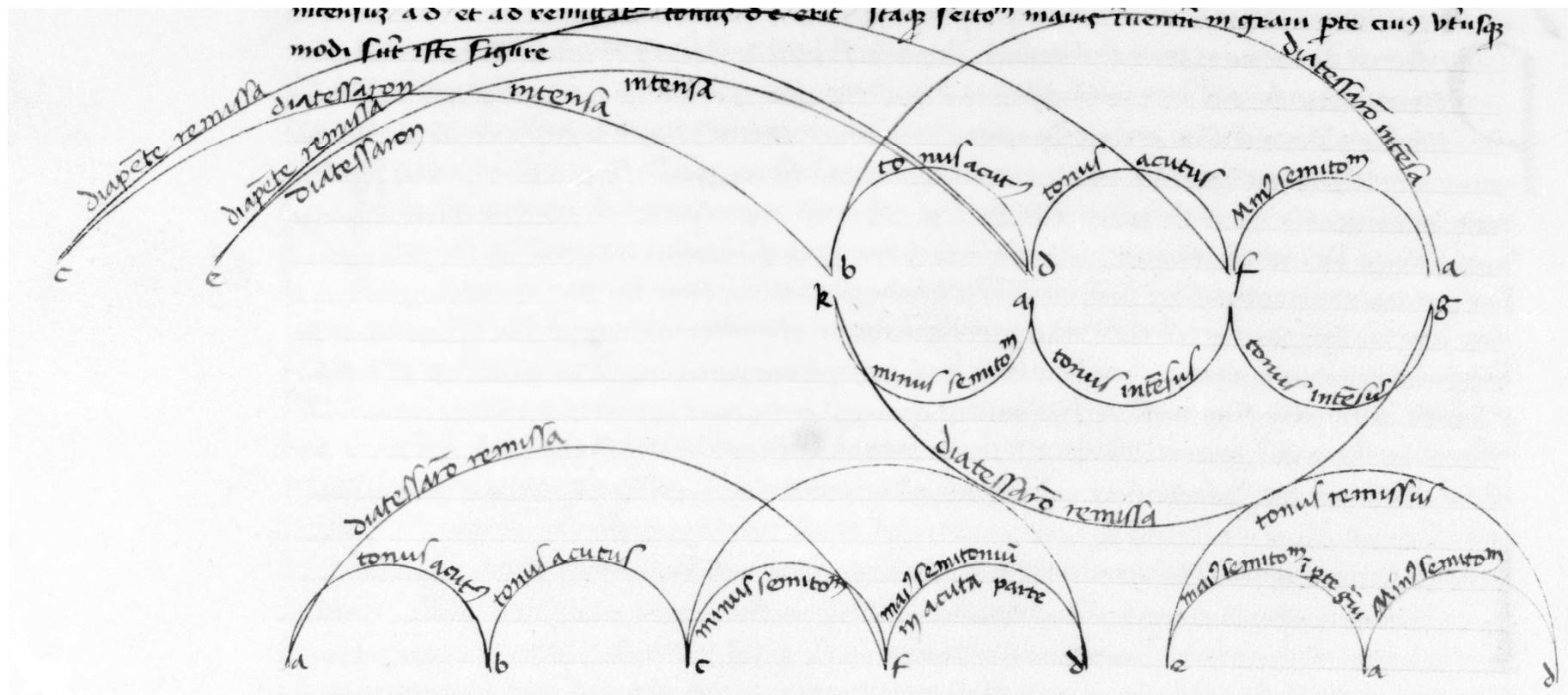


Pythagorean tuning

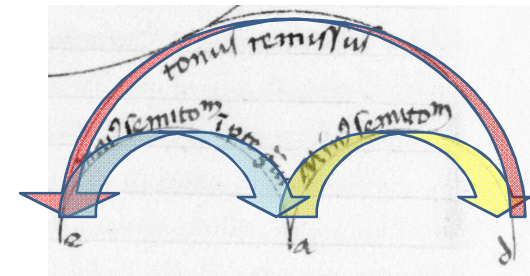
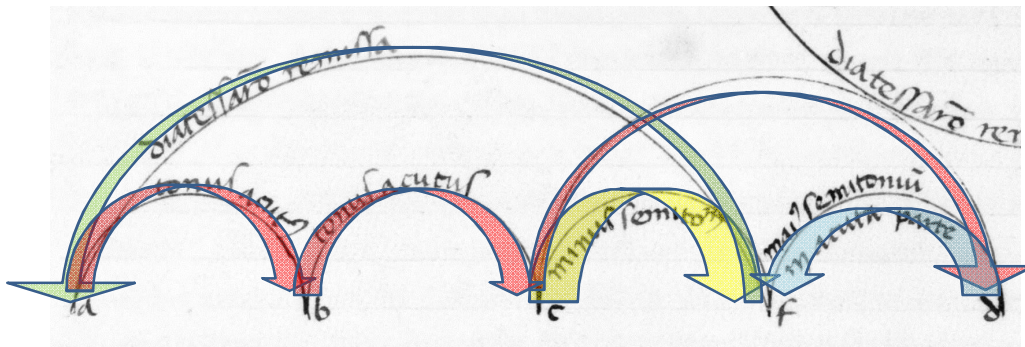
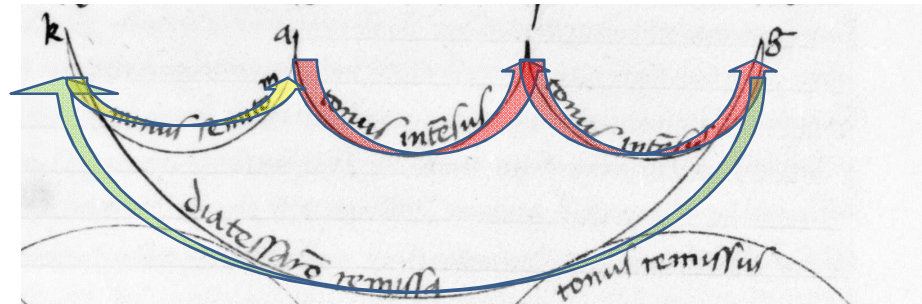
Spiraling fifths and fourths



