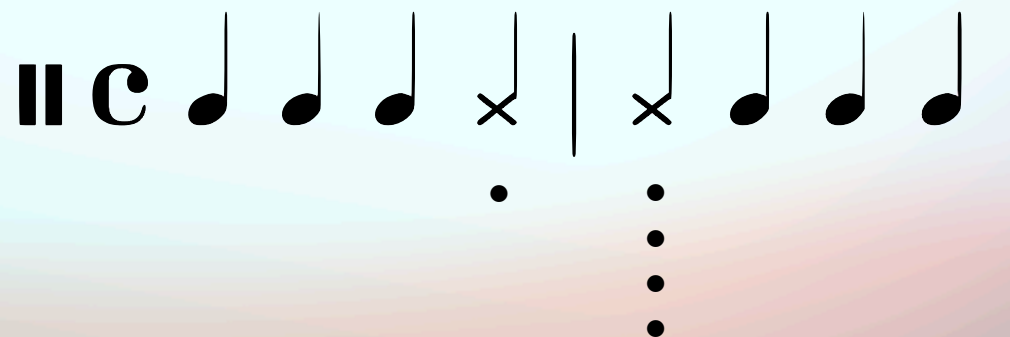


# Catalexis in Italian pop and rap songs



Davide Di Prete  
PhD Day - 19 May 2025

## PhD Supervisors



Andrew Nevins, Andrew Lamont  
UCL, London

## Thesis Committee



Giovanna Marotta, Jonah Katz  
UNIFI, Italy      UCLA, USA



Davide Di Prete      [d.diprete@ucl.ac.uk](mailto:d.diprete@ucl.ac.uk)

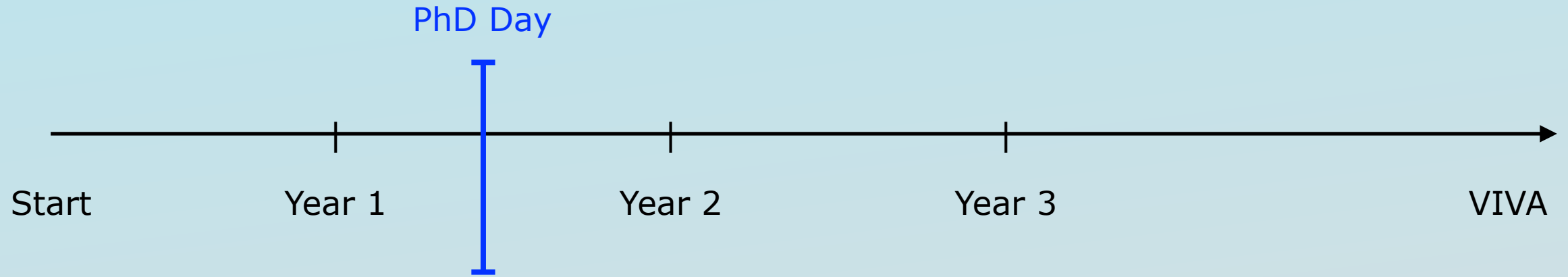
Music Phonology Research Group

Music & Language Reading Group \*NEW\*

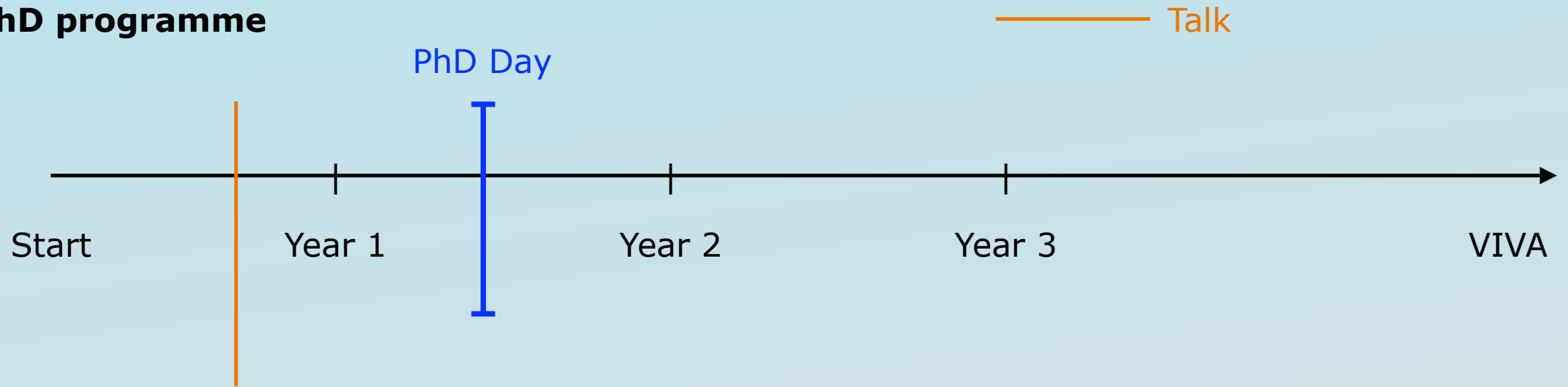
Comments, Feedback, Questions - Let me know 😊

1. Intro
  2. Text-tune composite
  3. Catalexis
  4. Corpus
  5. Results on the right
  6. Results on the left
  7. Conclusions
- Q & A

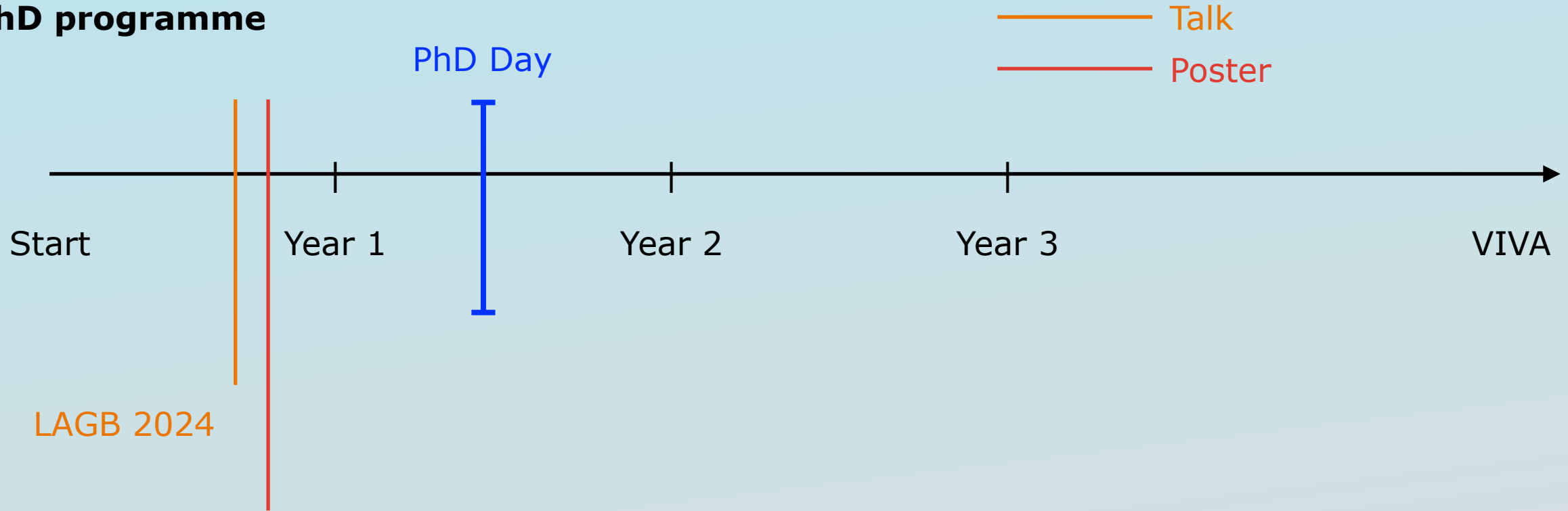
## PhD programme



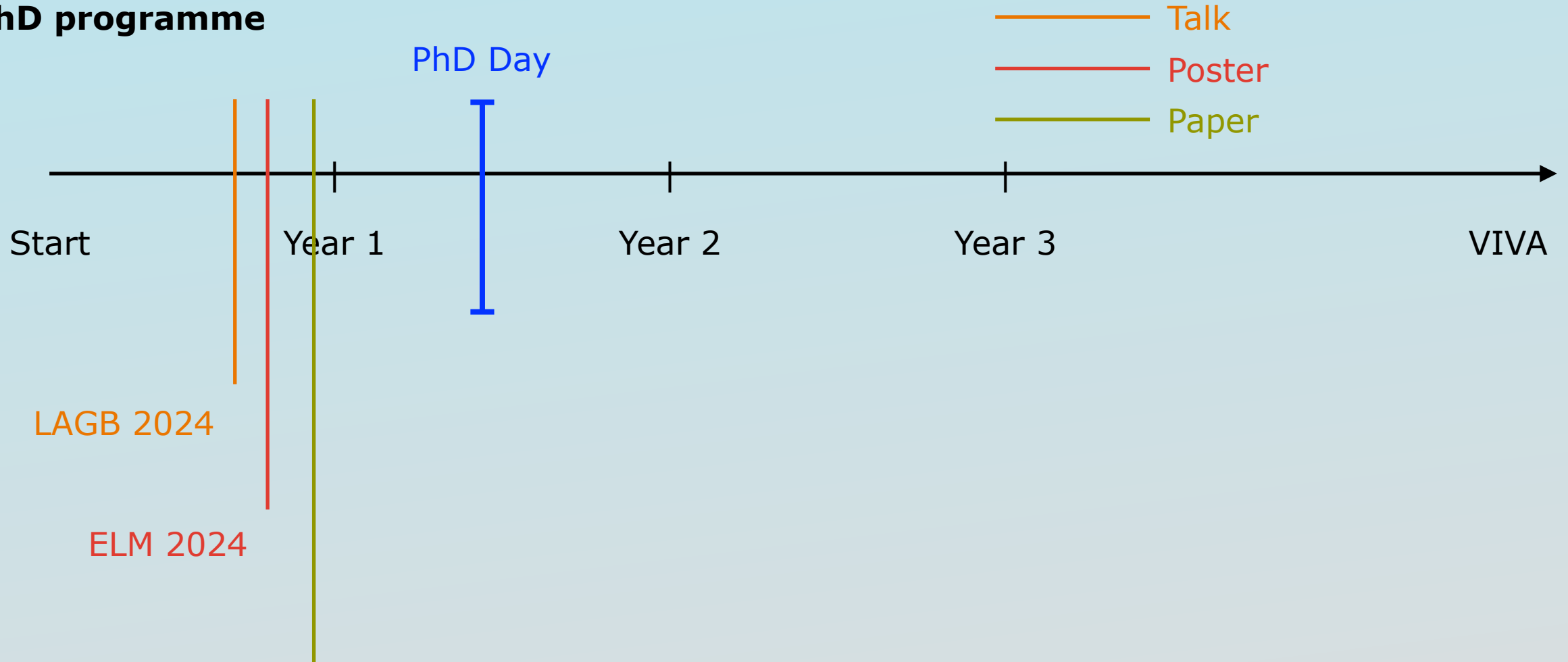


**PhD programme**

LAGB 2024 – Di Prete, D. *Textsetting (mis)alignment in the metrics of Italian pop and Rap*

