

### **/s/-aspiration and sound change in two varieties of Andalusian Spanish**

In many varieties of Spanish syllable final /s/ is usually aspirated or even deleted: e.g. *avispa* ('wasp') [a'βihpa]; *casas* ('houses') ['kasah]. /sp, st, sk/ sequences are of particular interest because of their high variability in pronunciation. Whereas traditional dialectological studies on Andalusian Spanish (e.g. Alvar, 1961-1973) used to transcribe /sp, st, sk/ as geminates or preaspirated stops, recent studies (e.g. Torreira, to appear; Parrell, 2012) have found that for Western Andalusian Spanish (WAS) postaspiration [p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup>] seems to be the usual realisation of /sp, st, sk/ sequences, at least among younger speakers. For Eastern Andalusian Spanish (EAS), on the other hand, preaspirated stops (Torreira, 2007), breathy voicing (Gerfen, 2002; O'Neill, 2010) and a constrained relationship between consonant and vowel lengthening have been observed (Gerfen, 2002).

These findings raise the question of a sound change in progress from pre- to postaspiration in Andalusian Spanish. We expect this process to be in an advanced stadium in Seville (i.e. WAS) and, possibly, in an initial state in Granada (i.e. EAS), as previous informal observation suggest. Which strategies do Andalusian speakers use to distinguish between /st/ and /t/ in speech production? Applying the apparent-time method and assuming a sound change in progress [ht] → [t<sup>h</sup>], we expect the strategies to depend on age and dialect. Our assumption is that Sevillian speakers distinguish /st/-/t/ mainly by VOT-duration, while Granadian speakers use presumably preaspiration. Furthermore, we expect differences according to age in both varieties: VOT-duration should be longer among young speakers, and preaspiration should occur more frequently among older speakers.

As a first approach to the hypothetical sound change in Andalusian Spanish we analysed four trisyllabic words with medial /st/ and two with medial /t/ (isolated and randomized; 3 repetitions) pronounced by 24 speakers from Seville and 24 speakers from Granada. Each dialect group consisted of 12 young and 12 older speakers. In all test words, /st/ or /t/ was followed by /a/, nucleus of the stressed syllable (e.g. *pestaña*, *etapa*). Breathly voicing and voiceless preaspiration were both considered as preaspiration; unaspirated tokens, which represent the Standard Spanish pronunciation (i.e. [pes'taɲa]), were excluded from the analysis. The analysis was done in Emu-R (Harrington, 2010), applying ANOVA on the VOT difference /st/-/t/ and general linear mixed models on the occurrence of preaspiration.

Age and dialect showed to have a highly significant effect on the VOT-difference /st/-/t/. Young Sevillians presented the highest value (mean = 38.1 ms), old Granadians the lowest (3.5 ms). The difference between old Sevillians (12.6 ms) and young Granadians (16.4 ms) was not significant. Furthermore, we found that age and dialect had a significant effect on the frequency of preaspiration; young Sevillians displayed the lowest (27%), old Granadians the highest (77%) percentage of preaspirated tokens. The difference between old and young speakers (65% of preaspirated tokens) from Granada was not significant.

Overall, our results confirmed the findings of previous studies that Eastern and Western Andalusian Spanish differ in the manner of aspiration of /sC/ sequences. VOT length was an important acoustic cue in WAS, existence of preaspiration in EAS. This difference between the two varieties, however, was much less distinctive if we took account of age as a variable. Our findings clearly suggest a sound change from pre- to postaspiration in /st/ sequences not only in Seville, but also in Granada Spanish. A perception study is currently being carried out to further analyse this phenomenon. A comparison between closely related varieties in different stadiums of a sound change in progress allows us to better understand its nature and its mechanisms.