Prosodic realisation of Colombian Spanish vocatives

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Vocatives are typically used to attract the listener’s attention and are often realised with a pitch fall to a sustained pitch at a mid level following a high nuclear accent (“calling contour”), with subtle differences across languages [1]. However, the prosodic realisation of vocatives is sensitive not only to different pragmatic functions (the speaker may greet, reprimand, or ask the hearer, etc.), but also to social factors concerning speaker and hearer (social status, formality of the interaction, power relation) [2-5]. For Colombian Spanish, Velásquez Upegui [6] reported different pitch contours depending on whether the vocatives were neutral or whether they signalled reprimand, surprise, doubt, and tenderness. Since, in her study, the social relationship between speaker and hearer varied across different pragmatic conditions used to elicit the vocatives (e.g., calling a child, an elderly aunt, a friend, etc.), it is not entirely clear whether the different prosodic patterns she found are due to pragmatic or social factors. In the present study, our aim is therefore to substantiate prosodic differences in the productions of vocatives in distinctive pragmatic conditions when social factors are controlled. We specifically tested the use of pitch contours in different pragmatic conditions as well as phonetic variables (alignment of peak and valleys, duration, intensity, spectral tilt).

We elicited Colombian Spanish vocatives in three pragmatic conditions, while keeping constant the status and social relationship between speaker and hearer, the formality of the interaction and the environmental setting. The independent variable was speaker’s intention (call for greeting, call to reprimand, confirmation-seeking call). We recorded eight participants (aged 23-33 years, mean = 27, five female) who were native speakers of Colombian Spanish and were studying in Konstanz, Germany, at the time of testing. Eight Spanish sonorant first names were selected as target words (e.g., Manolo; underlining refers to the stressed syllable). The vocatives were elicited by means of a discourse-completion test [7, 8]: The respective contexts were presented orally and participants were asked to spontaneously answer to the given situation (i.e., call his/her best friend). Overall, we manually analysed 309 productions using Praat [9]. Productions were first segmented into syllables, then pitch accents and boundary tones were labelled according to the Spanish ToBI-system [5].

Our results show two different pitch contours for the (neutral) greeting condition which differ in the type of boundary tone (sustained mid L+H* !H% vs. falling L+H* HL%), see Figure 1 left and mid panel). Notably, the sustained mid contour (L+H* !H%) was less frequent than the falling contour (28% vs. 63%); it was produced more often by female than male speakers (87% vs. 13%). Reprimand vocatives were predominantly produced with a falling contour (high or rising nuclear pitch accent and a falling boundary tone (L+H* HL%). In comparison to the greeting vocatives with a falling contour, speakers increased spectral tilt of the tonic syllable, decreased the overall mean pitch and the steepness of the rise to mark vocatives as reprimand, see Figure 2. Confirmation-seeking vocatives were almost exclusively produced with a finally rising pitch contour (low nuclear pitch accent and a high boundary tone L* H%, see Figure 1 right panel). Our study shows that speakers of Colombian Spanish vary pitch contour and other prosodic features to differentiate between pragmatic conditions in situations in which variables concerning social relationship and status of speaker and hearer as well as formality and setting of the interaction are controlled.
**Figure 1** Waveforms, spectrograms, and smoothed f0-contours. Left: Greeting vocative on ¡Camila! (sustained mid pitch L+H*; H%, female speaker 04). Mid: Greeting vocative on ¡Camila! (falling contour L+H* HL%, female speaker 09). Right: Confirmation-seeking vocative on ¿Camila? (rising contour L* H%, female speaker 04).

**Figure 2** Time normalised f0-track of productions of trisyllabic penultima stressed vocatives with falling contour in greeting (grey line) and reprimand (black line) condition, produced by female speakers, dashed lines indicate standard error.

**References**