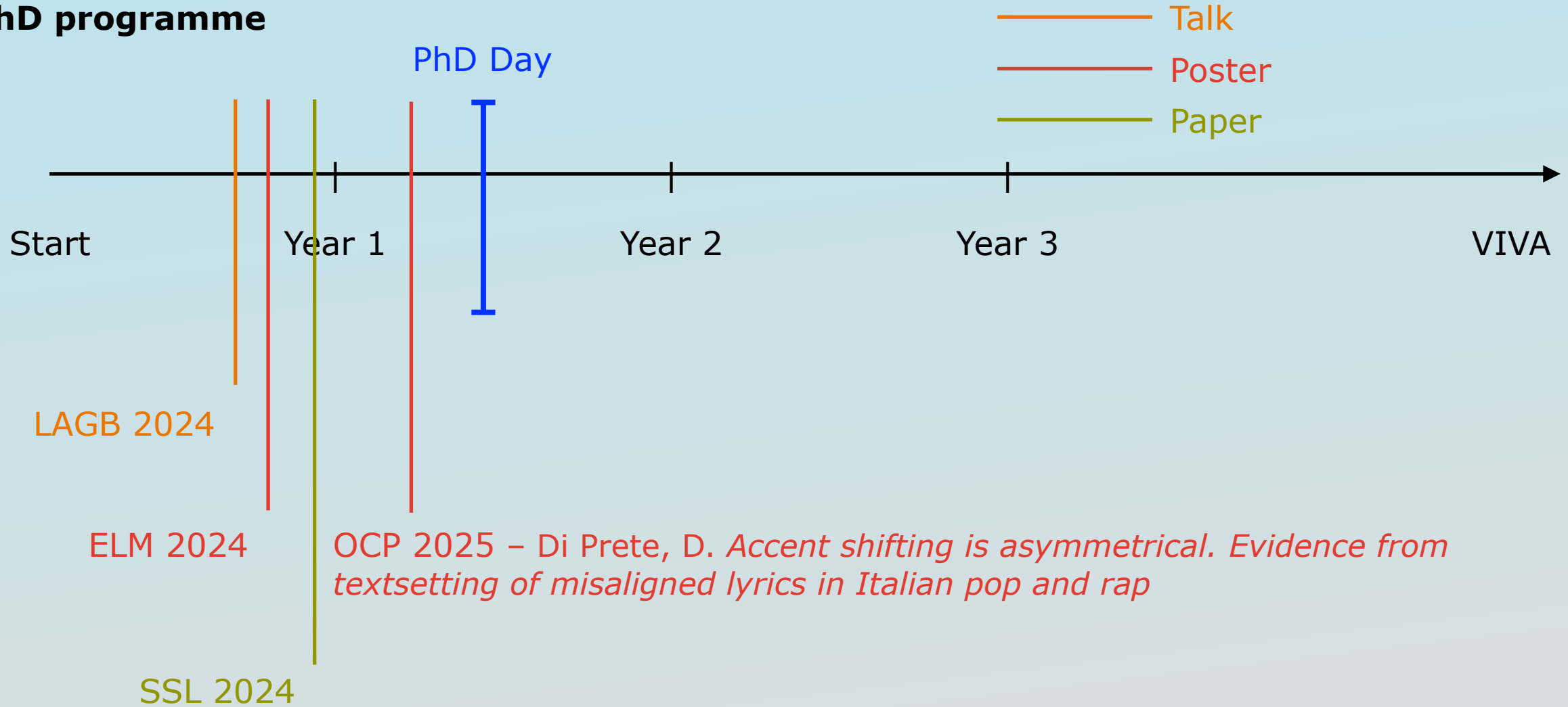
**PhD programme**

ELM 2024 – Di Prete, D. *Super Repair Strategy in Italian Textsetting misalignment*

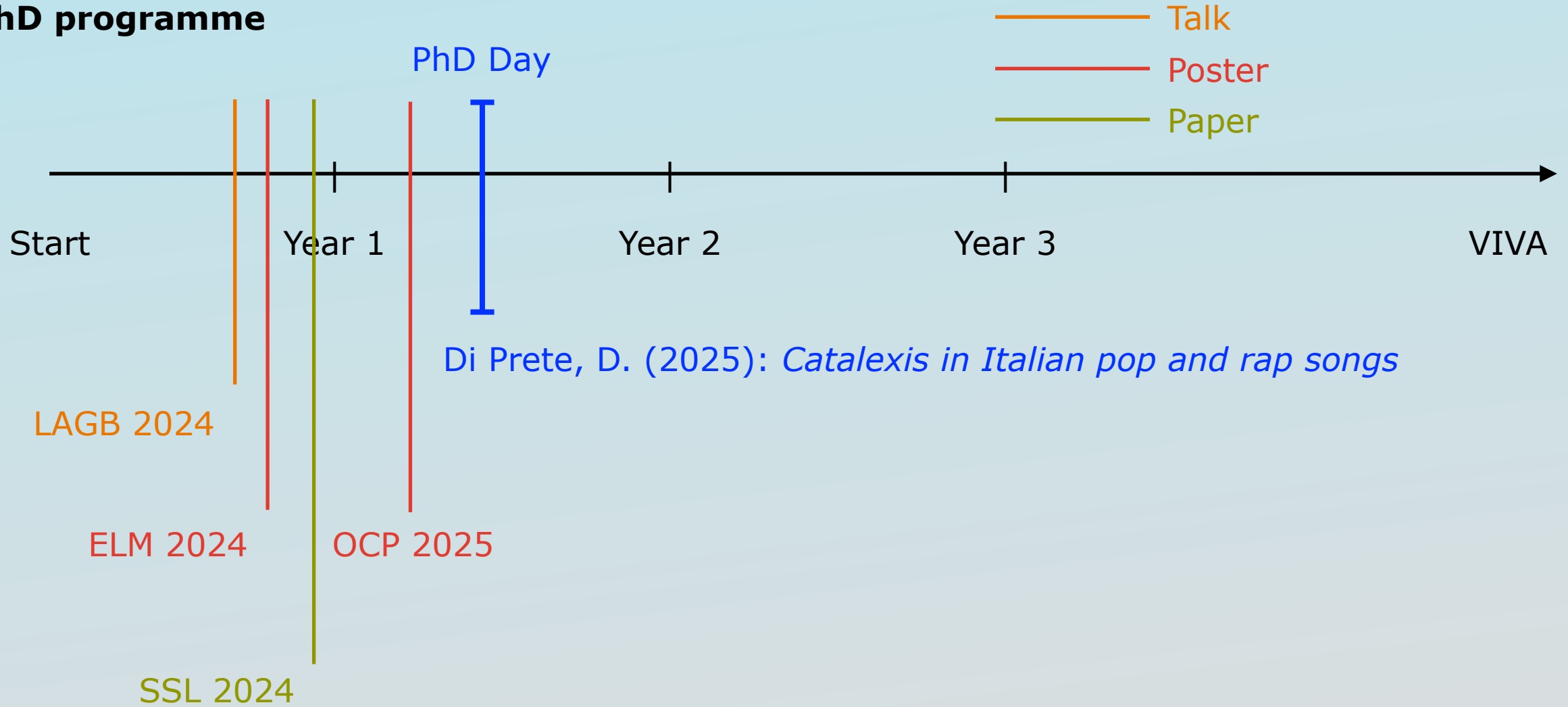
**PhD programme**

SSL 2024 – Di Prete, D. *La lingua batte se la mente vuole: il template prosodico dell'anacrusi nella musica rap e pop italiana (under review)*

## PhD programme



## PhD programme



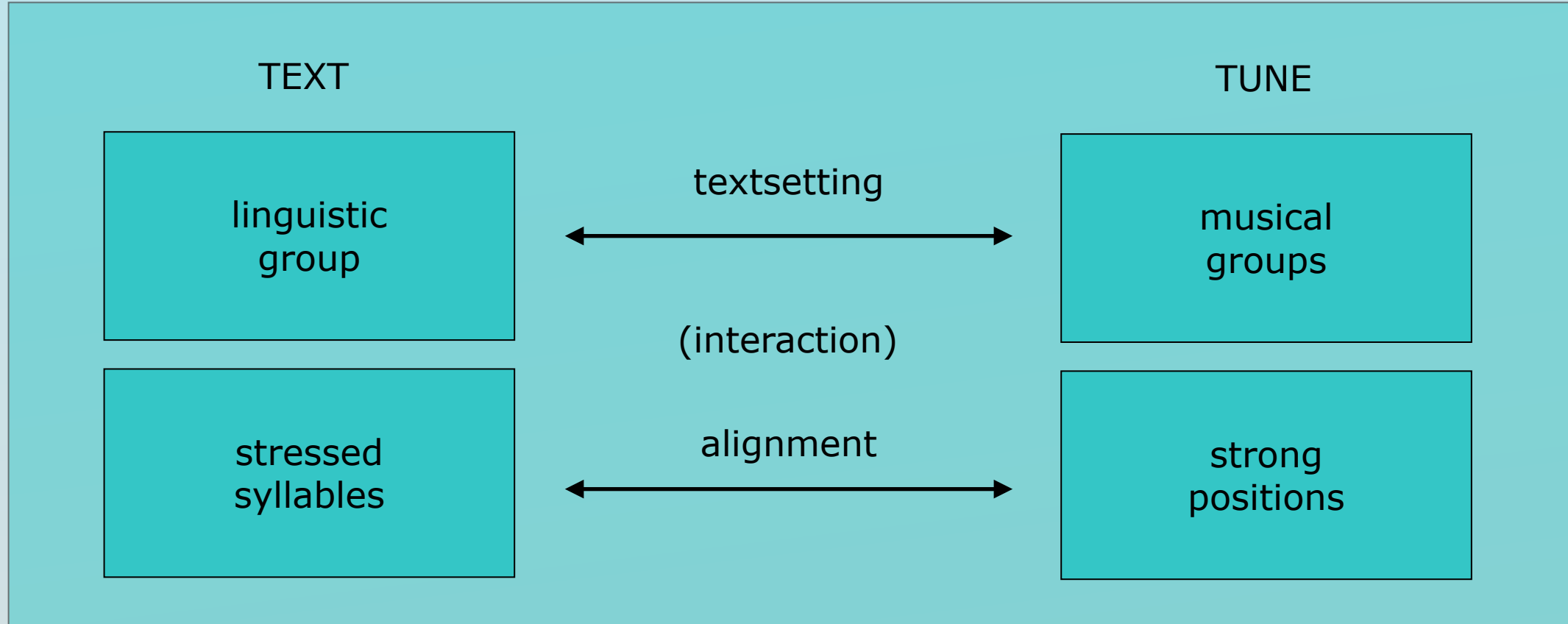
Di Prete, D. (2025): *Catalexis in Italian pop and rap songs*

## **Research questions**

What does text-tune composite reveal of Italian metrical phonology?

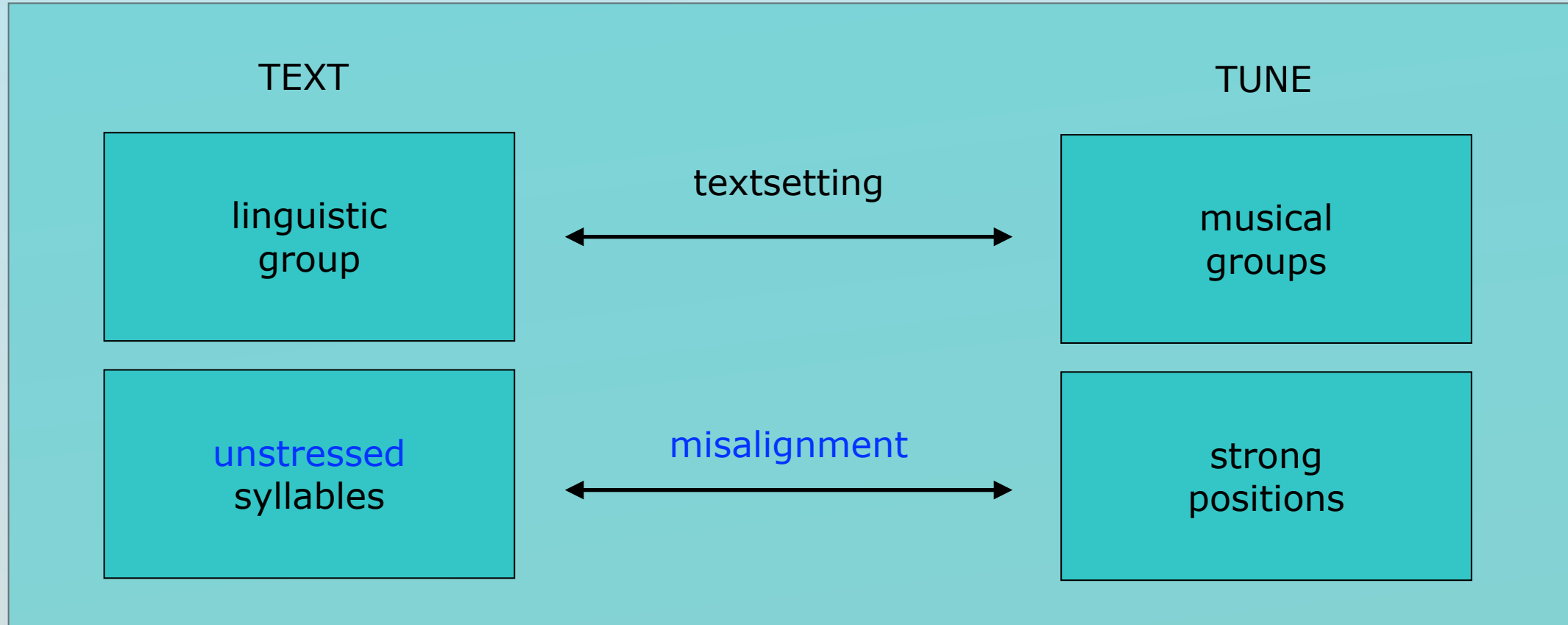
Can we expand the Italian metrical algorithm to insert iambs and ternary feet?

