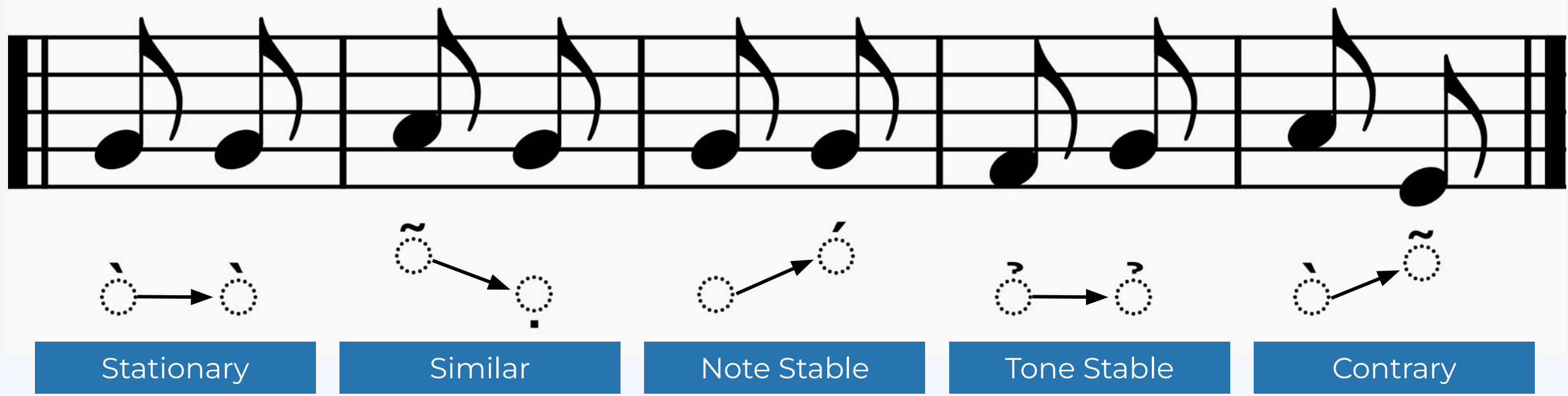


1. INTRODUCTION

- Vietnamese music follows from language (Nguyễn 1970).
 - Copacetic text-setting involves an **avoidance** of mismatch between pitch transitions of lexical tone and musical note pairs (Kirby & Ladd 2016).
 - While tone-tune matching in folk music is favored, mismatching is a window of opportunity for idiolectal vocal **creativity** (Phan & Ngô 2016).
- A **register complex** is a network of phonetic features that distinguishes phonological objects of different registers.
 - Cambodian and Kuy display acoustic splits between the modal high and breathy low registers in vowel production (Henderson 1952; L. Thongkum 1989).
 - Vietnamese tonogenesis proceeded in stages that gave rise to phonation types and pitch contours across registers (Haudricourt 1954; Matisoff 1973).
- I ask:
 - i. How is the tone-tune interface conditioned by tone?
 - ii. What strategies are employed to remedy mismatch?

2. METHODS

- Việt Tunes & Việt Tones (VTVT) Corpus
 - 45 most viewed V-pop songs from 2016–2024 (52 vocalists)
 - 10,150 tokens used for this analysis
- Northern tonal inventory ordered by descending tonal offglide:
 - /◌̌/ ngā *high curve* 𐄣 mã “code”
 - [◌̌č] sắc đóng *checked rising* 𐄣 mát “cool”
 - /◌̌/ sắc *rising* 𐄣 má “cheek”
 - /◌̌/ ngang *level* 𐄣 ma “ghost”
 - /◌̌/ hỏi *low curve* 𐄣 mả “tomb”
 - /◌̌/ nặng *drop* 𐄣 mạ “paddy”
 - [◌̌č] nặng đóng *checked drop* 𐄣 mật “debris”
 - /◌̌/ huyền *falling* 𐄣 mà “but”
- Operationalizing the tone-tune interface
 - follows Kirby & Ladd (2016) by invoking musical counterpoint to characterize the pitchwise movement of tone-tune transitions



