ACOUSTICS2008/2903 A cross-dialect acoustic description of vowels: Peruvian versus European Spanish

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This paper aims to provide acoustic description and comparison of vowel properties of two major dialects of Spanish: Peruvian and European. The method of data collection and acoustic analyses reported in Escudero et al. (submitted) for Portuguese is replicated in order to allow for future comparisons across languages. Each of the five Spanish monophthongs /i, e, a, o, u/ was produced in stressed position in the first syllable of a CVCV (consonant-vowel-consonant-vowel) frame. The CVCV words were read both in isolation and in a carrier sentence. Vowel tokens were examined between voiceless stops /p, t, k/ and fricatives /f, s/, which supplied five variable consonantal contexts. We analyzed the vowels' first and second formants (F1 and F2) as well as their fundamental frequency and duration. Unsurprisingly, a main effect of vowel identity and gender on formant values was found. Most importantly, unlike Morrison & Escudero (2007), we found for Spanish an interaction between dialect and vowel identity, implying that the F1 and F2 values of some vowels are significantly different between dialects.