### Composite



(adapted from Dell & Halle, 2009)

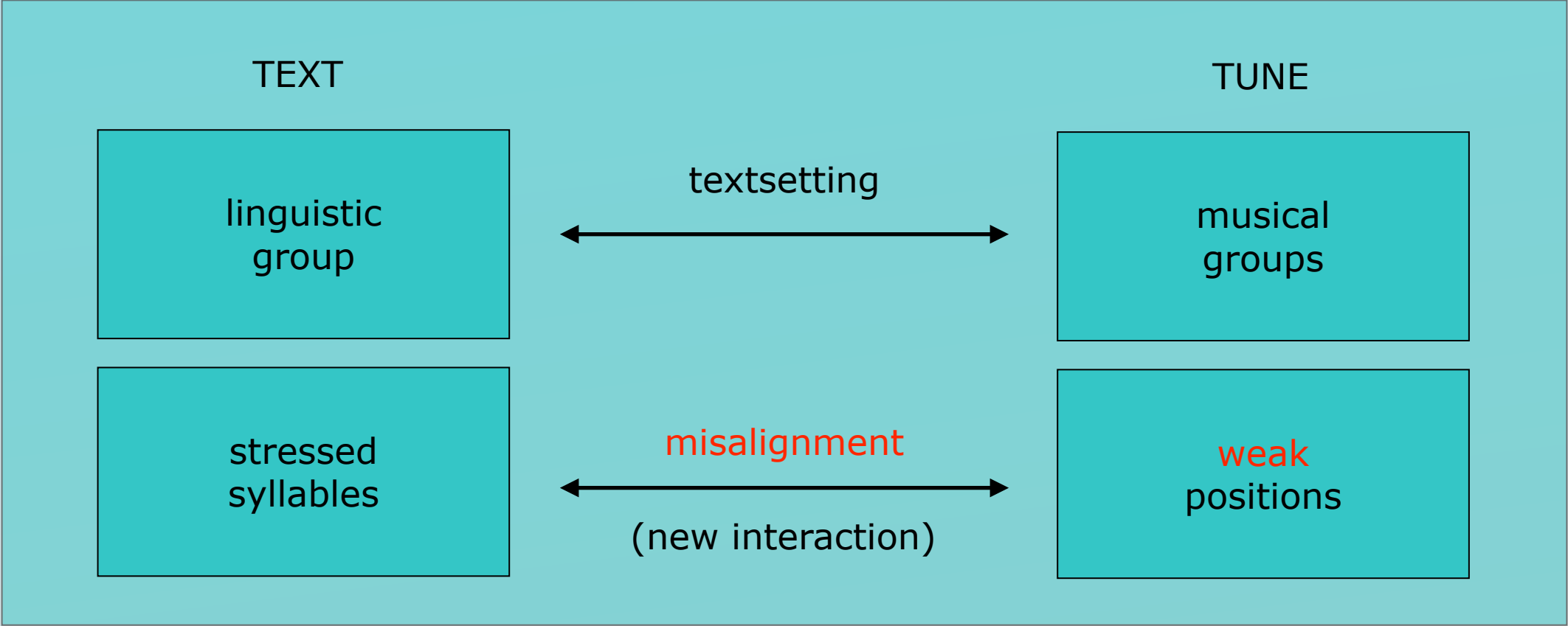
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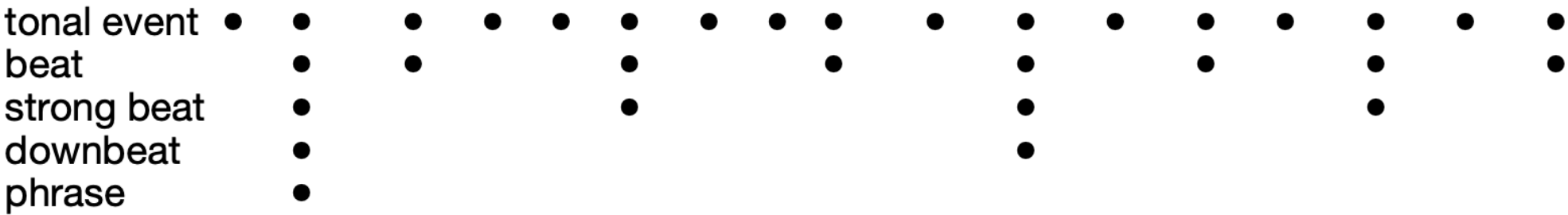
It's not goodbye - Laura Pausini (2013)



phrase																	
accent		x									x						
foot		x			x						x	x			x		
syll	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
	good	'bye		til	I	see	you	a	'gain	I'll	be	right	'here	re	'mem	b'ring	when

Liberman, 1975

It's not goodbye - Laura Pausini (2013)



Lerdahl and Jackendoff, 1983

Ideally we want strong beats and strong syllables to coincide

Misalignment creates a shift in the footing. e.g. [bi 'ɹaɪt] > ['bi: ɹaɪt]

### **Catalexis** in Italian

*Kiparsky, 1991: "Catalexis, the formal counterpart of **extrametricality**, can be understood as the peripheral addition of a prosodically relevant, though segmentally empty, constituent (syllable, mora or segment)."*

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*'tavolo'* (table)

/ˈta:volo/

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*Goldsmith (1990) algorithm*

- Left-headed feet
- Bounded
- Quantity sensitive?
- Extrametricality: right



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[('ta:vɔ)<.lo.>]

F

.ta:vɔ .vo. <.lo.>

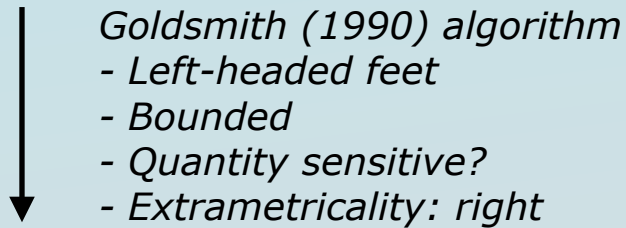


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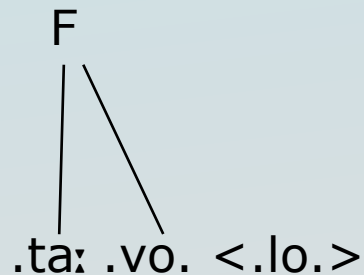
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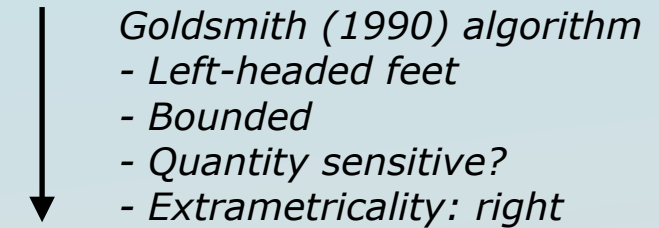


[('ta:vɔ)<lo.>]



*'città'* (town)

/tʃitˈta/

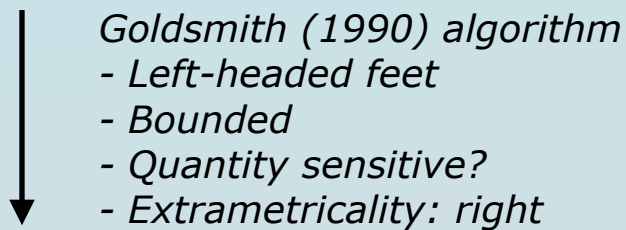


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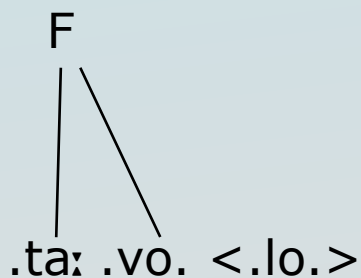
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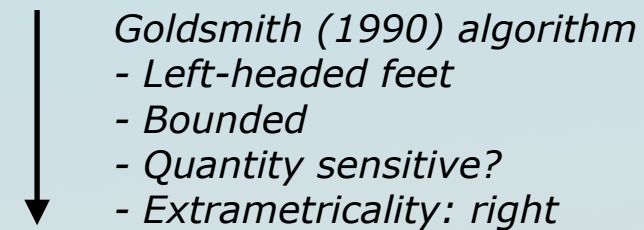


[('ta:vɔ)<.lo.>]

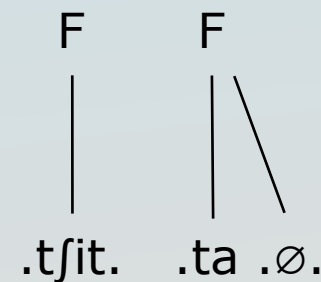


*'città'* (town)

/tʃitˈta/



[(.tʃit.)(.ta.∅.)]

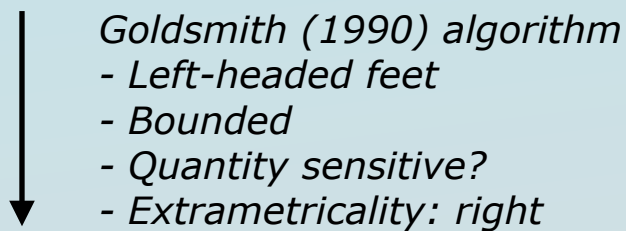


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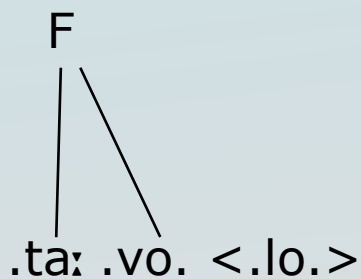
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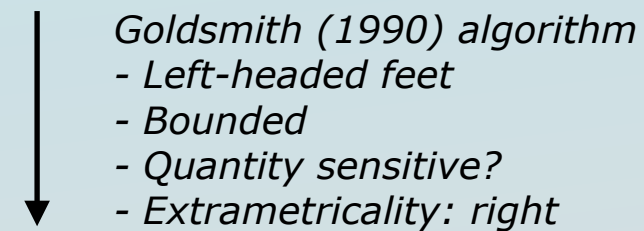
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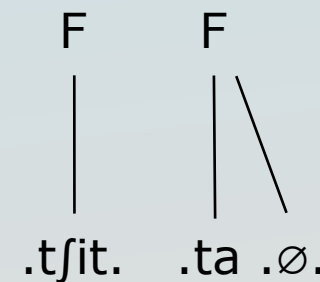
extrametricality

*'città'* (town)

/tʃitˈta/



[('tʃit.)('ta.∅.)]



catalexis

## Evidence **for** catalexis in Italian

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Examples:

The paragoge of monosyllables in Tuscan Italian  
*sì > sine, giù > giùe, fu > fùne, no > nòe*

'yes',      'down',      'it was'      'no'

