

Between modes and biggish data

creating and exploring a new catalogue of polyphonic modal cycles

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Abstract

Modal cycles are probably the most solid evidence we possess for the relevance of the modes for polyphony, specifically for composing 'in' the modes. Whereas the prototypical modal cycle consists of precisely one composition for each mode--such as Palestrina's *Vergine*-cycle (1581)--cycles display an astonishing amount of variation in, for example, number of pieces, length of the pieces, number of modes, degree of order and completeness, relationship to psalm and Magnificat tones, scoring, genre, and selection of modal characteristics. This variation points to a range of motivations for creating a cycle: providing overarching structure, adding symbolic meaning, teaching by example, proving mastery, bringing order in a set of pieces, or enabling selection of an appropriate piece for a given context. This illustrates why a comprehensive overview of modal cycles (including borderline cases) is important, in addition to close-reading of the individual cycles.

In 2001, the first author published a catalogue of 475 modal cycles dating from the end of the 15th century until c. 1800, with the majority of cycles dating from 1540-1620. Since then, several new items have come to light through casual exploration. In this paper we will report the outcomes of a systematic exploration of several digital resources, in particular the RISM dataset with its nearly 1.5 million records. We show how mode information is retrieved from various fields and how candidate cycles are extracted.

A total of nearly 200 new cycles have been identified, some of which are especially intriguing due to their size, organisation, or ambition of the composer. A selection of these cycles will be discussed in detail. We will also present a quantitative analysis of the augmented catalogue and discuss temporal and geographical patterns, as well as patterns in musical features across modal cycles. Finally, we will reflect on lessons learned in digital musicology, specifically on how meaningful insights can be gained by recycling data created for a different purpose. The new catalogue of modal cycles will be published online in summer 2025.

Modal cycles

- sets of compositions through all modes (typically 8 or 12)
 - robust evidence for the practical reality of polyphonic modality
-
- modal organisation may be explicit from cycle or composition title (Stoltzer) or implicit (Palestrina)

composer	title	m1	sig_clefs	f_bass	f_mode
<Stoltzer, Thomas>	<melodia primi toni>	1	h (c1 c2 c4 c4 f4)	d2	d
<Stoltzer, Thomas>	<melodia secundi toni>	2	h (c2 c2 f3 f4 f5)	d2	d
<Stoltzer, Thomas>	<melodia tertii toni>	3	h (c1 c1 c4 c4 f4)	a2	e
<Stoltzer, Thomas>	<melodia quarti toni>	4	h (c2 c2 f3 f4 f5)	e2	e
<Stoltzer, Thomas>	<melodia quinti toni>	5	1b (g2 c1 c3 c3 f3)	f3	f
<Stoltzer, Thomas>	<melodia sexti toni>	6	1b (c1 c1 c4 c4 f4)	f2	f
<Stoltzer, Thomas>	<melodia septimi toni>	7	h (g2 c1 c3 c3 f3)	g2	g
<Stoltzer, Thomas>	<melodia octavi toni>	8	h (c1 c1 c4 c4 f4)	g2	g

Stoltzer, *Octo Tonorum Melodiae V Vocibus Compositae*

composer	title	m1	sig_clefs	f_bass	f_mode
<Palestrina, Giovanni Pierluig	Vergine bella	1	h (g2 c2 c3 c3 c4)	a3	d
<Palestrina, Giovanni Pierluig	Vergina saggia	2	h (g2 c2 c3 c3 c4)	d3	d
<Palestrina, Giovanni Pierluig	Vergine pura	3	h (c1 c3 c4 c4 f3)	e3	e
<Palestrina, Giovanni Pierluig	Vergine santa	4	h (c2 c3 c4 c4 f4)	e3	e
<Palestrina, Giovanni Pierluig	Vergine sola al mondo	5	1b (g2 c2 c3 c3 f3)	f3	f
<Palestrina, Giovanni Pierluig	Vergine chiara	6	1b (c1 c3 c4 c4 f4)	f2	f
<Palestrina, Giovanni Pierluig	Vergine quante lagrime	7	h (g2 c2 c3 c3 c4)	g3	g
<Palestrina, Giovanni Pierluig	Vergine tale è terra	8	h (c1 c3 c4 c4 f4)	g2	g

Palestrina, *Le Vergini*

Identifying modal cycles

- very often, not so tightly organised
 - missing modes
 - pieces out of modal order
 - different number of pieces per mode
- unfinished cycles
- cycles surviving in different versions
- mode or psalm/magnificat tone cycle
 - different but related

title	m1	sig_clefs	f_bass	f_mode
Fama mihi egregiam	1	h (c1 c3 c3 c4 f4)	d3	d
Deus noster refugium	2	1b (c1 c3 c3 c4 f4 f4)	g2	g
Quasi insigne	3	h (c1 c3 c3 c4 f4 f4)	e2	e
Confiteantur tibi	8	h (c1 c1 c3 c4 c4 f4)	g2	g
In illo tempore	5	1b (g2 g2 c2 c3 c3 f3)	f3	f
Ecce nunc benedicite	6	1b (g2 c2 c3 c3 c4 f4)	f2	f
Noridus ingreditur	7	h (g2 g2 c2 c3 c3 f3)	g2	g
Ducite ab urbe domum	7	h (g2 g2 c2 c3 c3 f3)	g3	g
Risi, ploro, fui, non sum,	7	h (g2 g2 c2 c3 c3 f3)	g2	g

Lechner, *Sacrae cantiones sex vocum* (1581)

composer	title	m1
Gioseffo Zarlino	Osculetur me	1
Gioseffo Zarlino	Nigra sum, sed formosa	1
Gioseffo Zarlino	Si ignoras	1
Gioseffo Zarlino	Ecce tu pulchra es	1
Gioseffo Zarlino	Ego rosa saron	2
Gioseffo Zarlino	Capite nobis	2
Gioseffo Zarlino	In lectulo meo	3
Gioseffo Zarlino	Adjuro vos filiae Jerusalem	3
Gioseffo Zarlino	Ferculum fecit sibi rex Salomo	3
Gioseffo Zarlino	Ego veni in hortum meum	5

Zarlino, *Canticum canticorum* (after Judd 2000)

Cycles as biggish data

- 475 listed in *The language of the modes* (2001)
- c. 25 more have come to light, mainly from literature
- what could systematically exploring online catalogues yield?
 - number
 - coverage
 - insight

Online catalogues

resource	url	coverage	items	search
DIAMM	https://www.diamm.ac.uk/	medieval music manuscripts	60270	title
Books of Hispanic Polyphony	https://hispanicpolyphony.eu/	Spanish musical sources	7315	title
Motet catalogue	https://www.uflib.ufl.edu/motet/	motets 1475-1600	33000	title
Polyphony database	https://polyphonydatabase.com/	early music sources	37500	title, tone
Printed Sacred Music	http://printed-sacred-music.org/	European sources, 1500-1800	25866	title
RISM	https://rism.online/	musical sources worldwide	1586954	title, key, open data

Exploring RISM data (big, not biggish)

- analyse title and key fields with Python programs
- key challenges
 - 2 key fields (031r and 240r)
 - fields may contain multiple keys
 - accuracy and completeness
- title challenges
 - multiple languages
 - 'mode' and 'tone' can mean many things

field	items
031r (key)	26520
240r (key)	17617
245a (title)	11818

'in the modes' ≥ 'modis musicis' ≥ 'set to music'

Miguel Navarro, *Liber magnificarum* (1614)



RISM ID: 990046842

rism_id	contained_in	composer	title	sourcetitle	genre	mode1	mode2
1001237215	990046842	Navarro, Miguel	Magnificat	Primi toni Anima mea A 4	Canticles	1t	1t
1001237216	990046842	Navarro, Miguel	Magnificat	Secundi toni Anima mea A 4	Canticles	2t	2t
1001237218	990046842	Navarro, Miguel	Magnificat	Tertii toni Anima mea A 4	Canticles	2t	3t
1001237220	990046842	Navarro, Miguel	Magnificat	Quarti toni Anima mea A 4	Canticles	4t	4t
1001237222	990046842	Navarro, Miguel	Magnificat	Quinti toni Anima mea A 4	Canticles	5t	5t
1001237224	990046842	Navarro, Miguel	Magnificat	Sexti toni Anima mea A 4	Canticles	6t	6t
1001237226	990046842	Navarro, Miguel	Magnificat	Septimi toni Anima mea A 4	Canticles	7t	7t
1001237229	990046842	Navarro, Miguel	Magnificat	Octavi toni Anima mea A 4	Canticles	8t	8t
1001237236	990046842	Navarro, Miguel	Magnificat	Primi toni & exultauit	Canticles	1t	1t
1001237239	990046842	Navarro, Miguel	Magnificat	Secundi toni & exultauit	Canticles	2t	2t
1001237247	990046842	Navarro, Miguel	Magnificat	Tertii toni & exultauit	Canticles	3t	3t
1001237251	990046842	Navarro, Miguel	Magnificat	Quarti toni & exultauit	Canticles	4t	4t
1001237253	990046842	Navarro, Miguel	Magnificat	Quinti toni & exultauit	Canticles	5t	5t
1001237254	990046842	Navarro, Miguel	Magnificat	Sexti toni & exultauit	Canticles	6t	6t
1001237255	990046842	Navarro, Miguel	Magnificat	Septimi toni & exultauit	Canticles	7t	7t
1001237256	990046842	Navarro, Miguel	Magnificat	Octavi toni & exultauit	Canticles	8t	8t

- nice and easy example of Python program output
- most candidate cycles require human judgement
 - printed sources often lack detailed item info
 - not-so-tight cycles
 - inaccurate key data

Lots of not so exciting music

The image displays two pages from a historical musical manuscript, likely a collection of church songs. The left page features two systems of music, each for two voices (CANTVS and ALTVS). The first system is labeled 'Primi Toni. Plena voce.' and the second 'Secundi Toni.' The right page features two systems of music, each for four voices (TENOR and BASSVS). The first system is labeled 'Prima Modulatio. Quatuor vocum.' and the second 'Plena voce.' The music is written on staves with square notes and rests, characteristic of 16th-century notation. The manuscript is identified by the RISM ID: 456051433.

