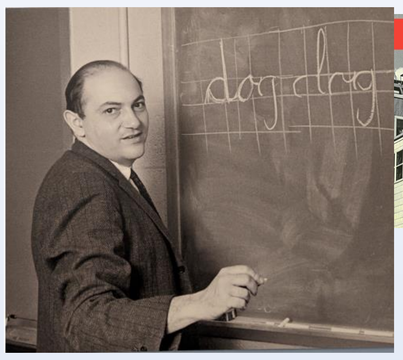
# WHAT FOLK METER CAN TELL US ABOUT SYLLABLE STRUCTURE AND SECONDARY STRESS IN PORTUGUESE





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1) Are {Obstruent ℘ Lateral} sequences really Branched Onsets?
2) Does Portuguese admit any kind of Word Secondary Stress?

## Branched Onsets in Portuguese

1. Mainstream understanding (e.g. Mateus & Andrade 2000):

Branched Onsets:
{Obstruent ℘ Coronal Liquid (Lateral ∨ Rhotic)} *(flor 'flower', fruta 'fruit')*

- Sonority Principle (SP) √
- Dissimilarity Condition (DC) √

-necessary conditions for Branched Onsets
-**phonetic evidence: no schwa-epenthesis between Obstruent and Liquid**

2. *But* (see Veloso 2006):

2.1. Historical data:
- Lat. {Obstruent ℘ Rhotic} > Port. {Obstruent ℘ Rhotic} (Lat. *fructum*>Port. *fruito*) √
- Lat. {Obstruent ℘ Lateral} > Port. XXX (Lat. *clavum*>Port. *cravo;* Lat. *planum* > Port. [tʃ]*ão)* ✗

2.2. Production/Acquisition data:
- Port. {Obstruent ℘ Lateral} : **schwa epenthesis** (*flor* 'flower' /.flor./→[.fɨ.'lor.]) ✗
- Port. {Obstruent ℘ Rhotic} : **no schwa epenthesis** (*cru* 'raw' /.kru./→[.kru.]) √

3. What about $C_1C_2$ sequences different from {Obstruent ℘ Coronal Liquid }?

"Empty Nucleus Hypothesis" (Mateus & Andrade 2000):
$C_1C_2$ sequences not respecting SP and/or DC ("marked" $C_1C_2$ sequences, {Obstruent ℘ Obstruent}, {Obstruent ℘ Nasal}, {Nasal ℘ Nasal}) are phonologically interpreted as **heterosyllabic /$C_{1\_Onset}\varnothing_{Nucleus}.\ C_{2\_Onset}$ /**
- Main phonetic argument: **EPENTHESIS** (in Nucleus of $C_1$-syllable)

4. **QUESTION:** Are {Obstruent ℘ Lateral} really allowed in Portuguese phonology as (tautosyllabic) Branched Onsets?

5. **OBSERVATION:** How are these "clusters" treated in Portuguese folk verse?
Corpus: *Cancioneiro Popular do Baixo Alentejo* (Delgado (Ed.) 1980), a collection of more than 2.000 folk compositions of Portuguese "popular verse" *("redondilha maior"*: 1 verse≡7 syllables)
Focus: all word forms including {Obstruent ℘ Lateral} sequences
Data: 100% of cases: syllable-counting for each verse fit into the *redondilha maior* template, iff Obstruent ℘ Lateral are prosodized as heterosyllabic {Obstruent$_{_Onset}\varnothing_{Nucleus}$. Lateral$_{Onset}$}:

Não olhes p'ra mim, não olhes,
Qu'eu não sou o teu amor.
Eu não sou como a figueira
Que dá fruto sem fɨllor.
(Delgado, org. 1980:236; nº 2114)

Primavera se ausentou,
Deixou tudo fɨllorido;
Também meu bem se ausentou,
Não mais me veio ao «sentido».
(Delgado, org. 1980:259; nº 2345)

(Veloso 2006: 142)

6. **INTERPRETATION:** {Obstruent ℘ Lateral} sequences are represented at Portuguese speakers' phonological knowledge as HETEROSYLLABIC {Obstruent$_{_Onset}\varnothing_{Nucleus}$. Lateral$_{Onset}$}

## Word Secondary Stress in Portuguese

*A kind of "Holy Grail" of Portuguese phonology:*

- No consensus among phonological descriptions
- No consensual algorithms for WSS-assignment
- No stable phonetic/phonological correlates

1. **RATIONALE**: If WSS corresponds to a type of "secondary prominence" comparable with "strong beats" of musical measures, then we can expect increased occurrence of WSS-syllables at strong beats of musical bars.

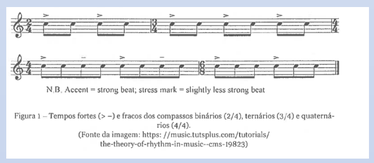
N.B. Accent = strong beat, stress mark = slightly less strong beat

Figura 1 – Tempos fortes (> –) e fracos dos compassos binários (2/4), ternários (3/4) e quaternários (4/4).
(Fonte da imagem: https: //music.tutsplus.com/tutorials/the-theory-of-rhythm-in-music--cms-19823)

(Veloso 2018: 181)

2. **OBSERVATION:** Word Prominence (Primary/Secondary Stress) and Music Strong Beats in Portuguese folk songs.
Corpus: a selection of 61 compositions of *Cantares do Povo Português* (Gallop 1950), an annotated collection of scores and lyrics of Portuguese folk songs
Focus: all strong beats of musical bars (duple and triple meter: 1st beat; quadruple meter: 1st and 2nd beats)
Data: Assuming that WSS might be found on each other syllable from the Primary Stress-Syllable leftwards (Andrade & Laks 1992, Andrade 1994, Collischonn 1993, 1994),

a) Primary Stress regularly occurs at music bars' strong beats: 82,8% of coincidence,
b) Secondary Stress does not seem to be to musical prominence: only 8% of WSS-syllables occur at music bars' strong beats.

3. **INTERPRETATION:**

**4 Discussion and Concluding Remarks**

In our view, the hypothesis that was formulated is partially confirmed. Even though no strong correlates between secondary stress and musical prominence were found, it was possible to identify a non-neglectable match between primary stress and musical prominence. In fact, strong musical beats of our corpus were predominantly filled by WPS-syllables (in 82,8% of all musical bars that were analysed). Bearing in mind that primary stress is the major prosodic prominence in Portuguese, this result cannot be ignored and should be regarded as an important sign of the relation between prosodic and musical prominence, in line with a huge amount of previous theoretical and empirical research that highlights the interconnection between music, prosody and verse [24, 25, 29–47].

(Veloso 2021: 162)

## TWO ILLUSTRATIONS OF HOW DATA FROM METER (FOLK VERSE, FOLK MUSIC) CAN BE USED TO SUPPORT PHONOLOGICAL ANALYSIS.

## ASSUMPTION THAT METER, MUSIC AND LANGUAGE MIGHT SHARE CLOSE MECHANISMS AND PRINCIPLES

- Halle 1987; 1989; 1997; Fabb & Halle 2008

- Sundberg & Lindblom 1976; Fonágy 1980; Lerdahl & Jackendoff 1981a; 1981b; 1983; Donegan & Stampe 1983; Hayes 1985; 1995; Lehiste 1985; Palmer & Krumhansl 1990; Auer 1988; Aroui 1997; Temperley 2001

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