Pitch range and perception of politeness in Peninsular Spanish requests

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Research in the field of pragmatics (Brown & Levinson, 1987) and phonetics (Ohala, 1984; Ladd, 2008) has suggested that suprasegmental features may be indicators of politeness. More specifically, the frameworks of the Frequency Code Theory (Ohala, 1984) and Politeness Theory (Brown & Levinson, 1987) have claimed that higher pitch range is used to show politeness. Politeness Theory (Brown & Levinson, 1987) provides a framework that employees three contextual variables to determine the degree of politeness: power, distance, and imposition. Research on diverse languages such as Korean (Brown et al., 2014) or Catalan (Hübscher et al., 2017) found that pitch is one of the prosodic mitigators used to show politeness or formality. While much of this work has focused exclusively on the social variable of the power difference between interlocutors (Brown et al., 2014; Hübscher et al., 2017), little systematic analysis has addressed the differential effects of power, distance, and imposition on the perception of suprasegmental phonetic features

Given the general lack of systematic analysis of power, distance, and imposition in the analysis of suprasegmental features, the current study investigates whether higher pitch range is perceived with higher degrees of politeness. Polar questions (i.e., yes/no questions) in Spanish serve as a strong test-case, as they (canonically) rely on a rising final tone contour for interrogative meaning (Henriksen, 2012). Polar questions are the most conventionalized way of performing a request in Spanish. The hypothesis for this experiment accounts for an increase in the pitch range of the final contour of polar questions will be perceived as more polite as indicated by the Frequency Code Theory (Ohala, 1984).

To test this hypothesis, 101 Spanish native speakers (M_{age} = 24.673, *SD* = 3.88) from Madrid, Spain completed a judgement task experiment. This experiment consisted of a rating task in which participants were presented with a context and a single modified stimulus that they had to rate in terms of how they perceived its degree of politeness (e.g., Nadeu & Prieto, 2011). The situations were balanced in terms of power, distance, and imposition (two levels each), as determined by a prior norming task. The goal of this experiment was to elicit participants' pragmatic interpretation towards difference pitch ranges in polar questions, which ended with a L*H% contour and had the same syntactic and syllabic distribution.The normalized pitch range of the final contour of these each stimulus was manipulated in steps of 1.75 semitones each through a resynthesis method using Praat. The modifications consisted of steps 7-levels (see Figure 1). Participants had to rate the stimuli using a 7-point Likert scale. The labels for the endpoints of the scale ranged from "impolite" to "very polite," with the center point being labelled "appropriate". A total of 11312 responses were analyzed (101 participants x 16 situations x 7-levels of modification).

The results from the judgement task showed that participants rated higher pitch range as more polite in all the situations (see Figure 2). The different levels of power (P), distance (D), and imposition (I) showed to have an influence on the ratings by which less face-threatening situations are rated as more polite. The findings of this project shed light on the role of pitch range on the perception of politeness and support the Frequency Code Theory (Ohala, 1984) as higher pitch correlates with the perception of higher degree of politeness.

Figures

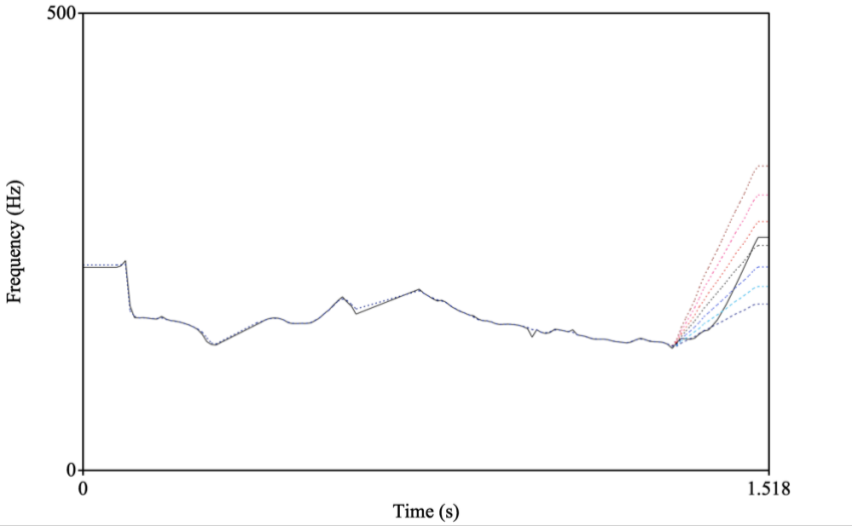

Figure 1. Example of the 7-step modification of the final contour. The solid line represents the original sound, whereas dotted lines represent the modifications.

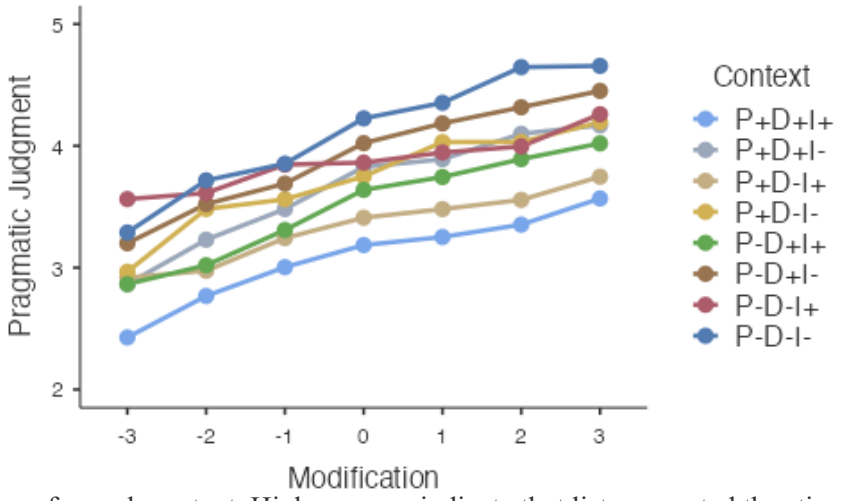

Figure 2. Average score for each context. Higher scores indicate that listeners rated the stimulus as more polite. The modifications range from 3 as the modification with higher pitch range to -3 with the lowest pitch range.

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