Intonationes vespertinae septem (1622); D-Mbs Mus.ms. 520: 14 cycles of falsi bordoni

Cycle

ID64cat_2001336seenyes▼printedprinted source▼

collectorPalestrina, Giovanni Pierluigi da

collector_IDPalestrina, Giovanni Pierluigi da▼

titleLe Vergini

editionPalestrina 1939-, vol. 9

url

literaturePowers 1974; Powers 1981, pp. 449-50

annotationA cycle through the 8 modes, consisting of 5-voice settings of the first 8 stanzas of Petrarca's canzone Vergine bella.

regionItaly▼

musicalmusical source▼

modality_typemodes▼

n_modes8(4) mode system▼

dated1581

genreMadrigals

notes

status_anA - complete, corrected▼date_edited13-06-95edited_byFWstatus_recA - complete, corrected▼

Record 64 of 84 * ◀ ▶ ⏪ ⏩ 🔍 🔄 ↺ ⌂ 📄 🗑️ 🚫 🛡️ 🧐 📊 📈 📉 📋 📅 📆 📇 📈 📉 📊 📋 📅 📆 📇

Source of cycle instance

referencePalestrina 1581source_ID327seenyes▼

authorGio. Petr'aloyisio Prenestinoauthor_IDPalestrina, Giovanni Pierluigi da▼

titleIl primo libro de madrigali a cinque voci.. novamente composti & dati in luce

placeVenetiamusicalmusical source▼

publ/wrtn byAngelo Gardanoprintedprinted source▼

dateM D LXXXItonality_typeTraditional modes (1-8)▼

b_year1581e_yearcontent_type▼

urlhttps://www.digitale-sammlungen.de/en/view/bsb00072078?page=,1

rism_ID990048359diamm_link

current location

annotation

notes

status_anA - complete, corrected▼date_edited23-01-25edited_byFWstatus_recA - complete, corrected▼

Cycle instances

	ID	collector	title	source_ID
▶	564	Palestrina	Le vergini	Palestrina 1581
	1020	Palestrina	Vergini	Doni 1640
+>	Field>			

Compositions in cycle instance

	no	comp_...	dup_ID	composer	title	part_...	m1	m2	sig_clefs	f_bass	f_mo...
▶	1	1700		<Palestrina, Giovanni Pierl	Vergine bella		1 1		h (g2 c2 c3 c3 c4)	a3	d
	2	1701		<Palestrina, Giovanni Pierl	Vergina saggia		1 2		h (g2 c2 c3 c3 c4)	d3	d
	3	1702		<Palestrina, Giovanni Pierl	Vergine pura		1 3		h (c1 c3 c4 c4 f3)	e3	e
	4	1703		<Palestrina, Giovanni Pierl	Vergine santa		1 4		h (c2 c3 c4 c4 f4)	e3	e
	5	1704		<Palestrina, Giovanni Pierl	Vergine sola al mondo		1 5		1b (g2 c2 c3 c3 f3f3)	f	f
	6	1705		<Palestrina, Giovanni Pierl	Vergine chiara		1 6		1b (c1 c3 c4 c4 f4 f2)	f	f
	7	1706		<Palestrina, Giovanni Pierl	Vergine quante lagrime		1 7		h (g2 c2 c3 c3 c4)	g3	g
	8	1707		<Palestrina, Giovanni Pierl	Vergine tale è terra		1 8		h (c1 c3 c4 c4 f4)	g2	g
+>				toField>							

Cycle data

Cycle

ID	64	cat_2001	336	seen	yes	
collector	Palestrina, Giovanni Pierluigi da					
collector_ID	Palestrina, Giovanni Pierluigi da					
title	Le Vergini					
edition	Palestrina 1939-, vol. 9					
url						
literature	Powers 1974; Powers 1981, pp. 449-50					
annotation	A cycle through the 8 modes, consisting of 5-voice settings of the first 8 stanzas of Petrarca's canzone Vergine bella.					notes
status_an	A - complete, corrected	date_edited	13-06-95	edited_by	FW	status_rec
						A - complete, corrected

