A cross-Romance typology of connected speech processes can now be considered, thanks to the existence of detailed studies (see list of references) of the acoustic manifestation of variable pronunciations in French and Spanish, to some extent in Italian, and very recently in Romanian. Such a comparison is useful for understanding the dynamics of change in phonological systems. The relationship between synchronic variation and sound change is unquestionable (Ohala 1989, 1996; Solé & Recasens 2012; see Chitoran 2012, Harrington 2012 for reviews). John Ohala’s research hypothesis has been verified countless times, showing that many common sound changes can be replicated synchronically in laboratory studies, and can be encountered in connected speech corpora from different languages. In this talk I would like to push the hypothesis further, and propose that connected speech processes that are language-specific reflect specific coarticulation patterns in those languages (cf. Manuel 1999). It should then be possible to encounter traces of sound changes at a given synchronic stage. We know, for example, that in all modern-day varieties of Spanish, consonant lenition is pervasive (Hualde et al., 2011), and is at the same time a prominent sound change. Consonant lenition is also present, but relatively less common, in Italian (Hualde & Nadeu 2011). In Romanian, where it is not an attested sound change, it is relatively rare, while consonant deletion is instead widespread in spontaneous speech (Chitoran et al., 2015).

I begin by documenting the connected speech processes attested in Romance languages, comparing Spanish, Italian, and Romanian (French is less relevant to this first comparison due to its extremely different prosodic structure). I compare representative examples encountered in connected speech in the three languages, and discuss them in the light of specific diachronic changes.

I then focus on Romanian, and I compare two studies that use different types of speech corpora and different methodologies, discussing the advantages and limitations of each. Chitoran et al. (2015) analyze elicited connected speech (Niculescu, forthcoming). The comparison of conversational data in Spanish and Romanian has revealed differences in consonantal variation, and similarities in variation involving vowels (e.g., vowel coalescence, glide formation). In Spanish, the most pervasive type of consonantal variation, consonant weakening, closely reflects the same diachronic change. In Romanian, the relationship between synchronic variation and sound change is more subtle, but the comparison suggests so far a particular vulnerability of the consonantal release phase, reflected by the frequent consonantal reduction encountered in the data. The second study, Chitoran et al. (2014) relies on annotated corpora and an ASR system currently being developed for Romanian (Vasilescu et al., 2014) to analyze the system errors. Such annotated corpora have been shown to be valuable resources for linguistic studies (Adda-Decker & Lamel, 1999; Vasilescu et al., 2012). In this study, the ASR system was used as a tool to detect instances of inter- and intra-speaker variation in two types of corpora: broadcast news (prepared, formal speech) and debates (casual speech). In an ASR system, the training process of the acoustic model generates segmentations into words and on a subword level, into phone segments. The phonemic labeling resulting from the segmentation process depends on the acoustic model configuration, and on the pronunciation variants included in the dictionary. From a linguistic point of view, the errors allow us to identify the contexts in which they occur, and the acoustic manifestation of the variants. Ultimately, this essential first step will allow us to assess whether the observed variation is strictly contextually predictable, or tends to generalize, potentially leading to sound change.

In Chitoran et al. (2014) we studied specifically the variable deletion of the final lateral of the masculine definite article /-ul/: omul ‘the man’ is realized as either [omul] or [omu]. Impressionistically, [l] deletion is very frequent in a casual, conversational style of speech. For the definite article the
authorized transcription variants are –ul and –u. The results for /-ul/ show that the system was able to robustly detect the final [l] whenever it was realized with a strong release burst, and rarely detected it when it was realized with approximant-like formant structure, as well as when it had been deleted according to our visual spectrographic analysis. That is, the ASR system marked as deleted both instances where there was no evidence of [l] in the acoustic signal and also when it was unreleased. This failure of the ASR system to detect unreleased final [l] may shed light on the origin of the deletion phenomenon (by listener misinterpretation of non-salient articulations, cf. Ohala 1996).

The low detection of [l] may be interpreted as a weakening of its morphological marking of definiteness. We propose that the marking of definiteness may be transferred to the preceding [u], which is historically a desinence vowel (Chitoran, 2001).

Studies of connected speech in relation to sound change allow the development of new experimental paradigms for hypothesis testing. Cross-linguistic comparisons within one language family can be quite revealing and can highlight the different trajectories taken by different systems.

References


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