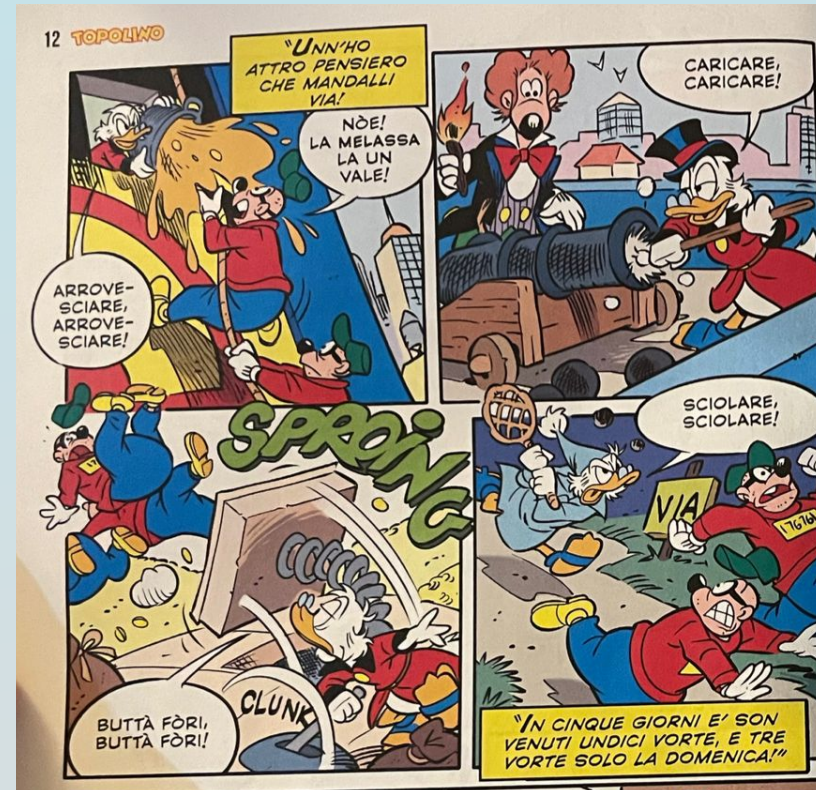
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 University of Florence



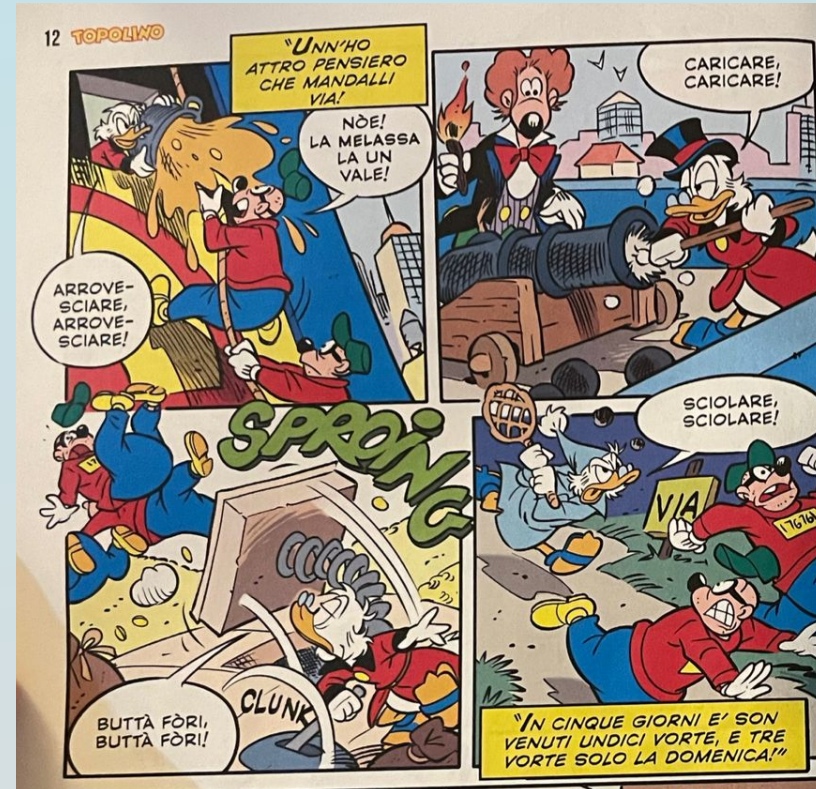
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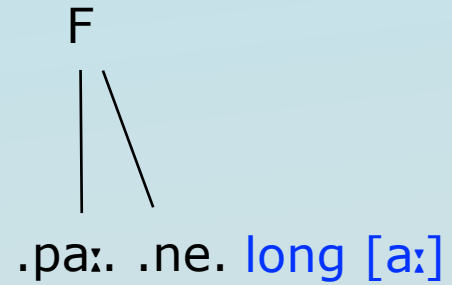




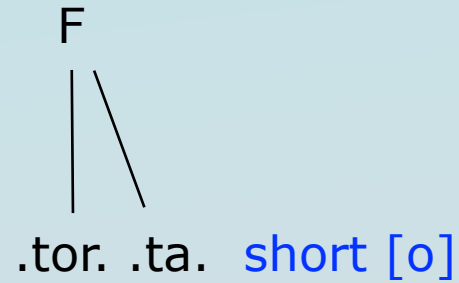
Evidence **against** catalexis in Italian

*Stressed open syllables lengthen in Italian. (Marotta, 2000)*

/ˈpane/      pane 'bread'



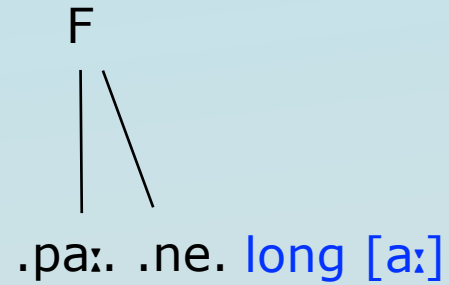
/ˈtorta/      torta 'cake'



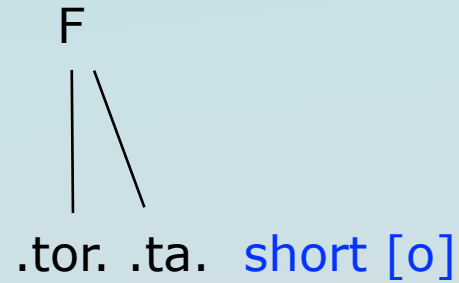
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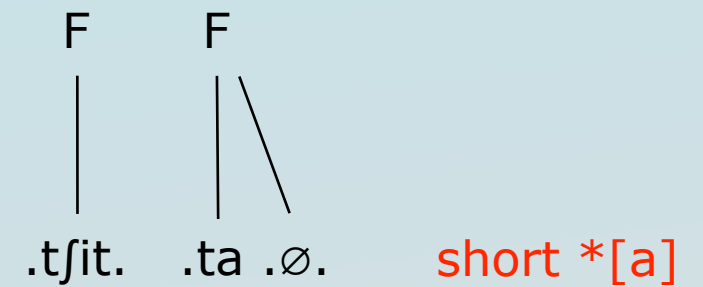
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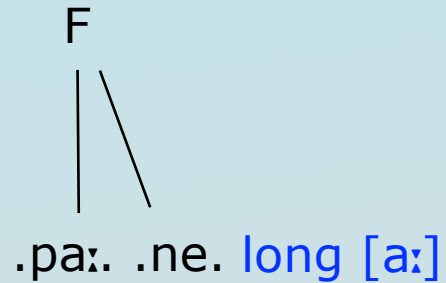
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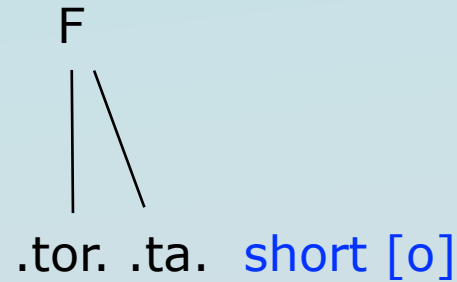
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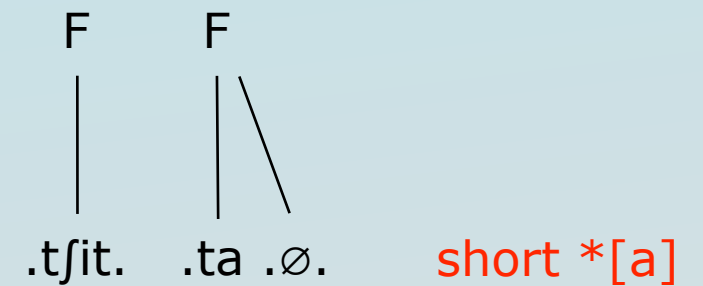
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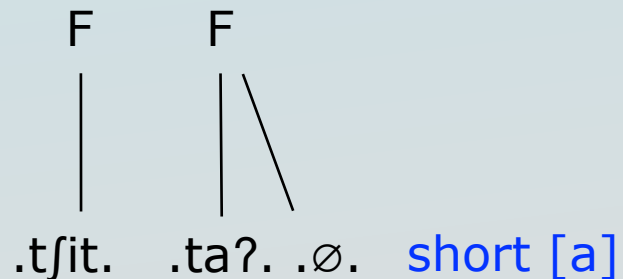


/tʃitˈta/      città 'town'



**BUT** Vayra, 1994 found indirect evidence of glottal stop after iambic patterns.

/tʃitˈta/      'town'





"Scrupoli", Daniele Silvestri (2023)

*'Leaving with a laugh, leaving you in the darkness  
of your pettiness, it's just as well to be  
unscrupulous, avoiding the need to reply.'*

#### **Haplology**

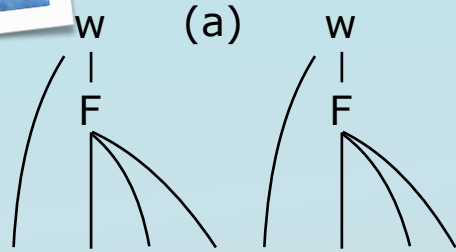
*Evidence supporting Vayra (1994) from music*

così ridendo an-darmene lasciandoti nel buio della tua meschini-tà  
tanto vale farsi meno scrupoli, evitando di ris-pondere

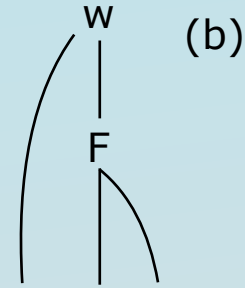


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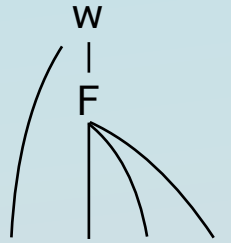
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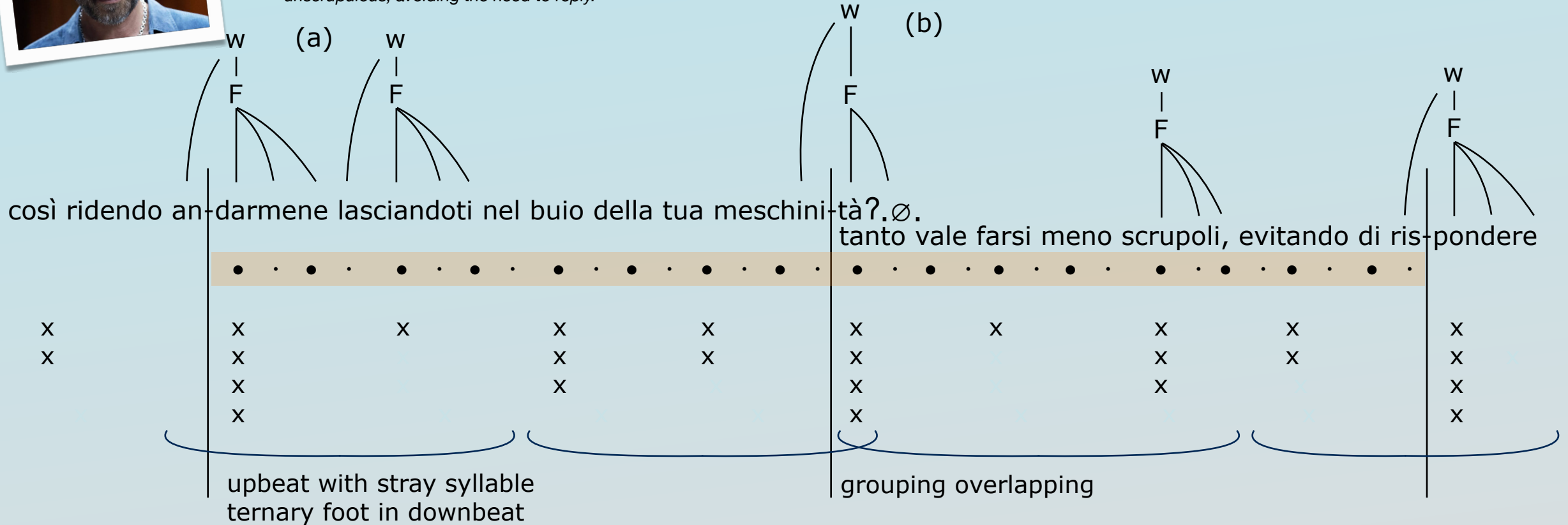


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Ternary feet on duple meter (hemiola). Meter is highlighted in orange. Long vertical lines separates bars.