Record 64 of 84 *

printed printed source

region Italy

musical musical source

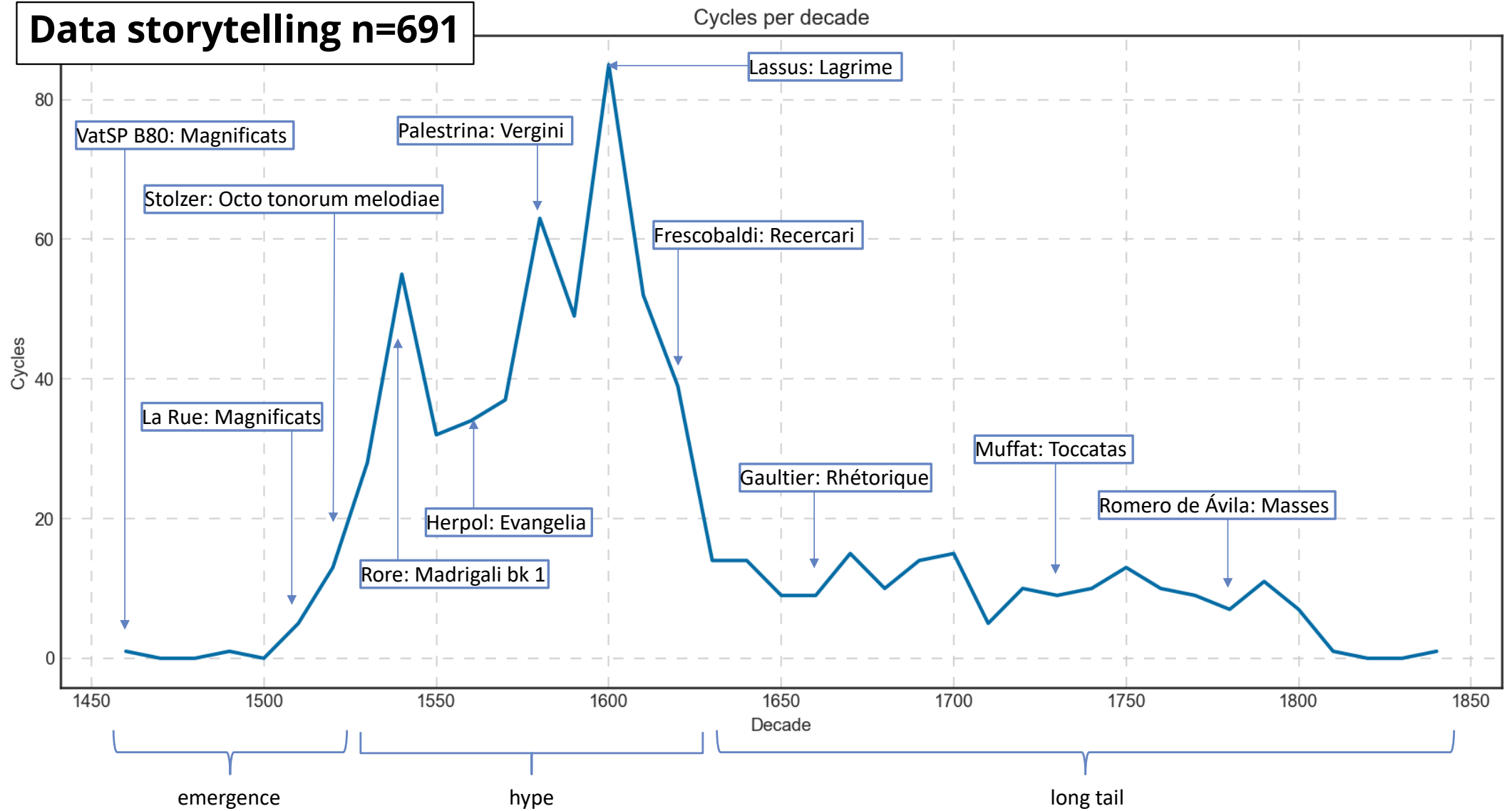
modality_type modes

n_modes 8(4) mode system

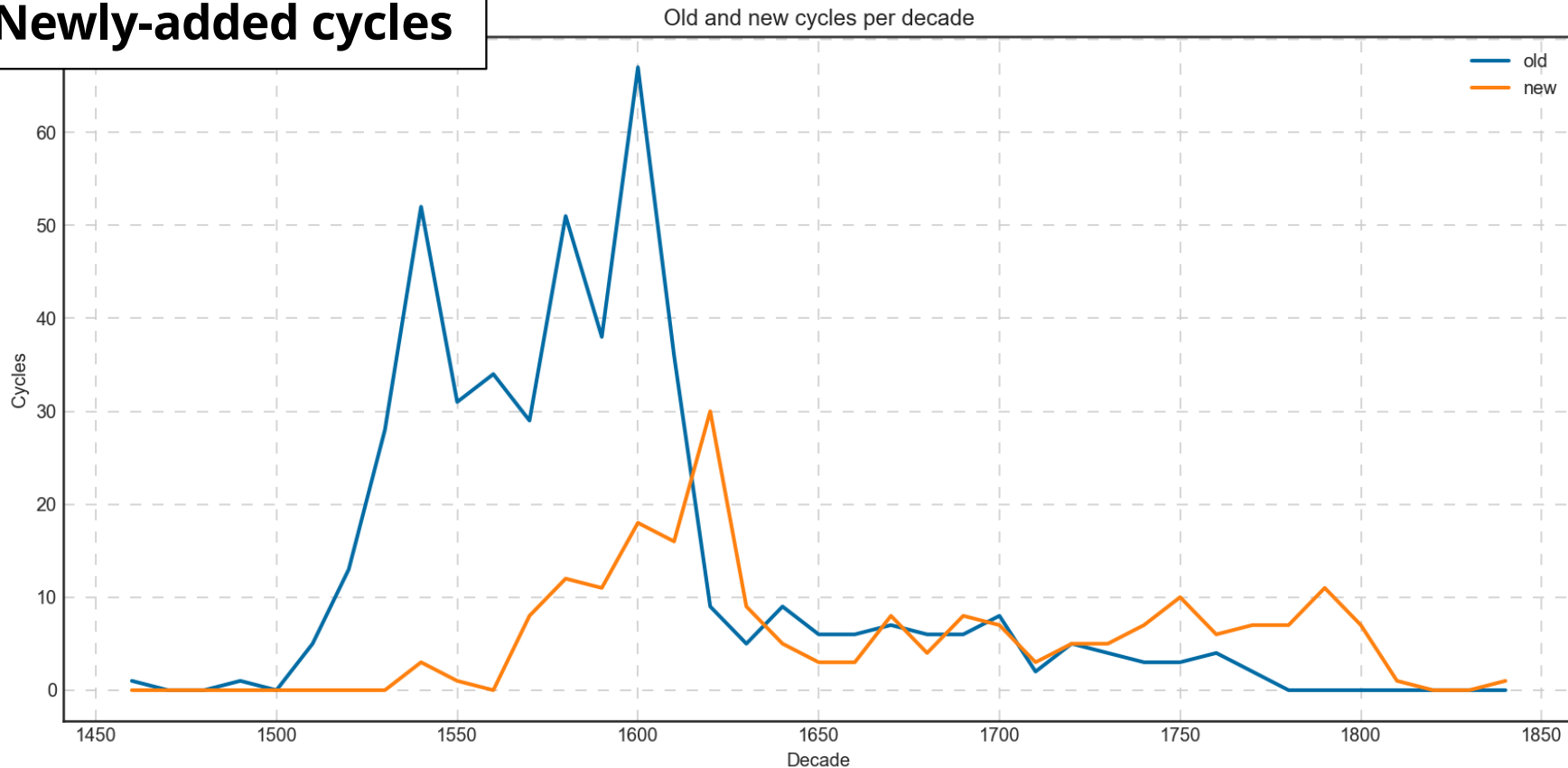
dated 1581

genre Madrigals

Data storytelling n=691



Newly-added cycles



cycles added after 2001

- hype: 103
- tail 117

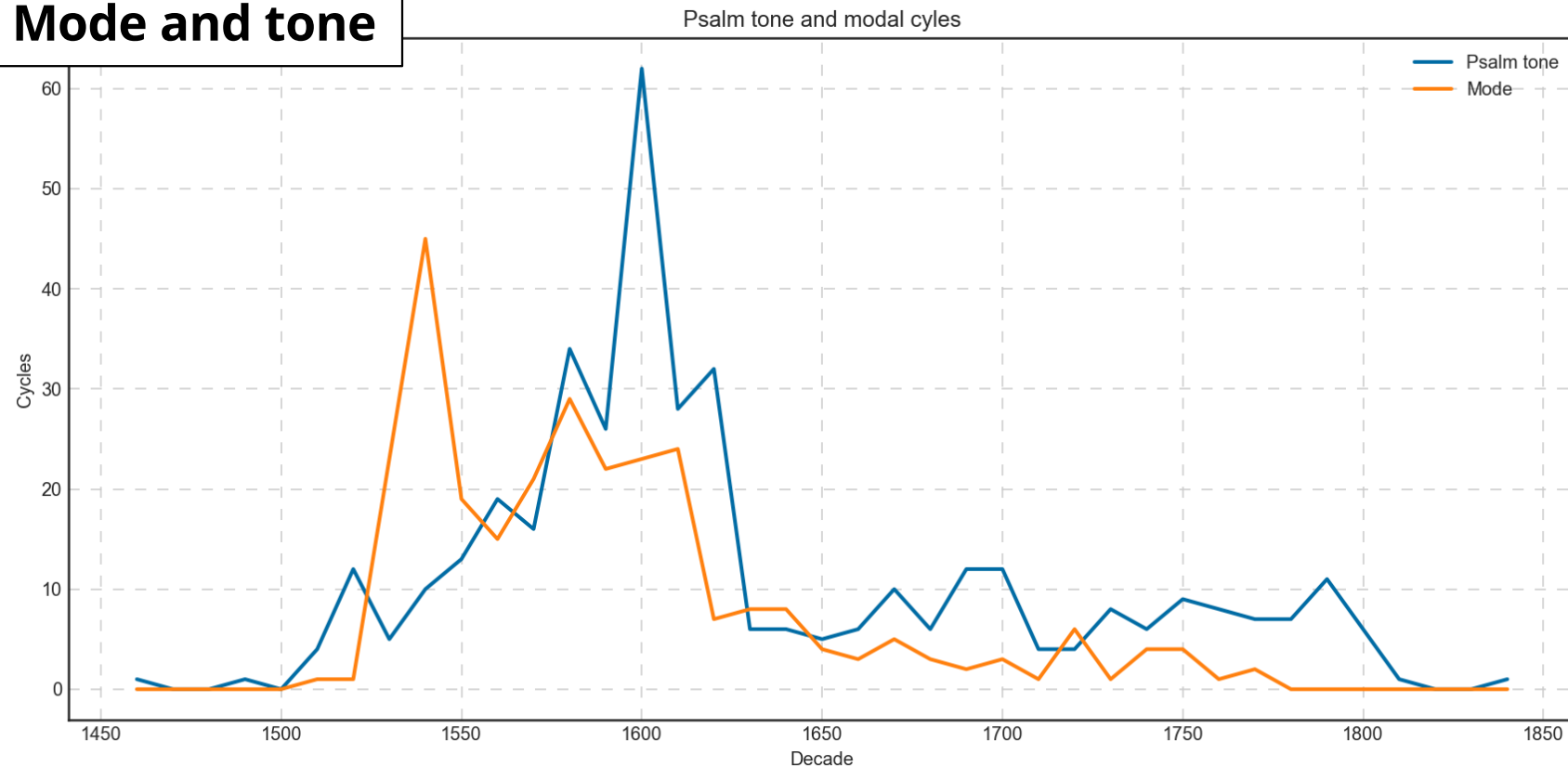
mostly (not all) from RISM

our cutoff year was 1800

- some slipped through
- many more 19th-c. cycles

tail seems less pronounced, continuity with Cecilianism?

Mode and tone



- psalm tone = melodic pattern
 - mode = abstraction
 - get entangled in polyphony
- ‘psalm tone keys’ or ‘church tones’ from c. 1590 (Dodds 2023)
- related to alternatim performance
 - 8 modes with some finals aligned with psalm-tone differentiae

Example: Croce's *Sonnetti penitenziali* (1596)

[No. 5] Esaudisci, Signor, gl'umil miei preghi

31

Canto

Alto

Tenore

Quinto

Sesto

Basso

E - sau - di - sci, Si - gnor, gl'u - mil miei pre -

65

di, che'l tut - - to in - ten - - di.

che'l tut - - - - to in - ten - - di.

di, che'l tut - - to in - ten - di.

di, che'l tut - - to in - ten - - di.

di, che'l tut - - to in - ten - - di.

di, che'l tut - - to in - ten - - di.