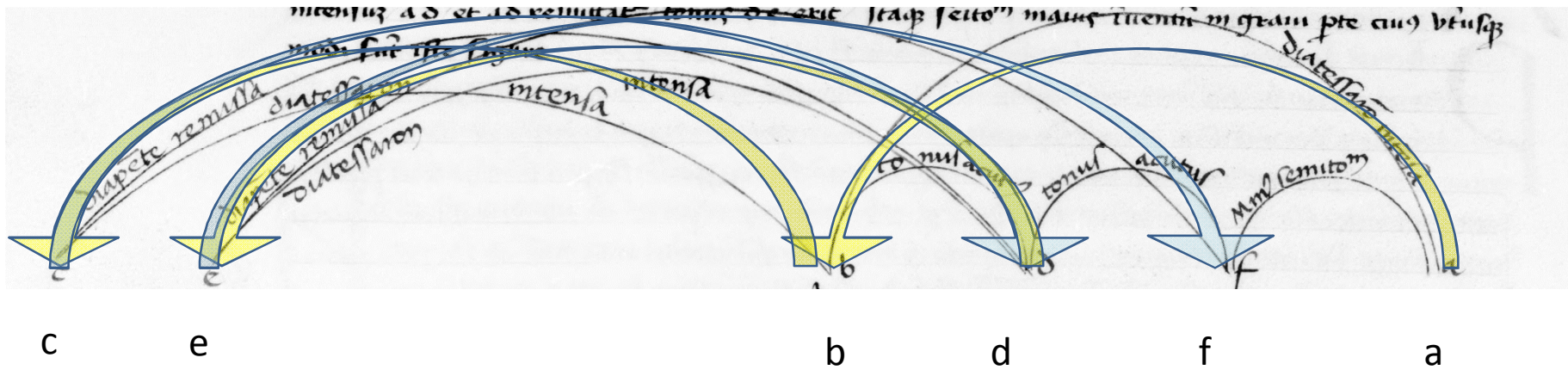
Leodiensis



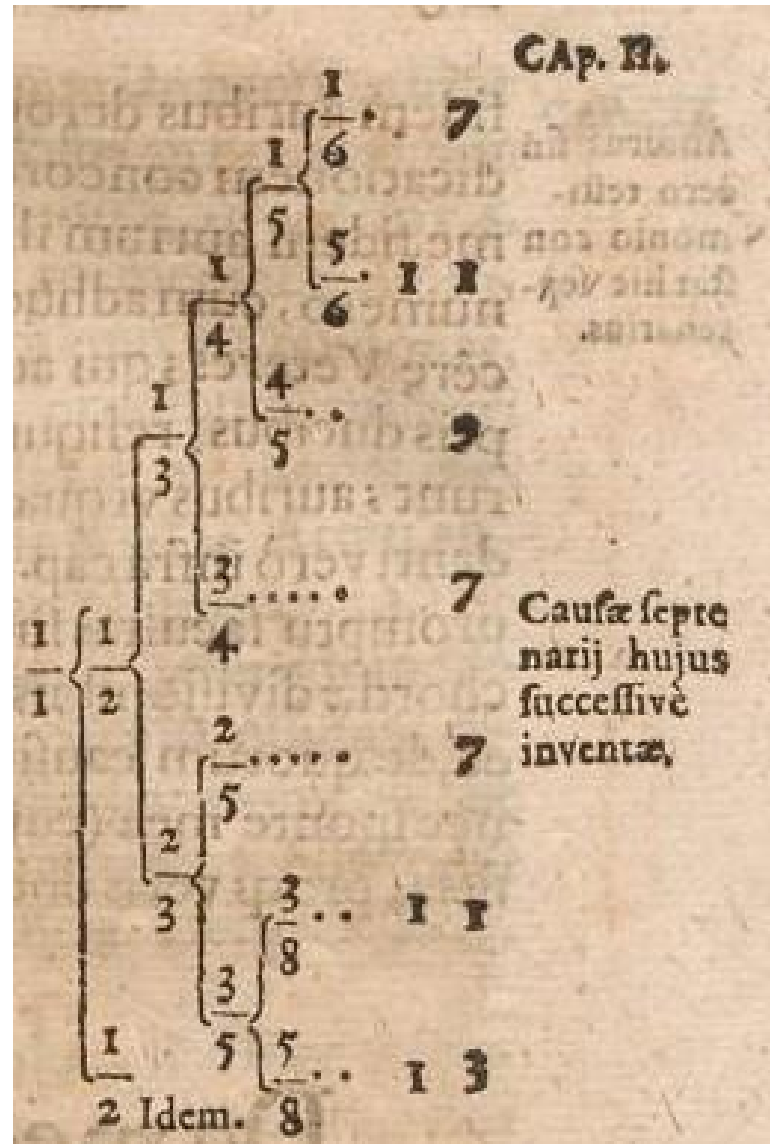
Leodiensis



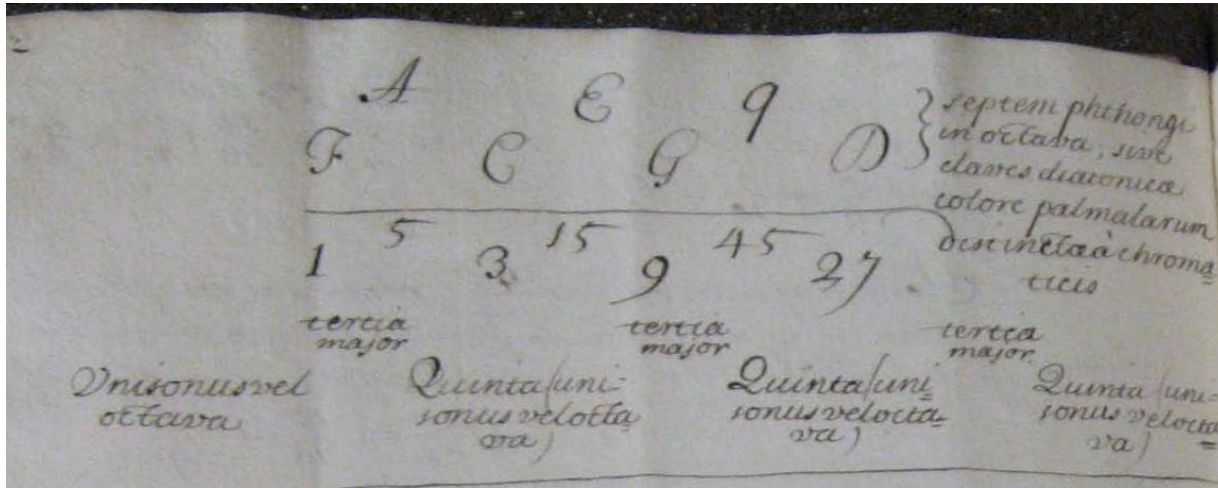
Leodiensis: Hexachord



1619_Kepler_Lib_III_27_derivationConsonances.jpg



Nicolas Mercator (c. 1665)



sharp

♯		F♯	C♯	G♯		
	D	A	E		♯	
		F	C	G		D
		A♭	E♭	B (nat: or ♭flat)		F

Nicolas Mercator (c. 1665)

septem phthongi in octava, sive claves diatonicae colore palmatarum distinctae a chromaticis

A	C	E	G	B
F	C	E	G	D
1	5	3	15	9
			45	27

tercia major *tercia major* *tercia major*

Unisonus vel octava *Quinta (unisonus vel octava)* *Quinta (unisonus vel octava)* *Quinta (unisonus vel octava)*

... quatuordecim qualem diatonicae

$\frac{24}{25}$	$\frac{15}{16}$	$\frac{15}{16}$	$\frac{120}{133}$	$\frac{15}{16}$	$\frac{24}{25}$	$\frac{25}{27}$	$\frac{15}{16}$	$\frac{24}{25}$	$\frac{15}{16}$	$\frac{24}{25}$	$\frac{25}{27}$	0
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se:mi: | se:maj: | se:mi:med: | se:maj: | se:mi:min: | se:maj: | se:mi:min: | se:maj: | se:mi: | se:maj:

ton: min | to:maj: | se:maj: | ton:maj: | ton:min: | se:maj: | to:maj:

Mercator 'Of Musick' (2), fol. 36v, 2013_BeW_227

*Of the Musicall Scale.*⁹

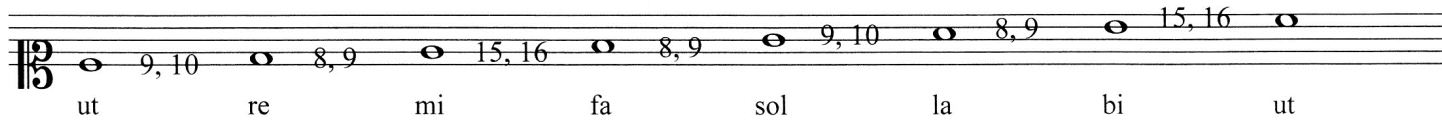
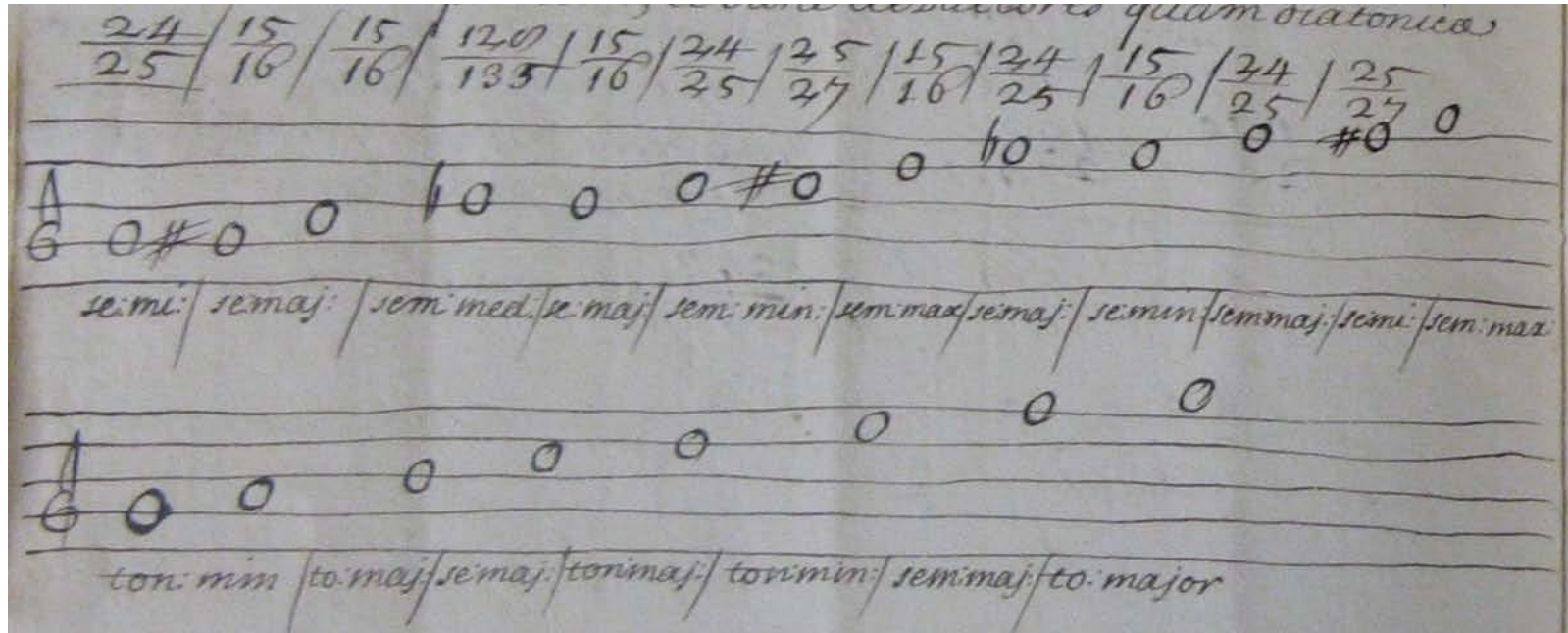
sharp
 ♯ F♯ C♯ G♯
 D A E ♯
 F C G D
 A♭ E♭ B⟨nat: or ♭flat⟩ F

ut re mi fa sol la bi ut

Here are three toni majores, two ⟨toni⟩ minores, and two semitonia majora in an eighth.

mi maj: max mi ma mi max mi ma max mi maj

Nicolas Mercator (c. 1665)



Here are three toni majores, two (toni) minores, and two semitonia majora in an eighth.