Stationary Similar Note Stable Tone Stable Contrary

Figure 1. Types of tone-tune pitch interaction

- Acoustic analysis of contrary tone-tune pitch interactions using *Sonic Visualizer* and *Praat*

3. RESULTS

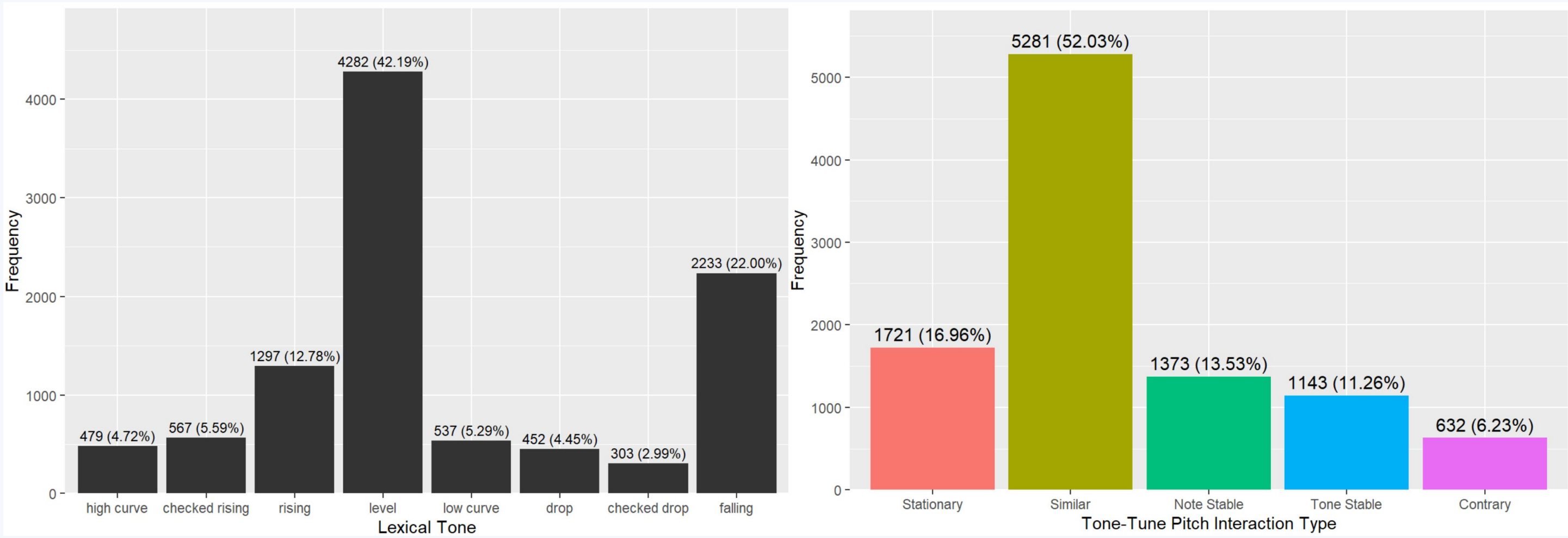


Figure 2. Frequency distributions of lexical tones (left) and tone-tune pitch interactions (right).