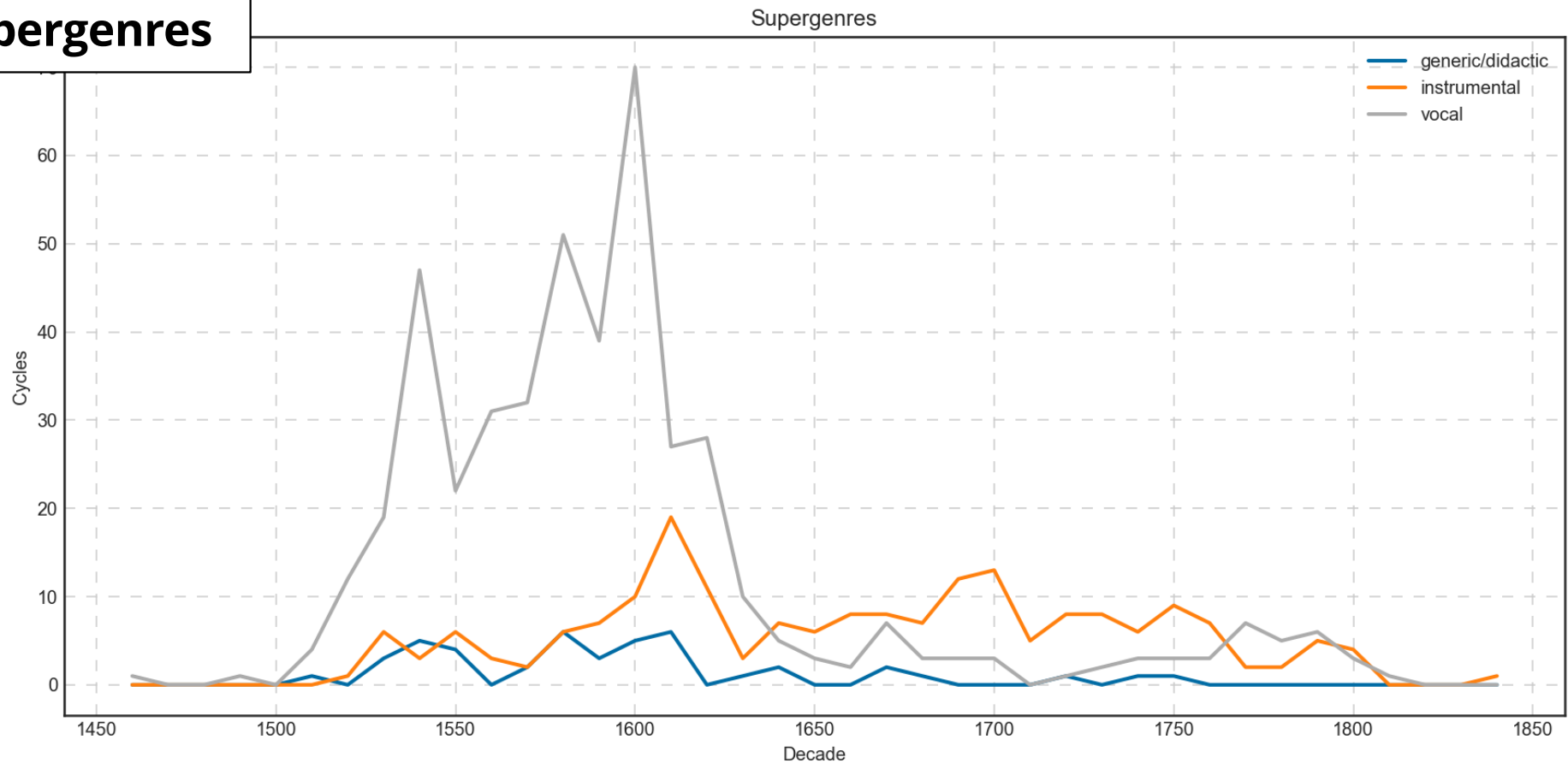
© Copyright Edition Michael Procter 2010

cycle identified by Michael Procter (2010)

	no	composer	title	m1	sig_clefs	f_bass	f_mode
	1	Giovanni Croce	Signor, non mi riprender con furore	1	h (c1 c3 c4 c4 c4 f4)	d2	d
	2	Giovanni Croce	Beati quei ch'ottengono perdono	2	1b (c1 c3 c4 c4 c4 f4)	g2	g
	3	Giovanni Croce	Signor, nel tuo furor	3	h (g2 g2 c2 c3 c3 f3)	a2	e
	4	Giovanni Croce	Abbi di me, Signor, pietade omai	4	h (c1 c1 c3 c4 c4 f4)	e2	e
	5	Giovanni Croce	Esaudisci, Signor, gl'umil miei preghi	5	1b (g2 c2 c3 c3 c3 f3)	a2	f
	6	Giovanni Croce	Dal profondo del core a te gridai	6	1b (c1 c1 c3 c4 c4 f4)	f2	f
	7	Giovanni Croce	Esaudisci, Signor, le mie preghiere	7	h (g2 g2 c2 c3 c3 c4)	a3	g