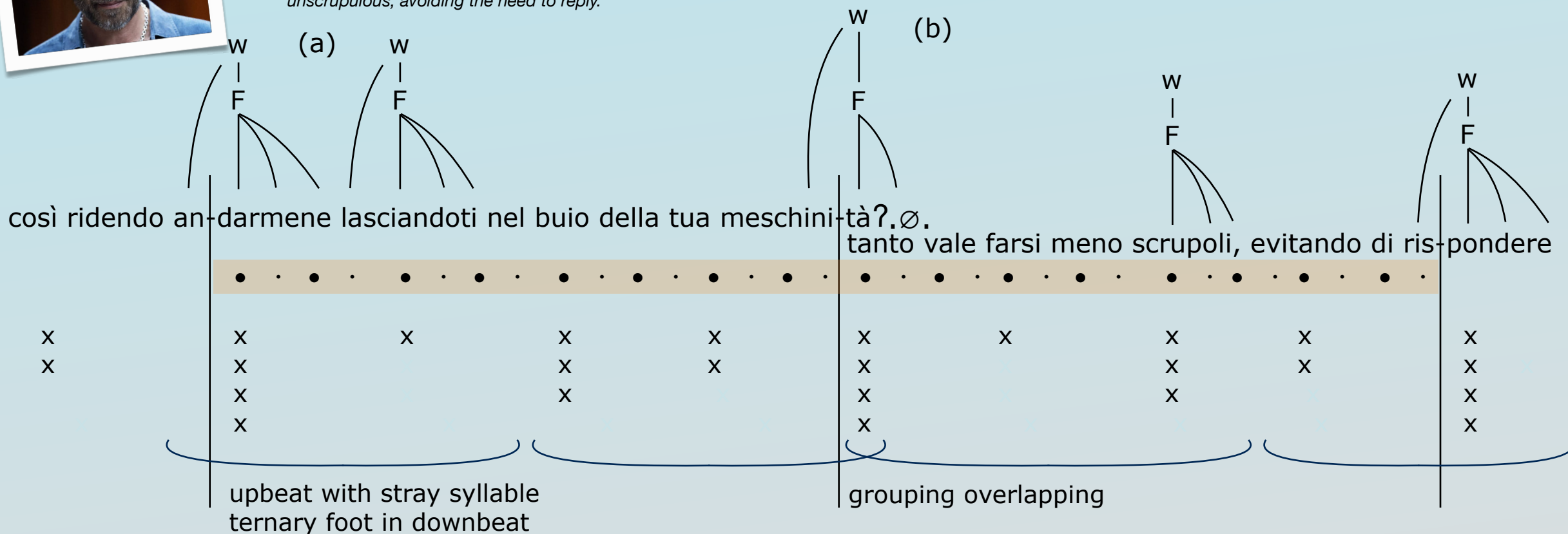


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First upbeat group (a) sets the stray syll [an.] in upbeat and the strong syll [dar.] on the following beat.

On the next bar (b) **haplology** shows branching DF, the syll [ta?] is short therefore it needs a coda.

Super Repair Strategy (Di Prete, 2024) is active.



“Più che un’idea”, Laura Pausini (2023)

*‘I feel your sound in my veins,  
it’s not a voice but enchantment,  
and you enchant me.  
You are the one, my own, my king,  
the one no one else could...’*

***Monosyllables***

*Evidence supporting Vayra (1994) from music*

\_\_\_ sento nelle vene il tuo suono non è voce ma in-canto e m’incanti    sei tu quello mio, il mio re    quello che nessuno





“Più che un’idea”, Laura Pausini (2023)

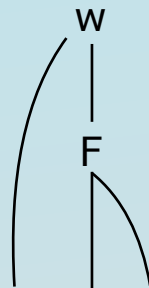
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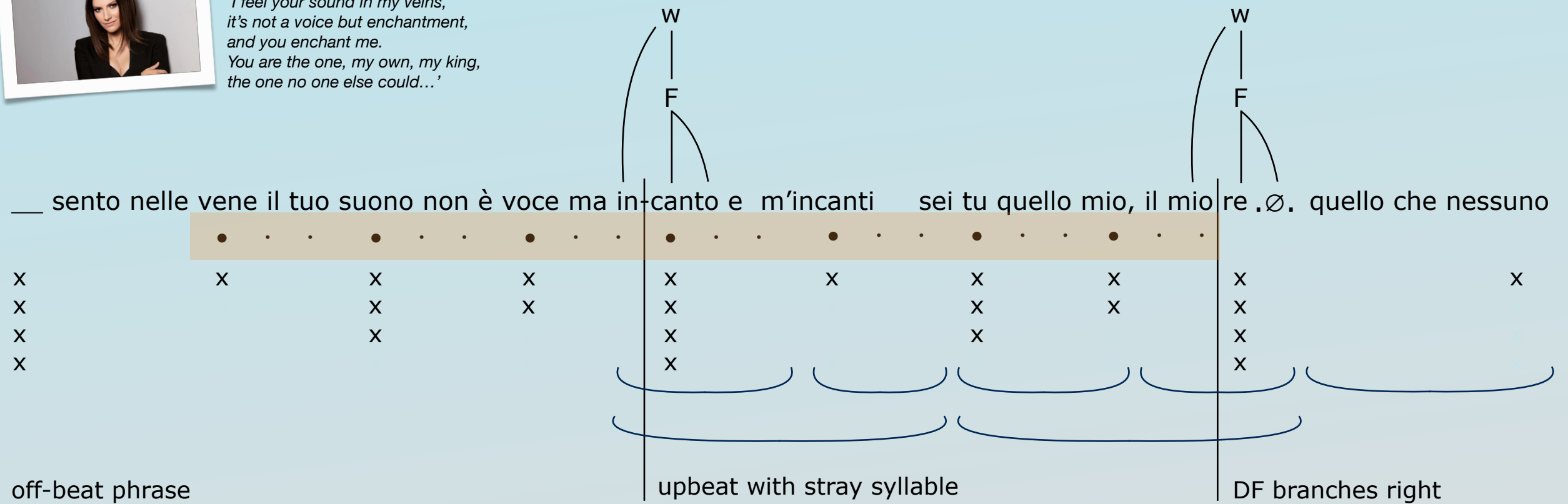
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**Monosyllables**  
*Evidence supporting Vayra (1994) from music*



Binary feet on ternary meter. Meter is highlighted in orange. Long vertical lines separates bars.



2020-2021 First collection of corpus: Italian music

**Pop** (Paolo Conte, Lucio Battisti, Franco Battiato) 18 songs - 370 musical phrases

**Rap** (Frankie hi-nrg mc, Neffa, Caparezza) 18 songs - 845 bars

TOTAL PHRASES = 1215

2023-2024 Second collection of corpus: Music Phonology Research Group

**Pop** (Adele (5), Bob Dylan (10), Ed Sheehan (1), Elton John (8), Michael Jackson (8), Musical theatre (5), Taylor Swift (3)) 40 songs

**Rap** (Little Simz (2), MC Jin (3), MF Doom (2), Nicky Minaj (1), Queen Latifa (2)) 10 songs

TOTAL SONGS = 50

2024-2026 NEW collection of corpus: English/Italian misalignment

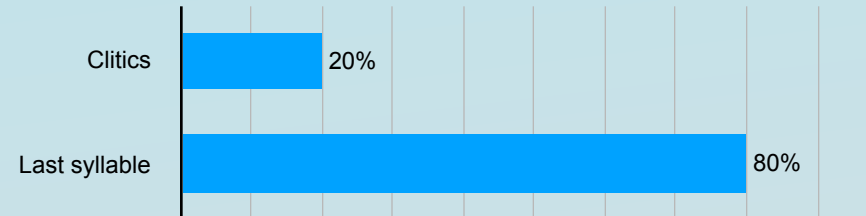
2024-2025 NEW collection of corpus: English/Italian misalignment

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
1								Genre		Phrase			Direction		New foot?				On which beat?				Retraction				Protraction			Distance	Environment		Phonology	Morphology
2	No.	Author	No.	Song	Year	No.	Shift	Pop	Rap	Downbeat	Upbeat	Off-beat	Retraction	Protraction	tro>tro	iam>tro	catalexis	Dactyl/ILT	Beat 1	Weak 1	Strong 2	Last	Stray	Left edge	Weak foot	Clitic	Right edge	Clitic	?	Jumps	After right edge	Before left edge	Heavy syll	[+stress]
3	1	Franco Battiato	1	La cura	1996	1	proteggerò > PRO.teggero	1			1		1						1				1	1			1			3	ti   PRO			
4					1996	2	dalle > dall'E	1			1			1				1	1								1			1	dal(le#in)giustizie			
5					1996	3	porterò > POR.tero	1			1								1					1					2	ti   POR		1		
6			2	Prospettiva Nevski	1980	4	aspettavamo > as.PET.tavamo	1			1				1				1					1					2	as   PET		1		
7					1980	5	disintegrava > di.SIN.tegrava	1			1				1				1					1					2	di   SIN		1		
8					1980	6	incontrastato > in.CON.trastato	1			1				1				1					1					2	in   CON		1		
9					1980	7	guardavamo > GUAR.davamo	1			1				1				1					1					2	poi   GUAR		1		
10					1980	8	studiavamo > STU.diavamo	1			1				1				1					1					2	e   STU				
11			3	Via Lattea	1985	9	equipaggio > E.equipaggio	1			1				1				1					1					2	dove un   E				
12			4	Segnali di vita	1981	10	cosmico > cosmi.CO	1			1			1					1					1			1		2	cosmi(co#s)sta				
13			5	Summer on a solitary beach	1981	11	arrivava > AR.rivava	1			1				1				1					1					2	e ci   AR		1		
14					1981	12	mentre > men.TRE	1			1				1				1								1		1	men(tre#lon)tano				
15	2	Paolo Conte	6	Chiamami adesso	1992	13	chiamami > chiama.MI	1			1				1				1								1		2	chiamami(mi#_)				
16					1992	14	era > e.RA	1			1				1				1								1		1	e(ra#_)				
17			7	Bartali	1979	15	avrà > A.vra	1			1				1				1				1	1					1	quanta ne   A				
18	3	Lucio Battisti	8	29 Settembre	1969	16	d'improvviso > DIM.provviso	1			1				1				1					1	1				2	poi   DIM		1		
19					1969	17	ristorante > RIS.torante	1			1				1				1					1	1				2	un   RIS		1		

	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
	Genre		Phrase			Direction		New foot?				On which beat?				Retraction			
	Pop	Rap	Downbeat	Upbeat	Off-beat	Retraction	Protraction	tro>tro	iam>tro	catalexis	Dactyl/ILT	Beat 1	Weak 1	Strong 2	Last	Stray	Left edge	Weak foot	Clitic
	1			1		1					1	1				1	1		
	1			1			1			1		1							
	1			1		1					1	1					1	1	
	1			1		1		1				1							1

	AA	AB	AC	AD	AE	AF	AG	AH
	Protraction			Distance	Environment		Phonology	Morphology
	Right edge	Clitic	?	Jumps	After right edge	Before left edge	Heavy syll	[+stress]
				3		ti   PRO		
	1			1	dal(le#in)giustizie			
				2		ti   POR	1	
				2		as   PET	1	