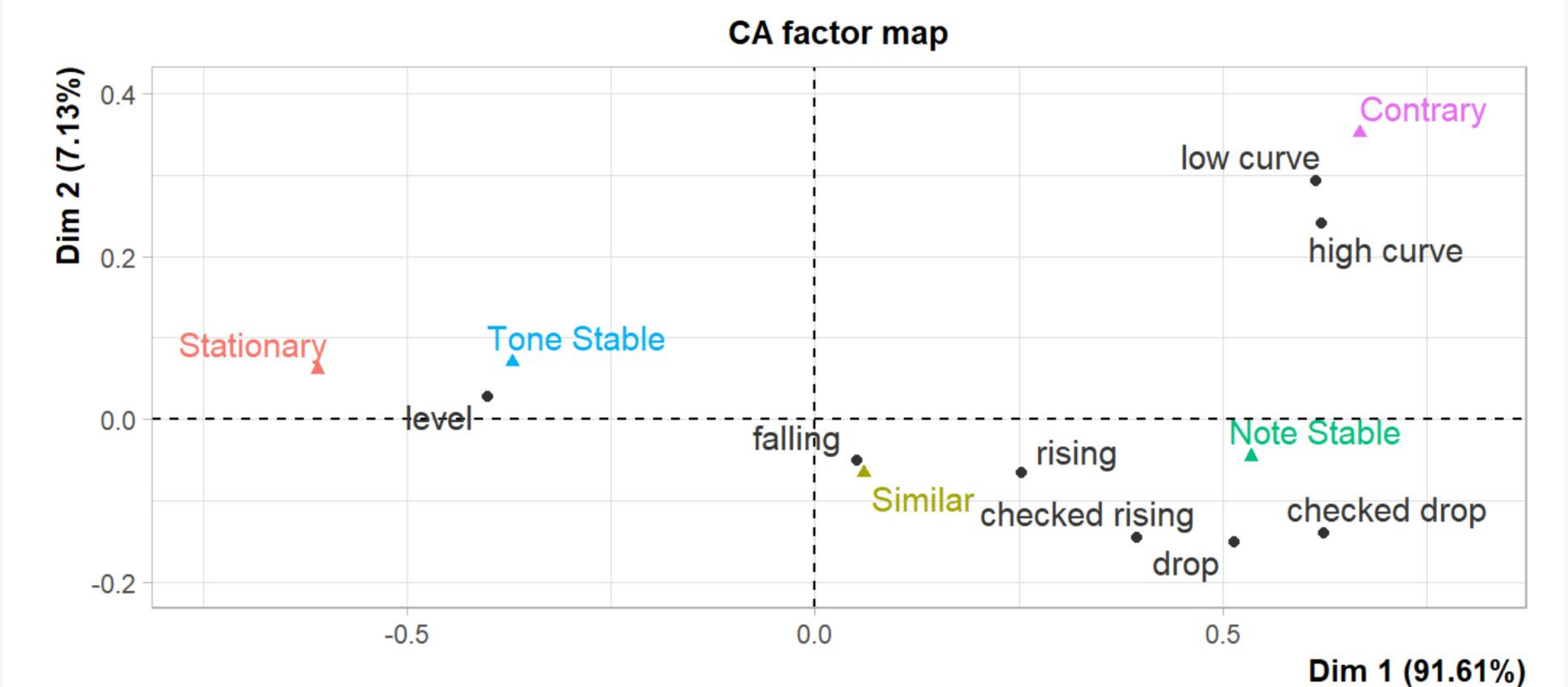


Figure 3. Tonal clusters corresponding to specific tone-tune pitch interaction types.