endings on psalm-tone
differentia

Supergenres



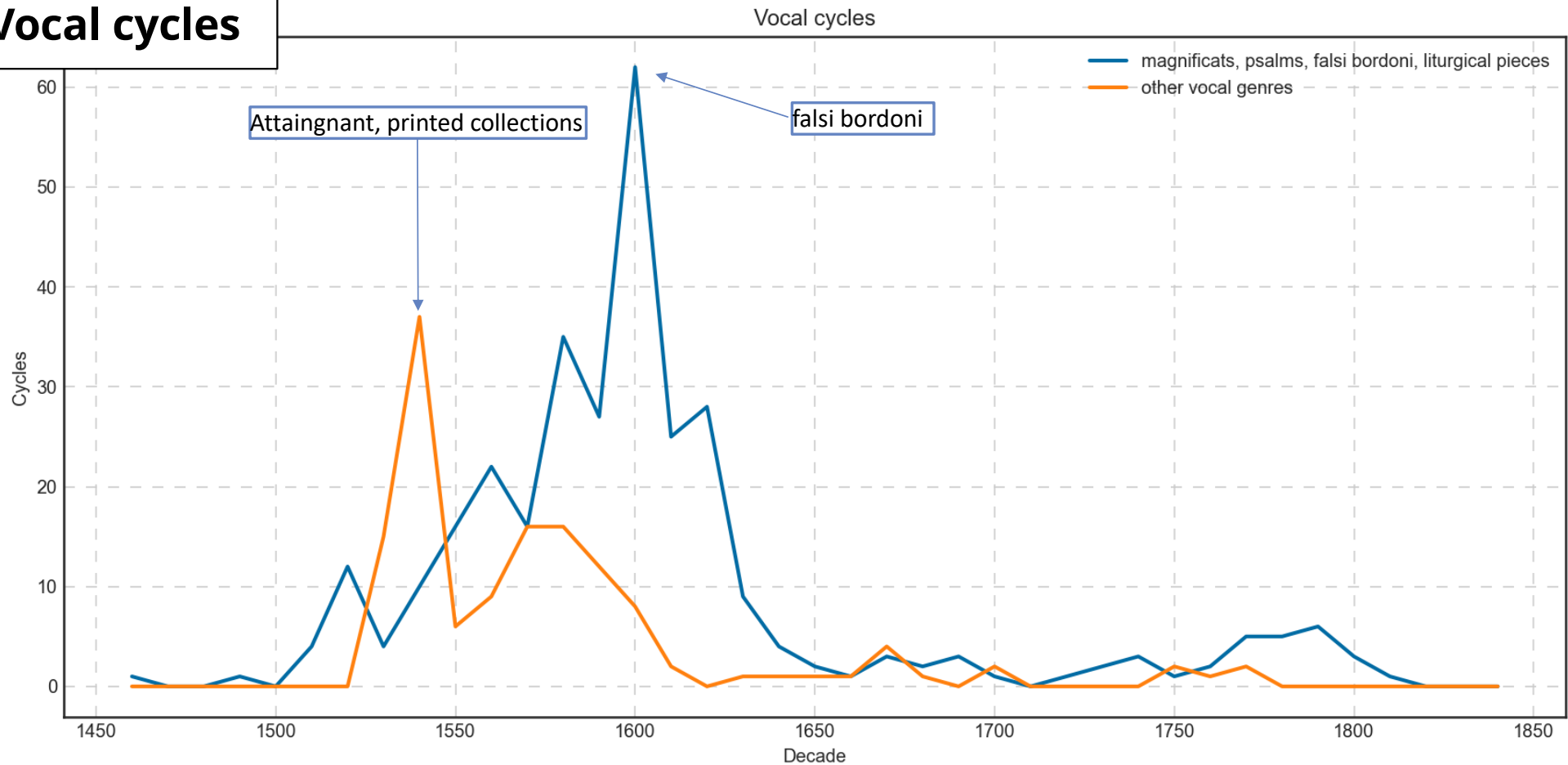
before 1630

- most cycles are vocal
- fewer didactic and instrumental cycles

after 1630

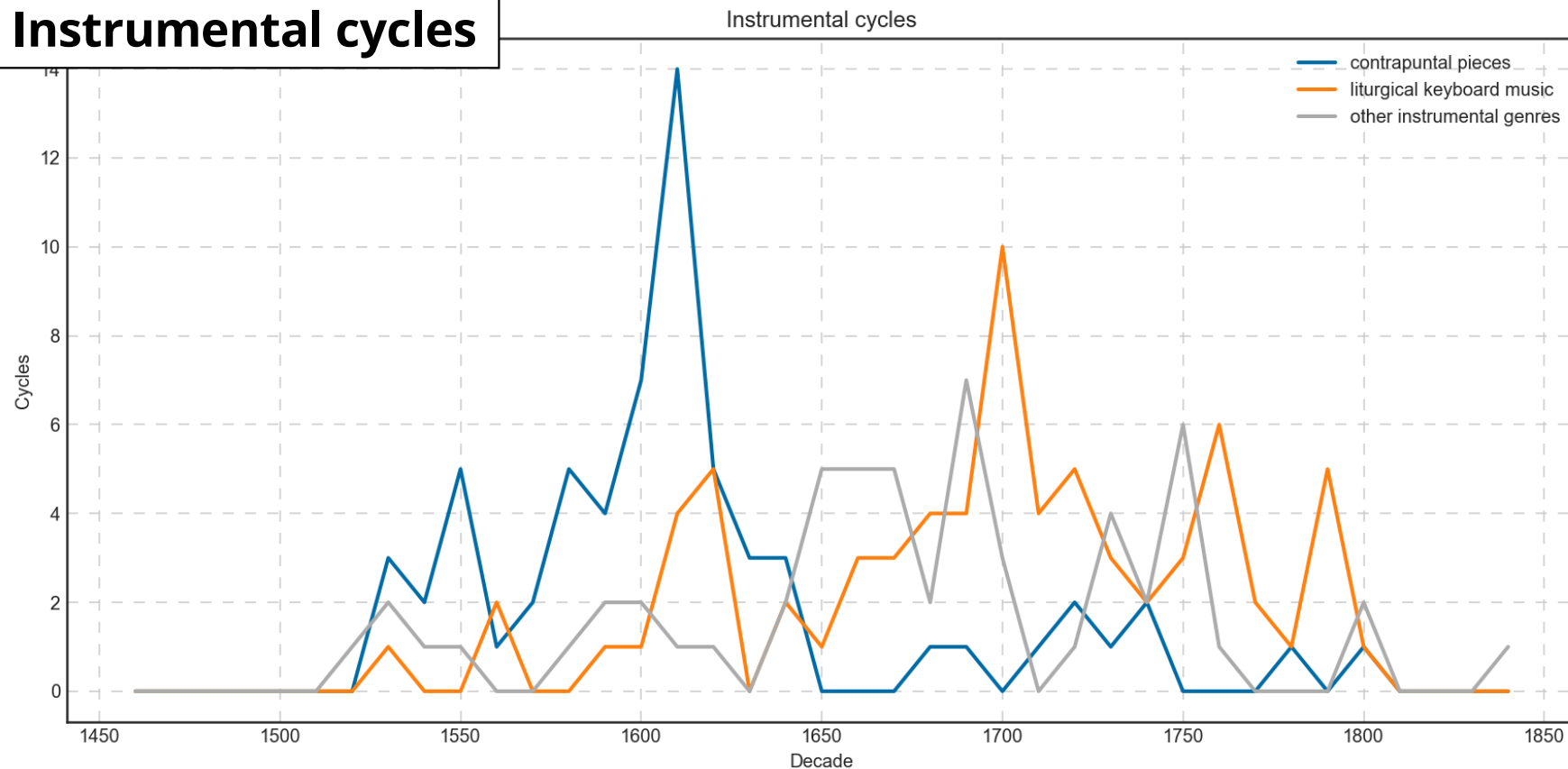
- instrumental cycles prevail (hardly a long tail)
- didactic cycles almost disappear

Vocal cycles



- mass, motet, chanson and madrigal cycles mostly restricted to 'hype' period
- longer lifespan for psalm/magnificat tone related genres

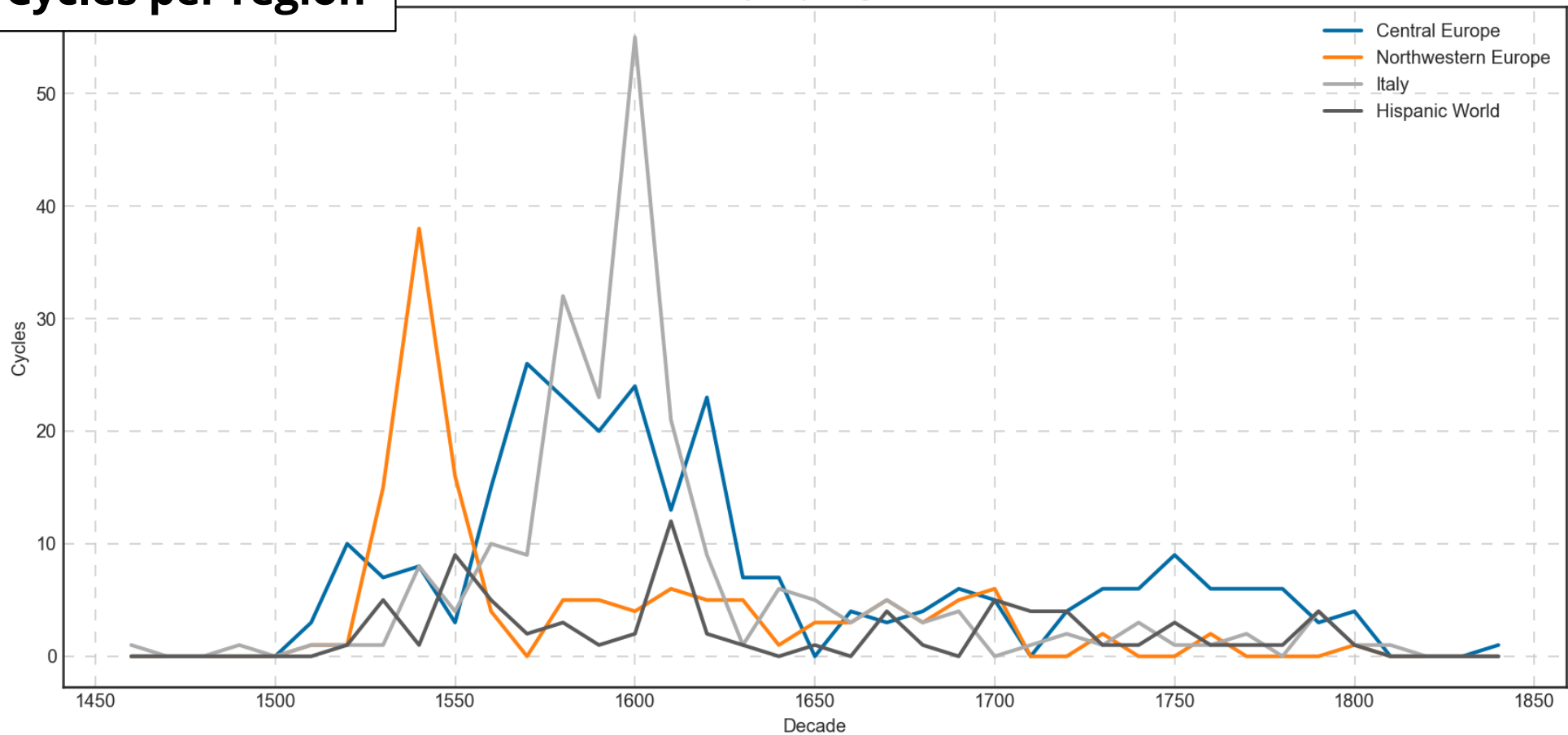
Instrumental cycles



- substantial amounts of ricercars, fantasias, tientos etc. until 1640
- liturgical keyboard cycles are a late phenomenon
- same is true for 'other' cycles such as dances, sonatas, preludes, toccatas
- from 'theory-informed' to 'pragmatic' use of modes?