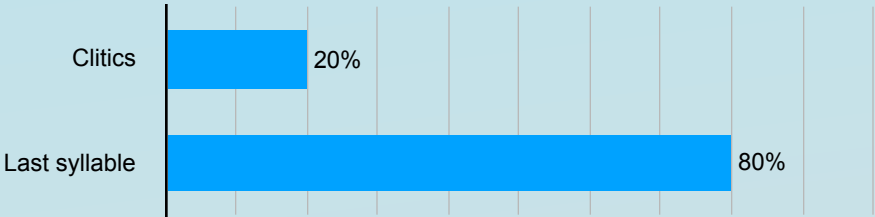
## Protraction data



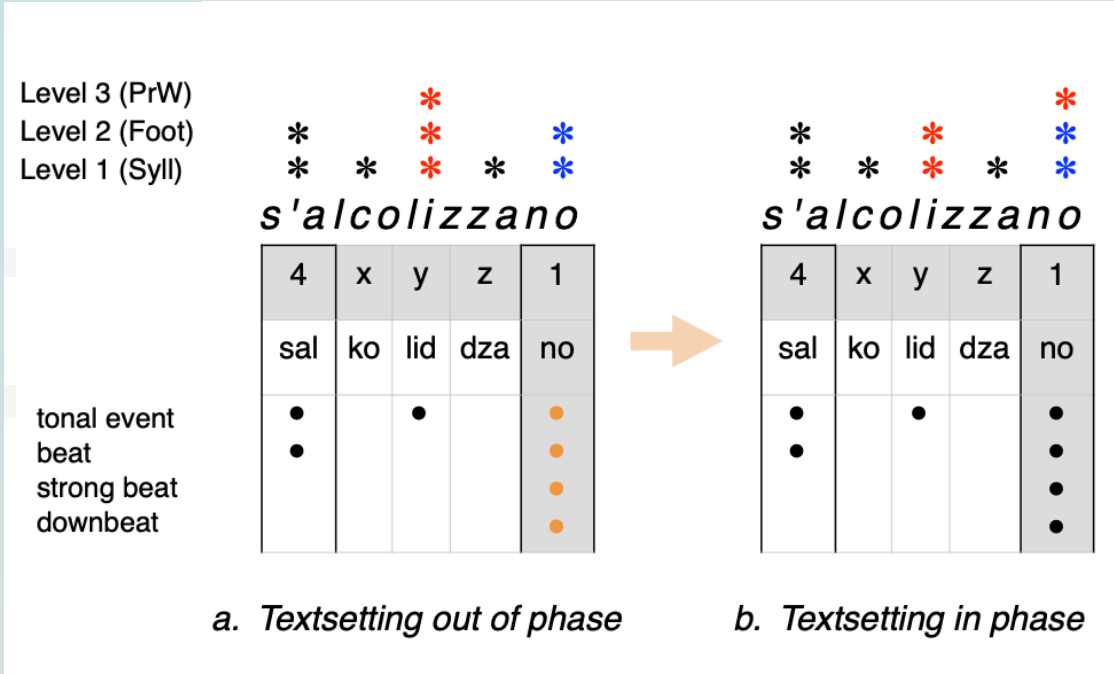
Clitics and last syllable are different prosodic constituents; nevertheless, both of them are at the right edge of the word. Protraction has some textsetting peculiarities worth exploring:

Whilst during **retraction** the accent shifts onto different prosodic components (e.g. weak foot, weak phonological word, etc.), **protraction** seems to target one and only one place: the last available syllable.

Protraction data



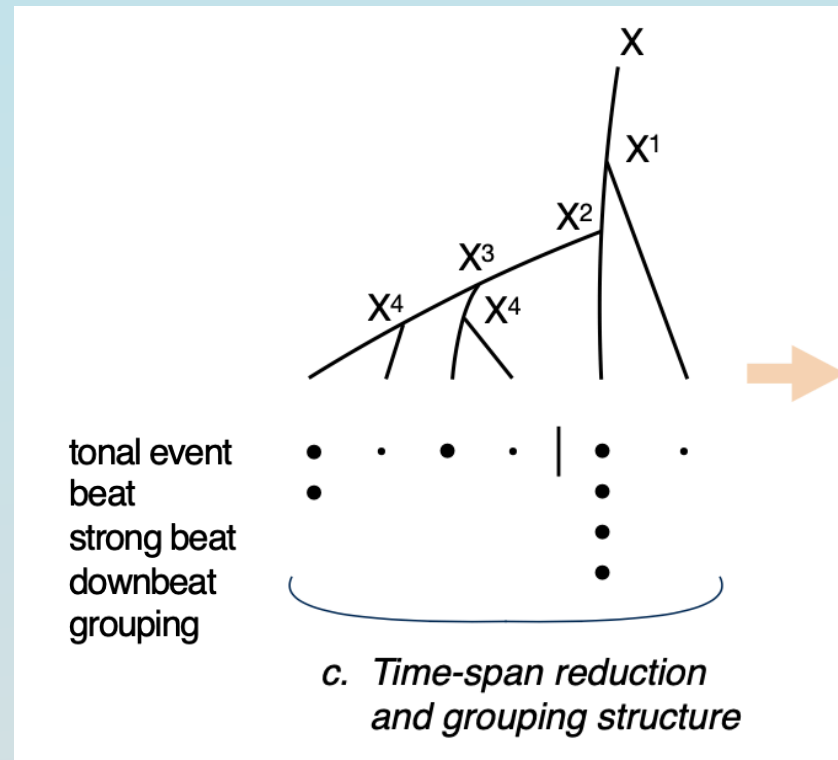
This phenomenon is stable within our corpus and we believe that the explanation lies in the metrical texture underlying the lyrics. Moving the accent to the last available syllable means placing the accent onto the downbeat, count 1.



'they get drunk'

"Quelli che benpensano",  
Frankie hi-nrg mc (1997)

## Time-span reduction

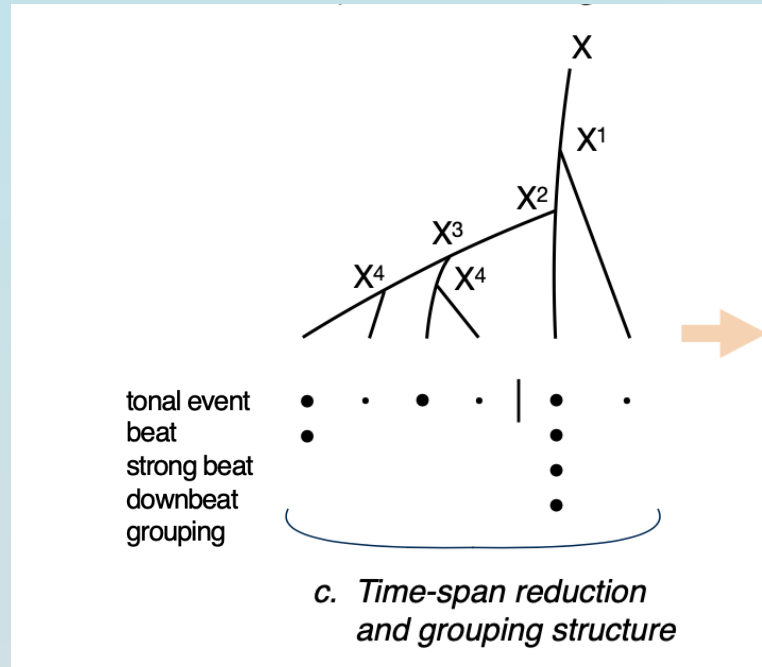


Time-span reduction is a bottom-up process, it begins at the smallest levels and moves through all larger levels. At each level of the analysis, a structural pitch-event or “head” for each time-span within the grouping structure must be determined, the remaining feature(s) from that group or time-span being heard as its “elaboration”. It ends with one event (x), the main constituent.

(Lerdahl & Jackendoff 1983)



## Time-span reduction



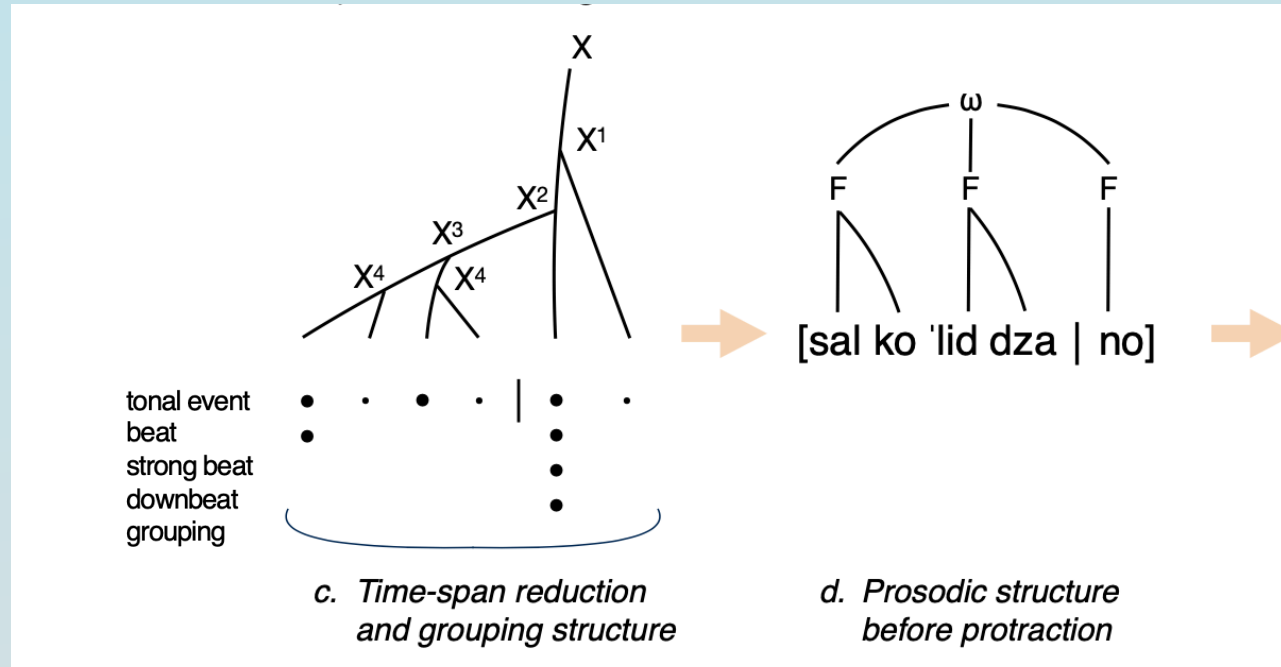
If we superimpose the two structures (c) and (d), as required by the textsetting of the phrase, the DF branches to the right and becomes a **catalectic trochee**. The strong syllable on the downbeat [.no.] head of our constituent is next to a prosodically relevant element (the time-span), visible to the algorithm but segmentally empty.

(Jakobs, 1994)

(Burzio, 1994)

Time-span reduction

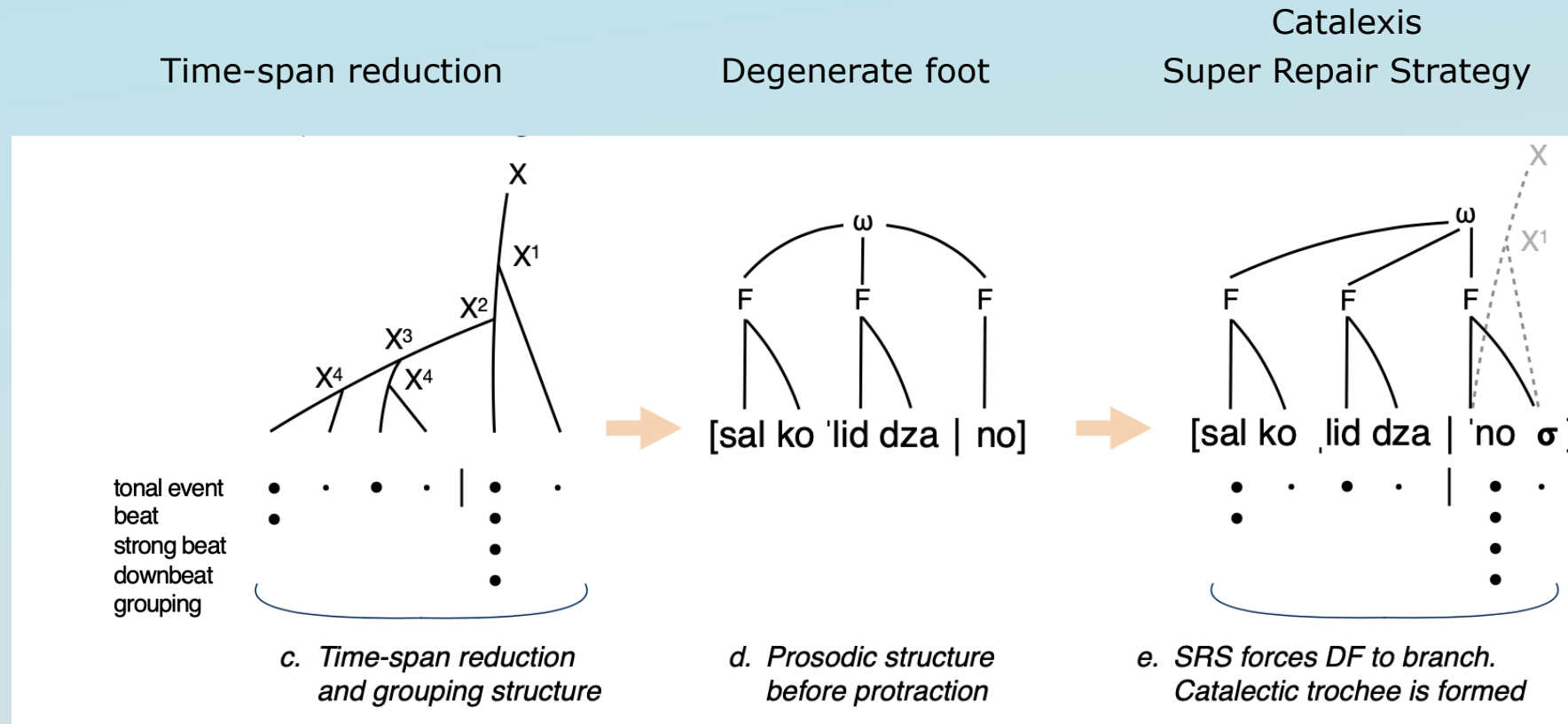
Degenerate foot



If we superimpose the two structures (c) and (d), as required by the textsetting of the phrase, the DF branches to the right and becomes a **catalectic trochee**. The strong syllable on the downbeat [.no.] head of our constituent is next to a prosodically relevant element (the time-span), visible to the algorithm but segmentally empty.