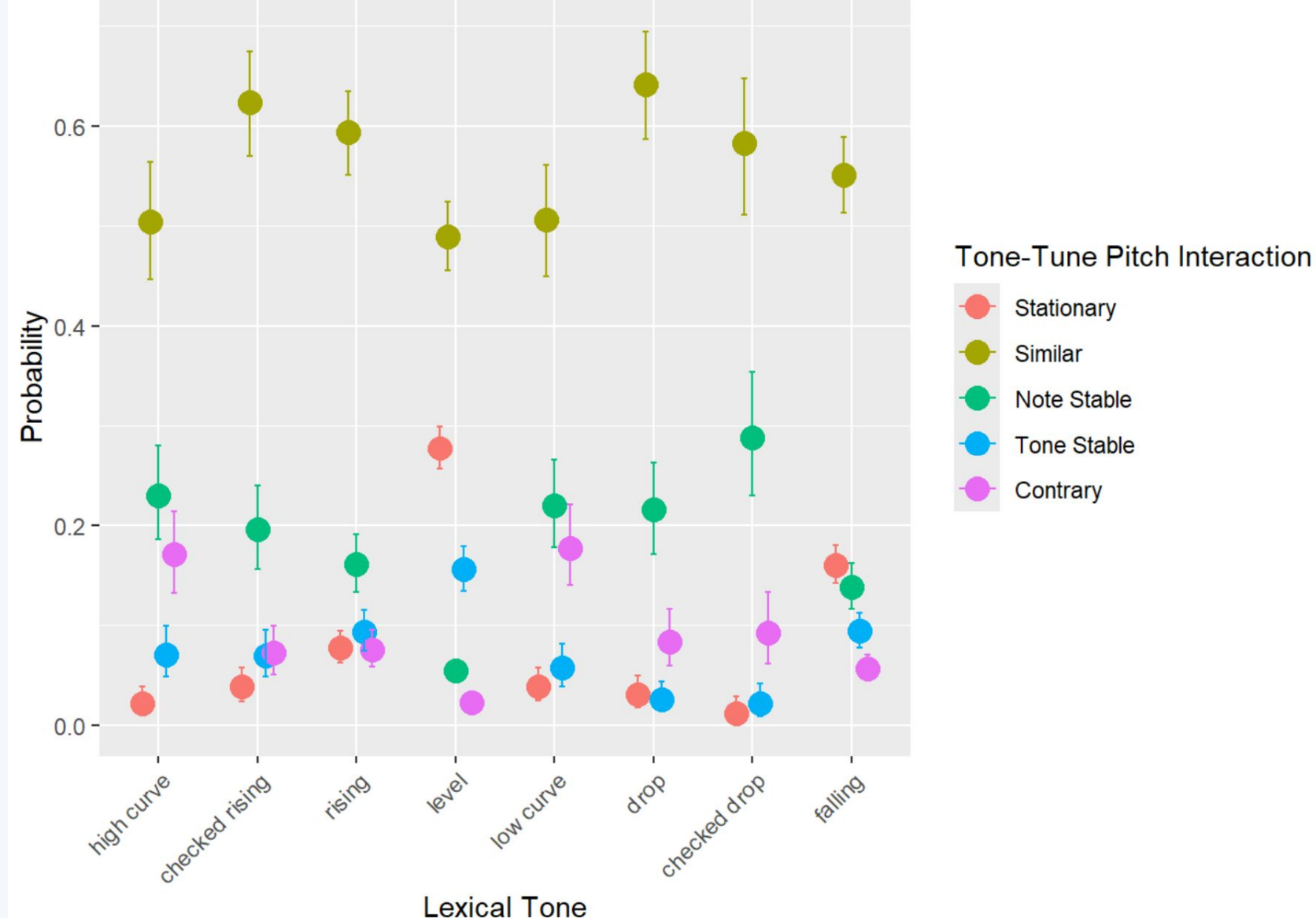


Figure 4. Converted probabilities of Bayesian multinomial logistic regression predicting tone-tune pitch interaction type with lexical tone as fixed effect and random intercept for song.