Cycles per region

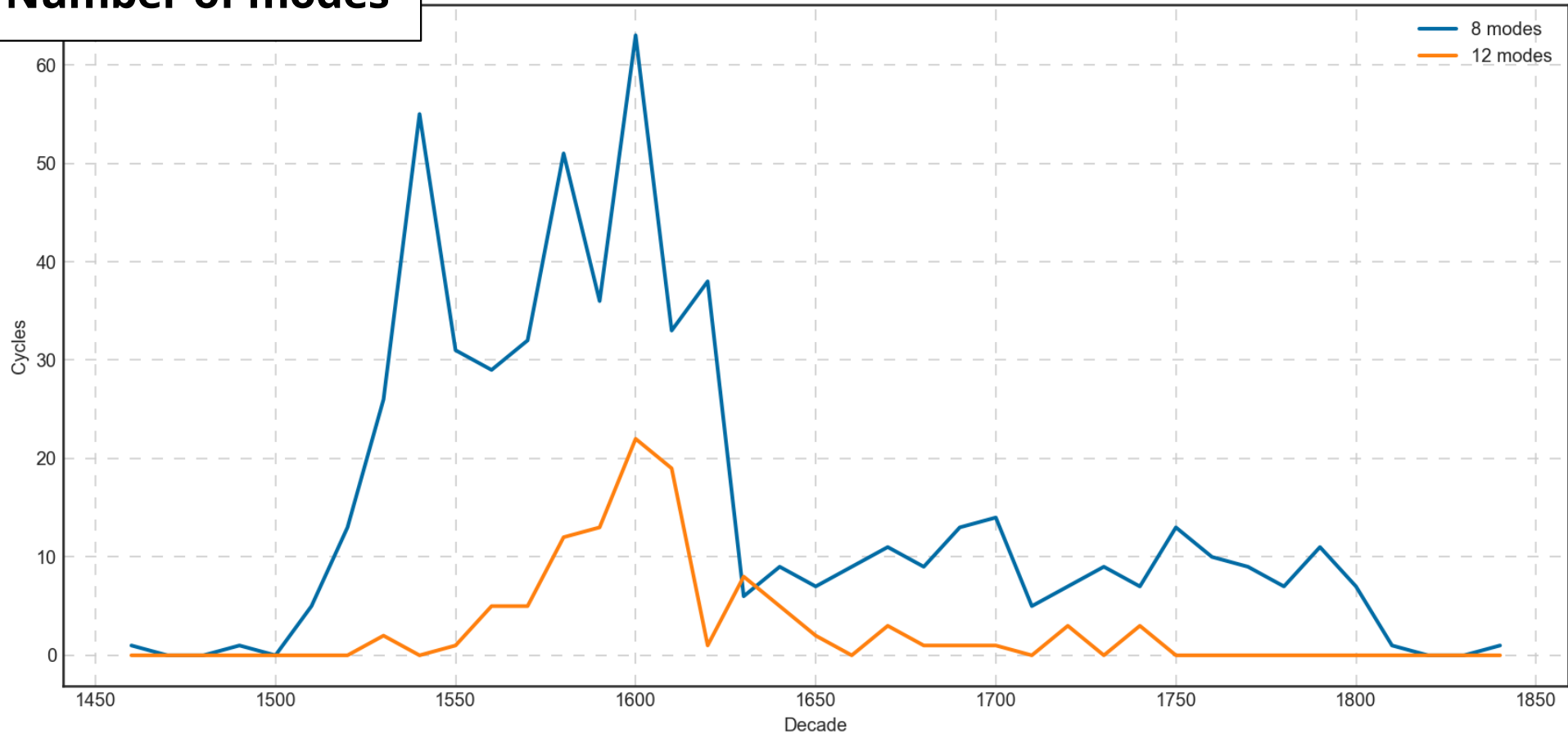
Cycles per region



- 18th-c South Germany/Austria small peak
- to what extent a reflection of musicological research and cataloguing efforts?

Number of modes

8 and 12 mode cycles



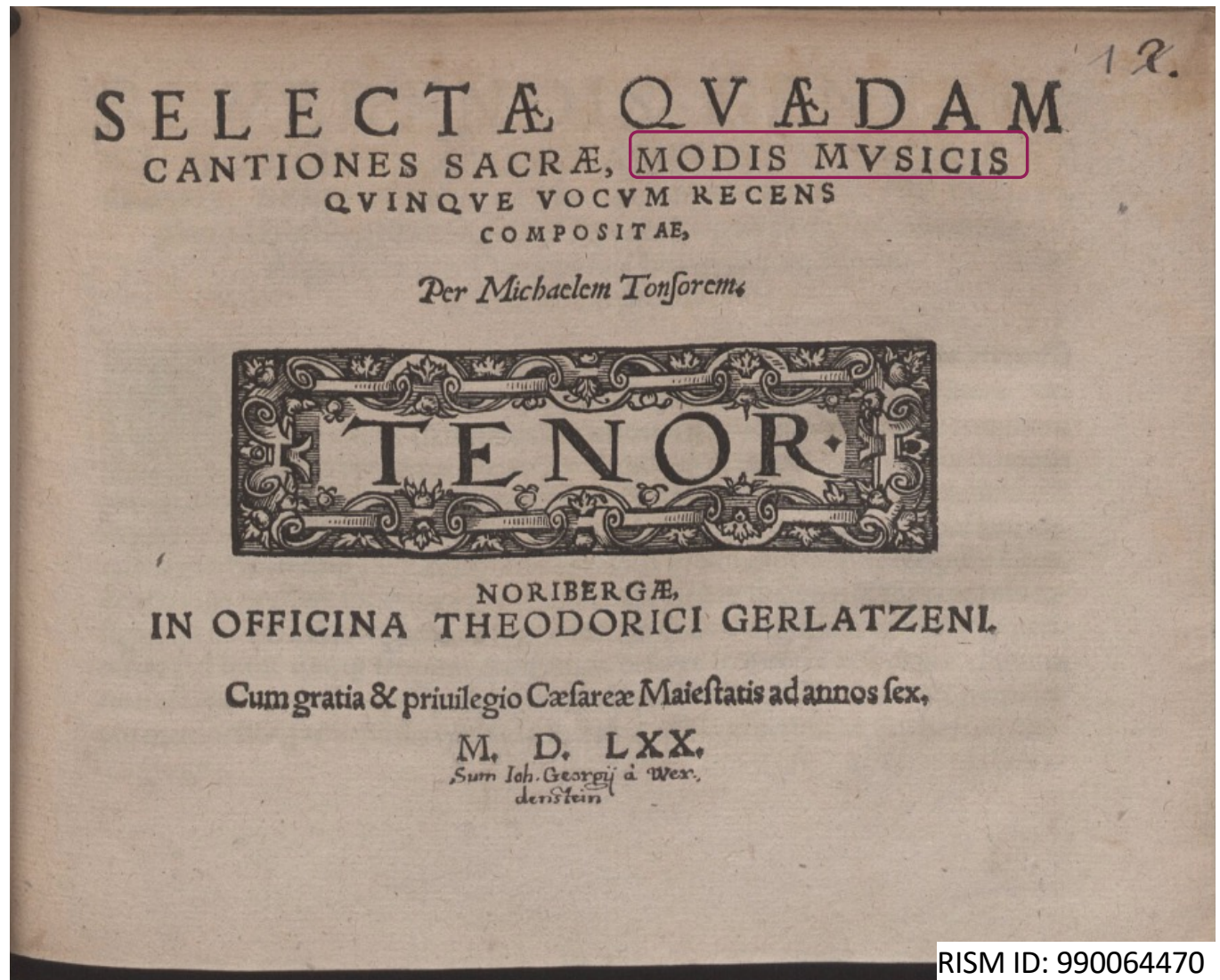
- composing in 12 modes short-lived phenomenon during hype phase
- here too a shift to 'pragmatic modality'?

Case 1: Michael Tonsor

note 'modis musicis' in title

16 motets for 5 voices

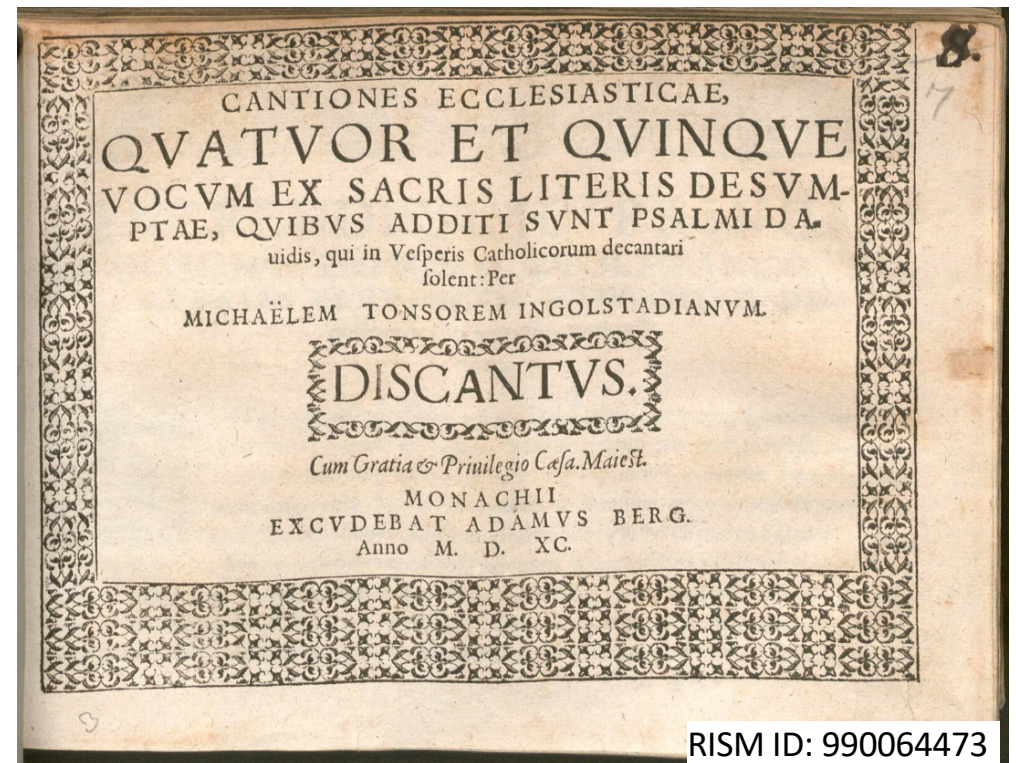
- 8 mode system
- modes 3 and 4 not distinguished



More Tonsor, no mention of mode or tone



8-mode cycle (1573)



8-mode cycle and psalm-tone cycle (1590)

Case 2: Ancina, *Tempio armonico* (1599)

Collection of *laudi* for 2 sopranos and bass by various composers

Remigio, Don	Di regia stirpe ebreia	[caption title, S 1, p. 7:] Primo. Soprano. a 3. voci. 2lo Tuono. I BREVE RITRATTO I
Remigio, Don	Or non nasce ciascun	[caption title, S 1, p. 8:] Primo. Soprano. a 3. voci. 2. Tuono. I PER LA NATIVIA.
Remigio, Don	Non più fasce ne cuna	[caption title, S 1, p. 9:] Primo Soprano. à 3. voci. D. Remigio 3lo Tuono I PRESEN
Remigio, Don	Scende l'angel dal cielo	[caption title, S 1, p. 11:] Primo Soprano. à 3. voci. D. Remlo 4lo Tuono I ANNUNCI
Remigio, Don	Piena del verbo eterno	[caption title, S 1, p. 12:] Primo Soprano. à 3. voci. D. R. 5lo Tuono I VISITATIONE.
Remigio, Don	Pura più che colomba in b	[caption title, S 1, p. 13:] Primo Soprano. à 3. voci. D. R. 6. Tuono I PURIFICATIONE
Remigio, Don	Che luce è questa ò Dio	[caption title, S 1, p. 14:] Primo Soprano. a 3. voci. D. R. 7. Tuono. I ASSUNTIONE.
Remigio, Don	Donna ab eterno eletta	[caption title, S 1, p. 15:] Primo Soprano. à 3. voci. D. R. 8lo Tuono. I EPILOGO I DI



RISM ID: 990001035

Don Remigio, *Breve ritratto*

'fatte in diversi Tuoni',

- see page headers

symbolic motivation

- 1 mode for each of the 'seven solemn feasts of the Blessed Virgin'
- mode 8: epilogue

who was Don Remigio?