(Jakobs, 1994)

(Burzio, 1994)



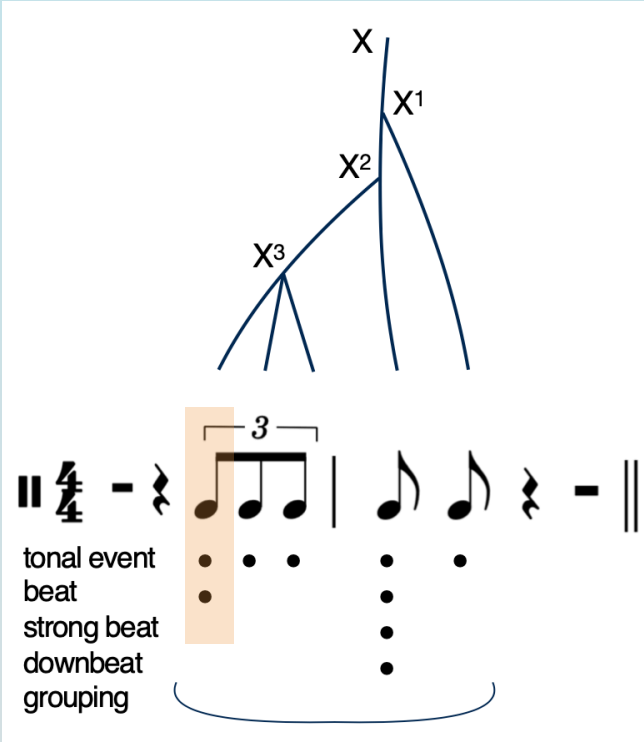
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(Jakobs, 1994)

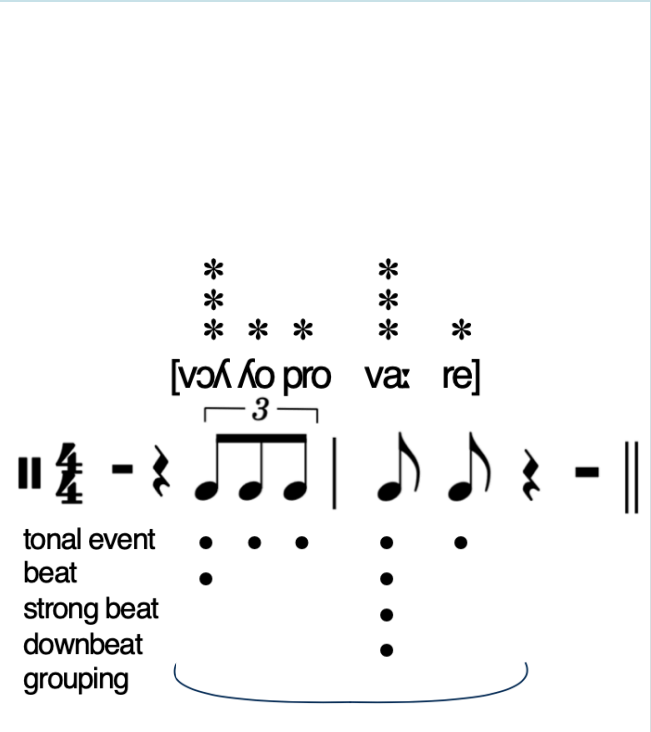
(Burzio, 1994)



Triplets are **left-headed** rhythmic elements, represented by metric theory as a multiple-branching tree. In (a) the onset of the triplet governed by the node  $X^3$  projects **two** dots. The following two notes, part of the triplet, are both in the weak position (one dot).



a. Time-span reduction and grouping of upbeat triplet



b. Textsetting shows intrinsic prominence on the first syll of the triplet

In (c), the contrast with the metrical structure of three notes in nominal value (i.e. non-extrametrical).

In this case it is the **central** note, locally governed by  $x^3$ , that is in a relatively strong position (two dots).

(a)

• Tonal event  
• Beat  
• Strong beat  
• Downbeat

<quindici> [.'kwin.di.tʃi.]

(c)

• Tonal event  
• Beat  
• Strong beat  
• Downbeat

<diciotto> [.di.'tʃot.to]

textsetting examples



Lucio Battisti  
'...E penso a te' (1972)

## Headless triplets – i.e. triplets whose onset aligns with a rest

1. (ó)-le-sor- | rì-do, *abbasso gli occhi e penso a te*      'I smile at her, lower my eyes, and think of you'
2. (ó)-le te- | lè-fo-no e *intanto penso a te*      'I phone her, meantime I think of you'
3. (ó)-ti-ac-com- | pàg-no e *penso a te*      'I walk with you and think of you'
4. (ó)-non son | stà-to *divertente e penso a te*      'I wasn't funny and think of you'

The first note of the triplet is aligned with a rest.

The symbol (ó) indicates an empty constituent which is the head of the triple, intrinsically stressed.

Headless triplets – i.e. triplets whose onset aligns with a rest

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'I smile at her, lower my eyes, and think of you'
2. (ó)-le te- | lè-fo-no e intanto penso a te

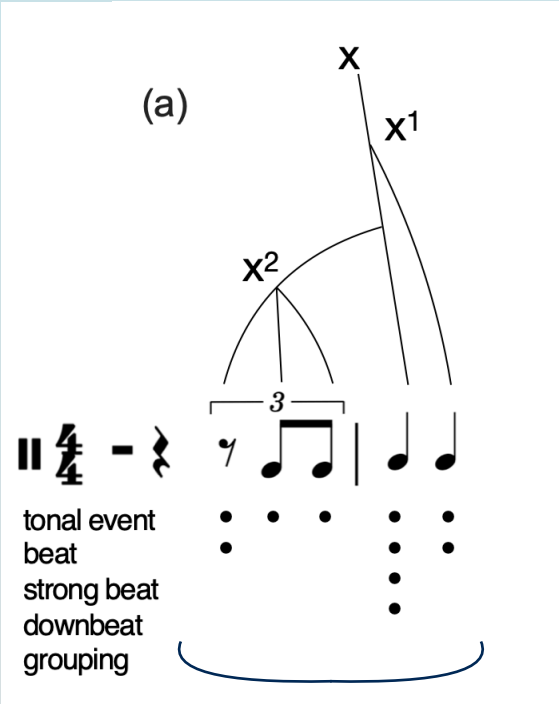
'I phone her, meantime I think of you'
3. (ó)-ti\_ac-com- | pàg-no e penso a te

'I walk with you and think of you'
4. (ó)-non son | stà-to divertente e penso a te

'I wasn't funny and think of you'



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'...E penso a te' (1972)