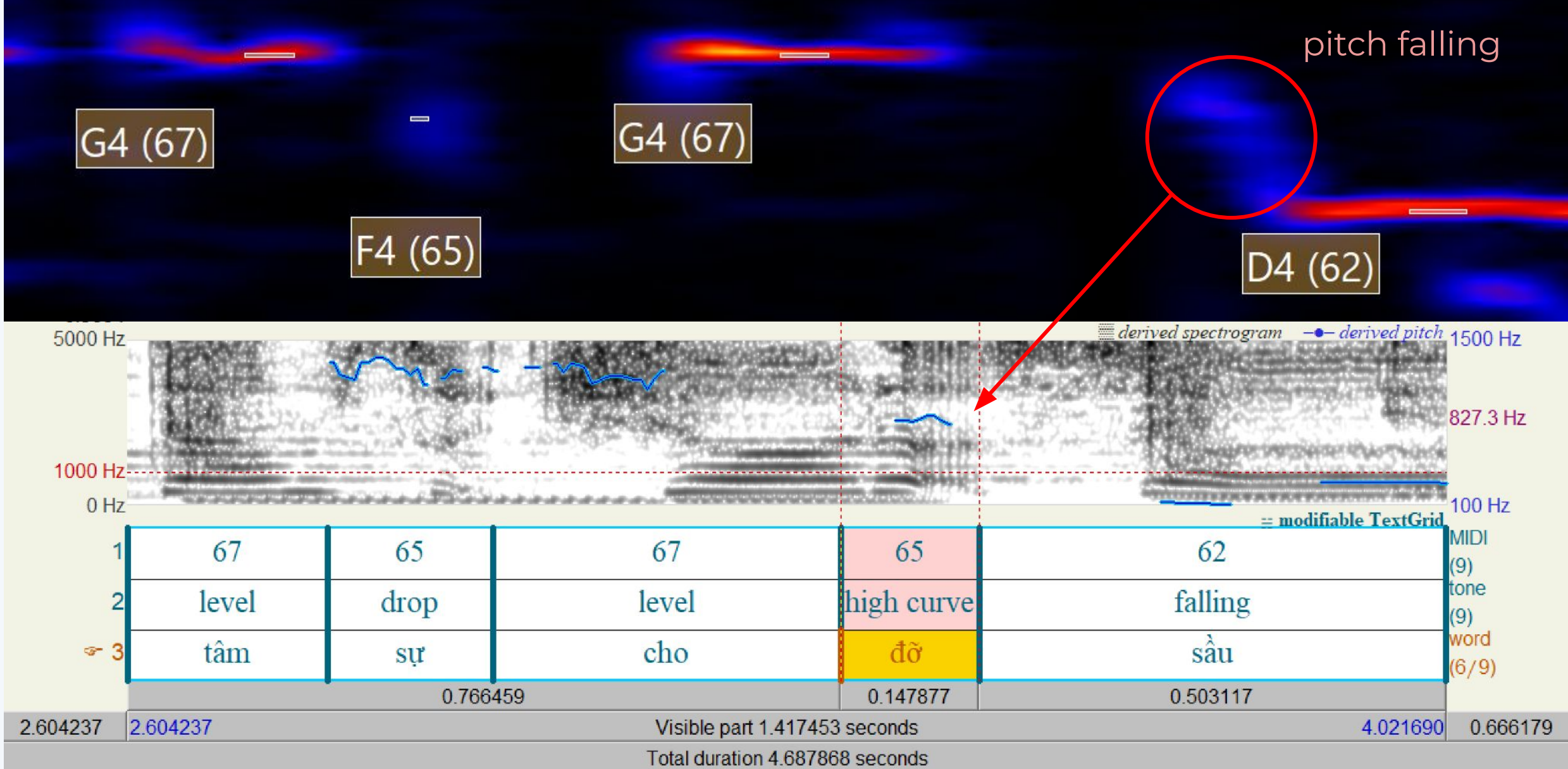


Figure 5. “Cà Phê” by Min (2022). A contrary tone-tune pitch interaction in which a high curve tone uncharacteristically decreases in pitch from a previous level tone. A melodic peak spectrogram (top) shows the pitch sequence of the tune while a regular spectrogram (bottom) shows that creakiness is visibly produced.

4. CONCLUSIONS

- Tone language text-setting does not simply correspond to pitch.
 - i. The tone-tune interface suggests tonal category formation.
 - ii. Other features like voice quality retain tonal identity despite loss of phonological pitch due to tone-tune mismatch.

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LabPhon – June 2026

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