BASSO 13. voci. Don Remigio. Primo Tuono. 7

A BREVE RITRATTO
DELLE SETTE FESTE SOLENNI DELLA BVERGINE
CHE SONO LE SEVENTI PER ORDINE.

1 Concettione. 4 Annunciatione.
2 Natiuità. 5 Visitatione. 7 Et Assunzione.
3 Presentatione. 6 Purificatione.

Tutte fatte in diuersi Tuoni sin'all'Epilogo d'esse, & con distinto
numero di stanze proportionato à ciascuna.

PER L'IMMACOLATA CONCETTIONE.

D

1 Regia stirpe Hebreà, Ma nò di col parca
Hoggi formasi bella Vergin più d'ogni stella: Tanta Gratia dal Cielo
ij ij Spandesi, ij in
mortal velo: Spandesi, ij in mortal ve lo. Hoggi

PER

BASSO 13. voci. D.R. 8. Tuono.

OPROTARON ETILOGO MATHA2
DI TUTTE LE SETTE SOLENNITA
PRECEDENTI.

D

Onna ab'eterno e letta In tempo vien concetta Non rea:ò
ben fe li ce Anna pia ge ni tri ce Ditei, che si de sti na Del Cie-
loalta Regi na. Non rea:

2 Nasce per farsi Madre
Di Dio, ch'al sommo Padre
Così piacque ordinarla,
E tant'alto inalzarla,
Ch'al par non mai salire
Pur'huom, ne può fruire.

3 Nel Tempio si presenta
A Dio lieta, e contenta,
Offrendo al suo Signore
La pura mente, e'l core
Con le Verginee membra,
Ch'ogni bel fior rassembra.

4 Da l'Angiol salutarfi
Sente, e'l VERBO Incarnarsi
Del suo più puro sangue
Contente, e d'amor langue
Già fatta almo ricetto,
E Sposa al suo Diletto.

5 Piena già per mistero
Di Dio Verbo huomo vero
Sale per alti monti
Con passi lieti, e pronti,
E la Cognata porge
Saluro, che la scorge.

6 Indi Madre diuenta
E ogg'hor più gratie aumenta,
Ma per maggior suo merito,
Benche del Ciel' aperto
Sia degna, humil, e pronta
Si purga, e non tem onta.

7 Al fin col suo bel velo
Al'alto Empireo Cielo
Soruola, e Cherubini
Passando, e Serafini
Regina in coronata
D'immensa Gloria ornata.

8 Hor' ecco in breui cori
Sette Misteri scorsì
Tutti d'alto stupore
Colmi, e di Santo Amore:
Lei dunque i preghi nostri
Gradisca, e pia li mostri.

A SAN-

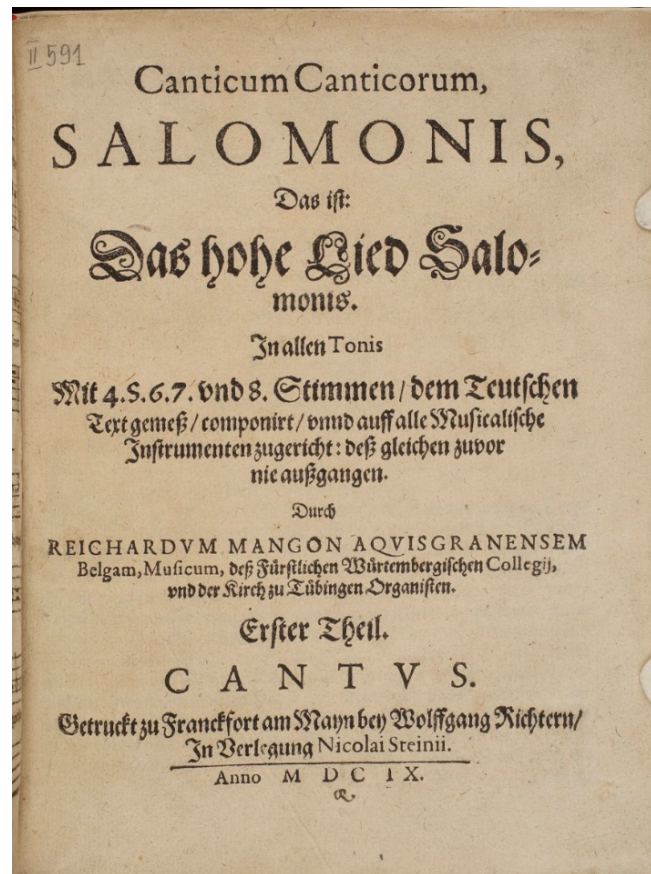
Case 3: Reichard Mangon, *Das hohe Lied Salomonis*

'In allen Tonis... dess gleichen zuvor nie aussgegangen.'

only book 1 (chapters 1 and 2, modes 1 and 2) survives

- what about book 2-4?

who was Reichard Mangon?



4. XVI. Secundi Toni. 27

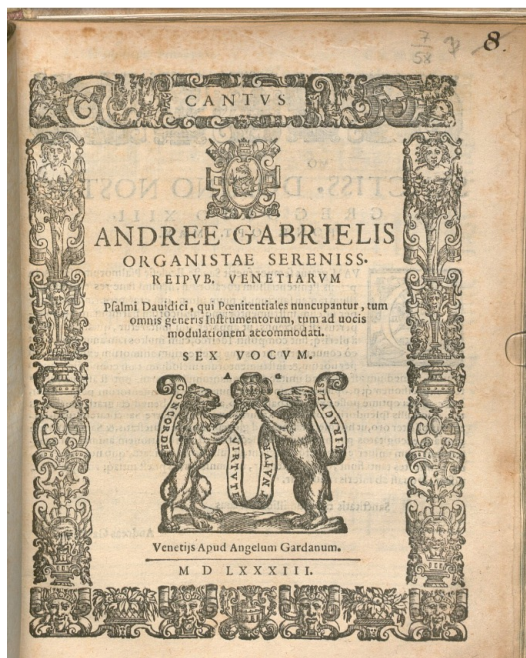
Ich der Tag bis der Tag küsse werde kü-
 le werde/ bis der Tag kü- le wer- de/ bis der Tag kü-
 wer- de/ kü- le werde/ vnd der Schatten ii wei-
 che/ wei- che/ wei- che/ ke/ vmb/ ke/ vmb/
 ij ii werde wie ein Rehe mein Freund/ oder wie ein junger
 Hirsch auff den scheidber- gen/ scheidbergen/ oder wie ein
 junger Hirsch auff dē scheidber- gen/ scheidberge/ scheidber- gen.
 Ende des Ersten Theils.

RISM ID: 990039109

Canticum Canticorum Salomonis. das ist/ das hohe Lied Salomonis mit 4. 5. 6.
 7. vnd 8. Stimmen/ durch Richard Mangon/ 4

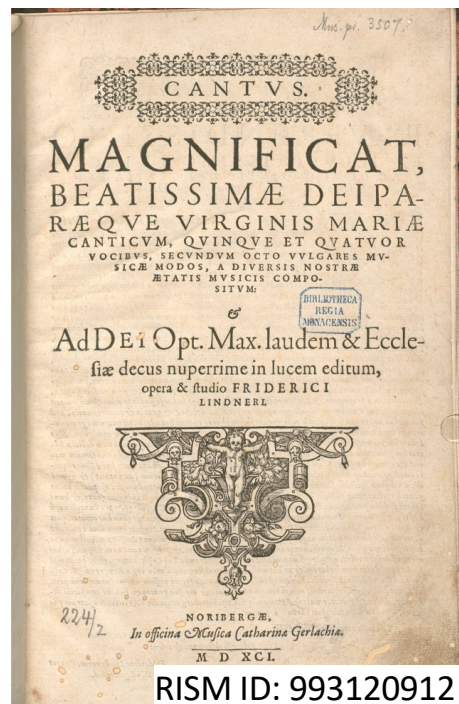
Willer, *Catalogus librorum musicalium* (1622)

More new items (8 mode system)