Time-span reduction



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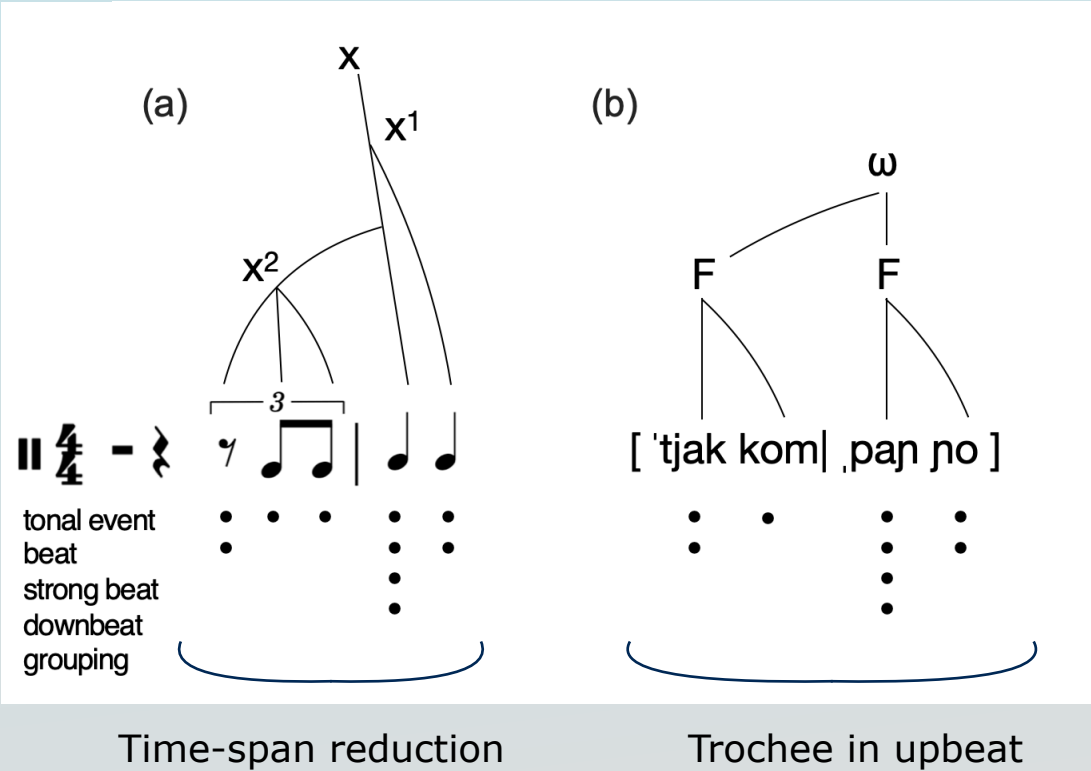
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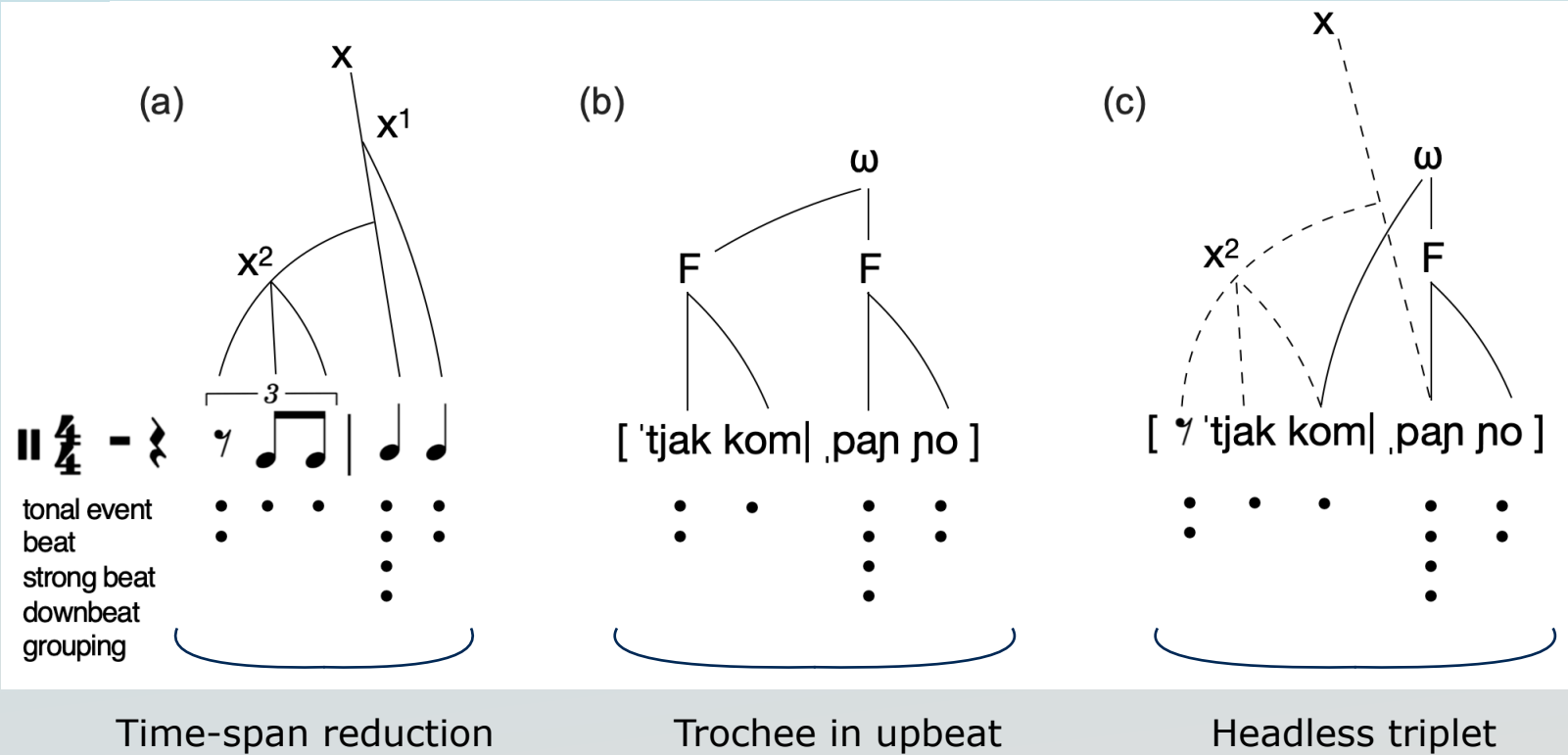
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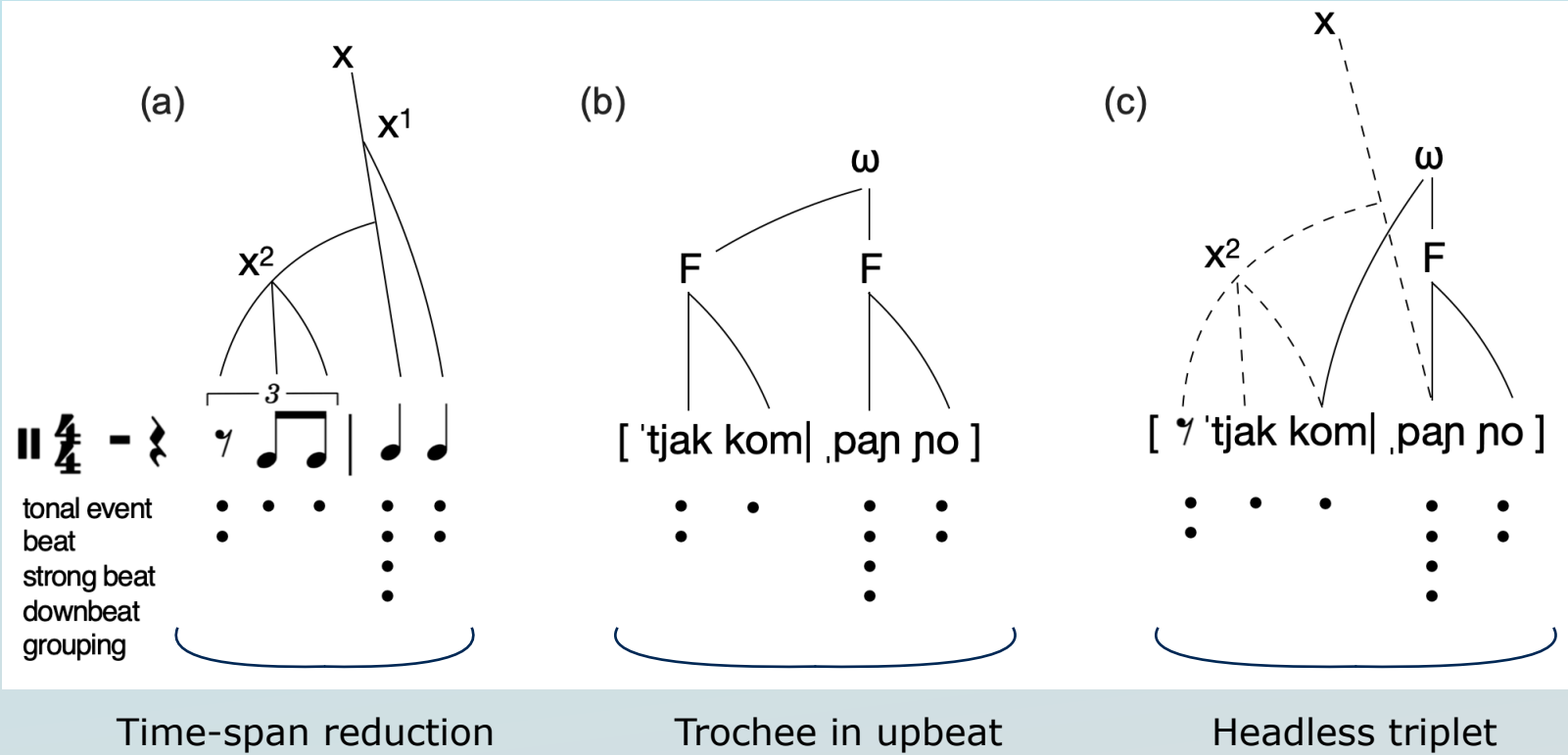
'I wasn't funny and think of you'



Lucio Battisti  
'...E penso a te' (1972)



Headless triplets – i.e. triplets whose onset aligns with a rest

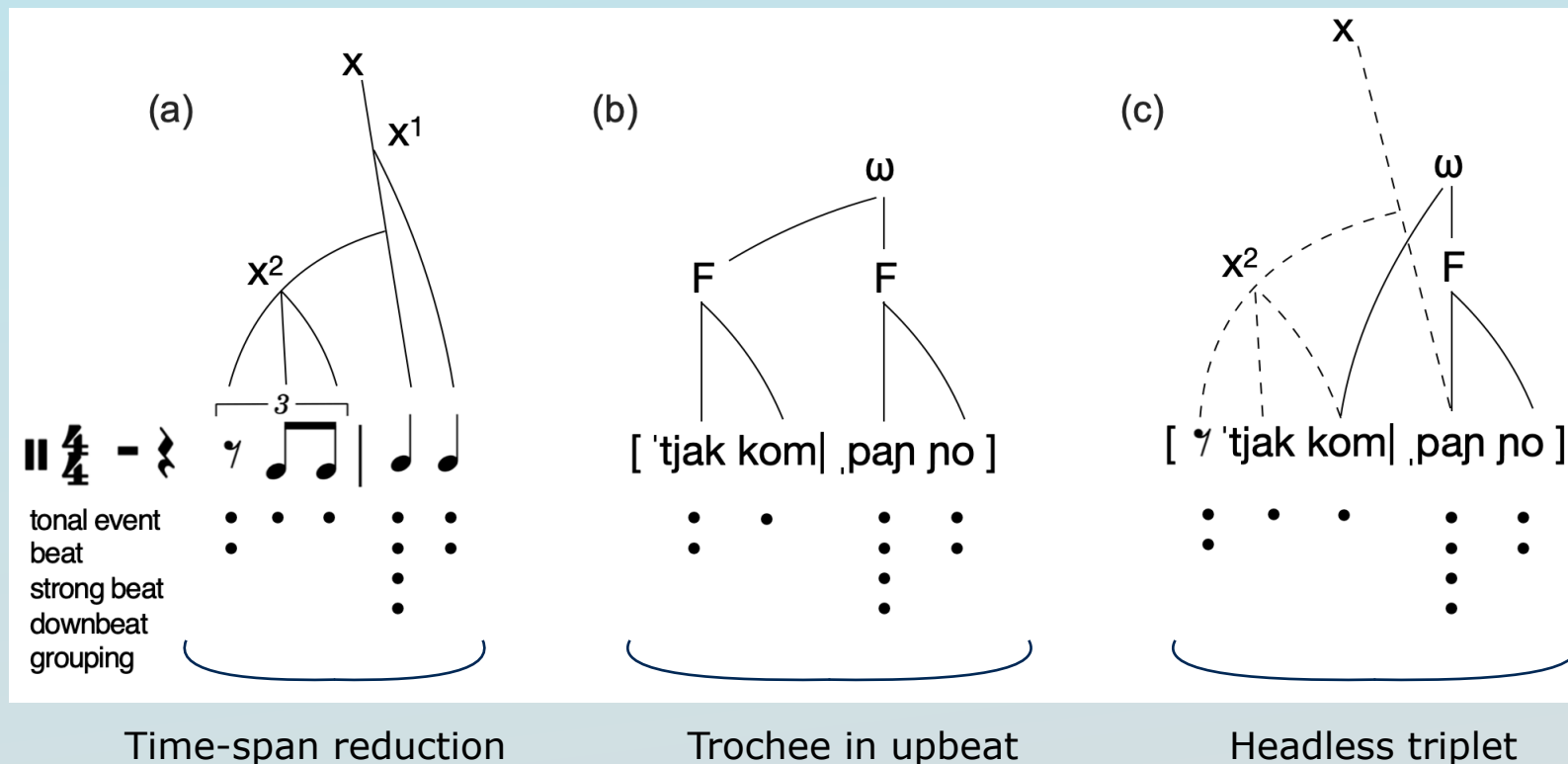


Lucio Battisti  
*'...E penso a te' (1972)*

In (c) the rest (two dots):

- governs the following two notes under a ternary tree,
- weakens their metrical structure, [.tjak.] is reduced to one dot (as opposed to (b))

Headless triplets – i.e. triplets whose onset aligns with a rest



Lucio Battisti  
'...E penso a te' (1972)

In (c) the rest (two dots):

- governs the following two notes under a ternary tree,
- weakens their metrical structure, [.tjak.] is reduced to one dot (as opposed to (b))

Therefore a headless triplet aligns with **unstressed** syllables, governed by an invisible head.  
A case of catalexis on the left?

Di Prete, D. (2025): *Catalexis in Italian pop and rap songs*

### **Research questions**

What does text-tune composite reveal of Italian metrical phonology?

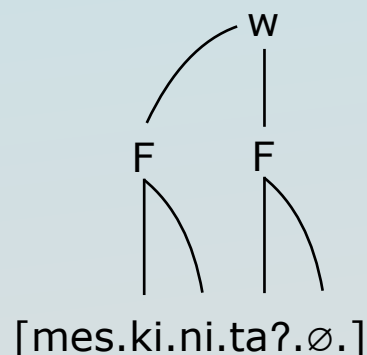
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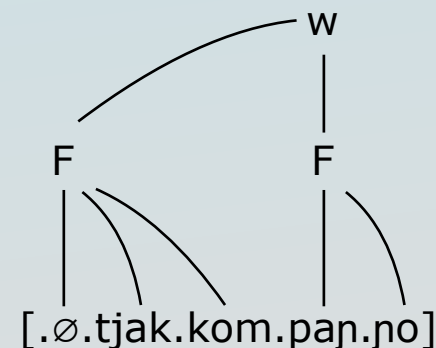
*In an Italian text-tune composite:*

*-catalexis is active on the right*



"Scrupoli", Daniele Silvestri (2023)

*-catalexis is active on the left*



"...E penso a te", Lucio Battisti (1972)

Di Prete, D. (2025): *Catalexis in Italian pop and rap songs*

### **Research questions**

Can we expand the Italian metrical algorithm to insert iambs and ternary feet?

Di Prete, D. (2025): *Catalexis in Italian pop and rap songs*

### **Research questions**

Can we expand the Italian metrical algorithm to insert iambs and ternary feet?

*In an Italian text-tune composite:*

- iambs and trochees co-exist, although are iambs really iambs?*
- ternary feet are set on duple metre, just like binary feet are set on ternary metre (hemiola)*
- headless triplets show evidence of ternary rhythm alignment*





# Thank you!

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*Any comments?*

*Feedback welcome!*

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