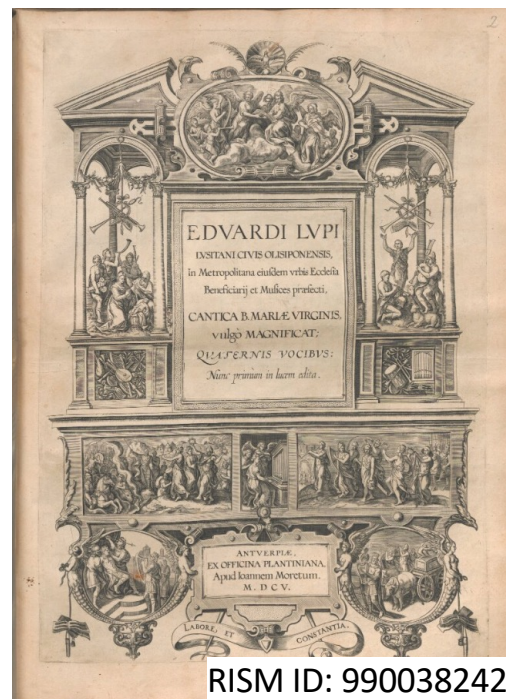
RISM ID: 990019322; Procter (2010)

Andrea Gabrieli
Penitential psalms (1593)



RISM ID: 993120912

Ruffo, Varotto, Guerrero
Magnificats (1591)



RISM ID: 990038242

Duarte Lobo
Magnificats (1605)



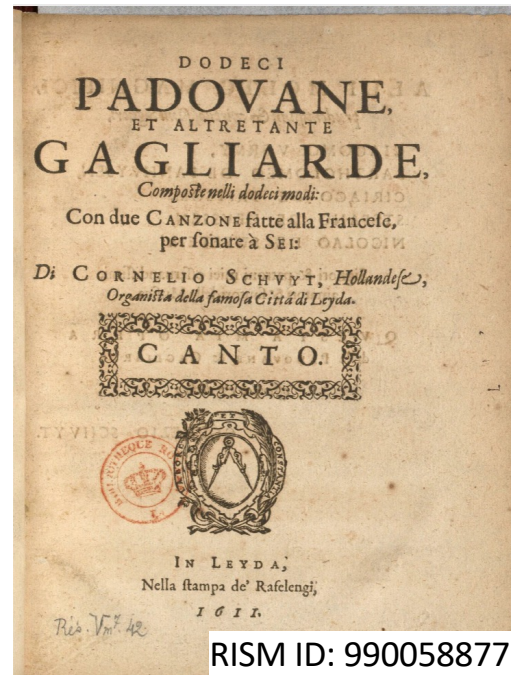
RISM ID: 455017016

Michael Haydn
Versets (c. 1780)

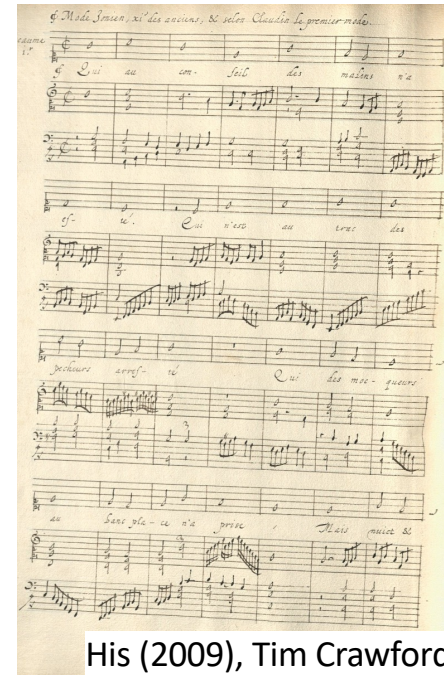
More new items (12 mode system)



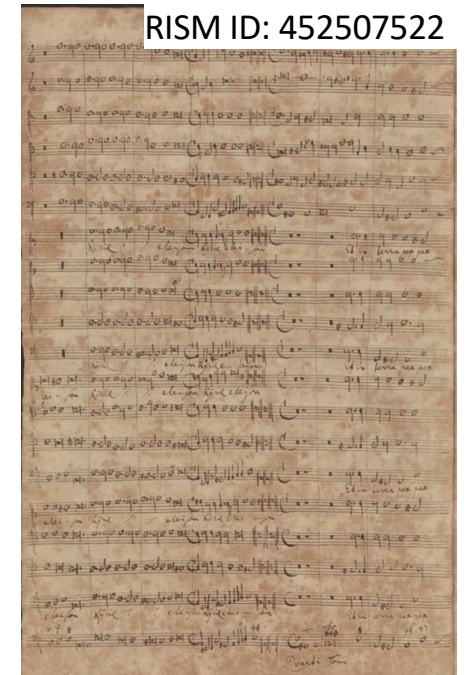
Ludovicus Ruschardus
Masses (1603-4)



Cornelis Schuyt
Pavans and Galliards
(1611)



Traicté des modes, ou tons,
de la musique (c. 1630),
3 cycles



Marco Scacchi
Missa omnium tonorum
(1664)

Conclusions 1: data

- enough data available for interesting patterns to emerge
 - even better: for at least 285 cycles online facsimile or edition available
- RISM main data source
 - rich data but unsystematic w.r.t. analytical information
 - lack of content metadata for printed sources
- other catalogues
 - deeper access to source content
 - generally, no key/mode info
 - small-scale initiatives, sustainability?
- how to better align catalogues?
 - interoperability, coverage

Conclusions 2: insights

- modes cease to be 'mainstream' after c. 1630
 - long survival of modes in instrumental and liturgical music
- some reasons for modal ordering
 - pragmatic (liturgical pieces, printed collections)
 - compositional challenge (ends around 1630-40)
 - symbolic reasons (Maria-cycles, coronation, penitential psalms)

Conclusions 3: cycles

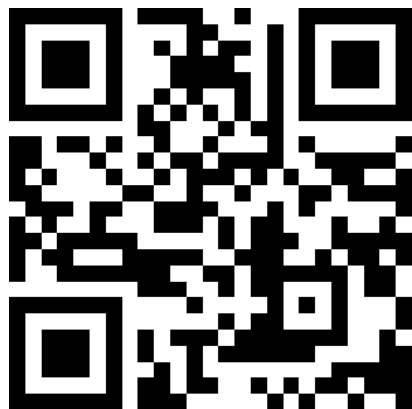
- strict definition of 'modal cycle' is problematic
 - I have become more lax with borderline cases
- cycles as works or as instances
 - original focus (2001) on work: analysis of the pieces
 - source catalogues report cycle instances
 - in practice, cycles merge, split, evolve (e.g. Morales magnificats)
 - only partially supported by present data model
- opportunity to be investigated: network approach (see Marnix van Berchum)

Conclusions 4: lacunae in the present work

- tablatures largely uninvestigated
- large differences in coverage per country/region
 - Southeast Europe
 - Iberian/Latin American world
 - coverage may be patchy even for other countries
 - 16th century seems better covered than later times
- implicit cycles (ordered but no modes assigned)

Polymode online

- work in progress
 - <https://tinyurl.com/polymode>
 - doi [10.5281/zenodo.15729286](https://doi.org/10.5281/zenodo.15729286)
 - lists of cycles and sources available
- please submit new items and corrections
 - <https://tinyurl.com/polymode-feedback>



Polymode



Polymode feedback

Navarro, Francisco

Magnificat à 4 [ID: 522; not seen] In: [E-VAcP LP 21](#).

8 magnificats in 8 tones, but the order seems irregular (probably 2-3-4-1-5-6-7-8) dated 1650 or earlier (death of the composer).

Navarro, Juan

Magnificat à 4 [ID: 201; W2001: 329; not seen] In: [Navarro 1590](#).

Composed before 1580. A cycle of Magnificats, each containing a canon at the interval of the psalm tone (tone 1, unison; tone 2, second; tone 3, third; etc.).

Magnificat à 5 [ID: 519; not seen] In: [P-EVc, Ms. 5](#).

Set of 8 magnificats in the 8 tones.

Navarro, Miguel

Magnificat à 4 [ID: 520; not seen] In: [Navarro 1614](#).

8 magnificats in 8 tones for 4 voices, with additional voices in some sections

Magnificat à 8 [ID: 521; not seen] In: [Navarro 1614](#).

Neriti da Salò, Vincenzo

Magnificat [ID: 174; W2001: 330; not seen] In: [Neriti da Salò 1593](#).

A cycle of 8 Magnificats for 4 voices in all the tones.

Nivers, Guillaume Gabriel

Deo Gratias [ID: 60; W2001: 331; not seen] In: [Nivers 1667](#).

A cycle of 8 short organ pieces in the 8 tones. Those in modes 2, 6 and 8 can be used as transpositions of modes 1, 2 and 6.

Livre d'orgue [ID: 59; W2001: 332; seen] In: [Nivers 1665](#).

A cycle of organ compositions in the 8 tones, consisting of a prelude and 8-10 other works for each tone. The compositions in tones 2 and 6 may also be used for transposed tones 1 and 5.

Troisième livre d'orgue [ID: 61; W2001: 333; seen] In: [Nivers 1675](#).

A cycle of short pieces in tones 1-6; tones 5 and 6 can be used for tones 7 and 8. Tones 2 and 6 are regarded as transpositions of tones 1 and 5. For most tones there is one series of 13 pieces; there are 2 such series for tones 1 and 6.