Tonal categories in prosodic annotation of dialectal variation

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The aim of this talk is to discuss prosodic categories from the point of view of phonological and pre-phonological analysis. The pre-phonological analysis refers to the workshop's theme of labelling surface intonation contours. I will illustrate the discussion by the annotation of similar intonation contours of two different German dialects. The approach to discover tonal categories in a language variety or in a dialect is similar to the approach to develop the tonal inventory of a hitherto unknown or undescribed language. Different ways of establishing tonal categories have been proposed and have successfully been shown to pin down the phonological oppositions of a tonal grammar: (i) contrasting prosodically minimal pairs which for instance was applied for German dialects [1, 2], (ii) going from phonetic characteristics of F0-contours to tonal categories [1, 3–6], (iii) using perceptual tests to express the functional load of a prosodic or tonal category [7, 8]. The variation in F0-contours between different dialects is hard to grasp unless a phonological analysis contrasts relevant contours. On a pre-phonological level similar contours may misleadingly be described by one and the same tonal label (or category, depending on the level of description).

This talk will discuss data from two German dialects (Swabian and Upper Saxon German) analysed in [1]. A rising-falling contour serves for illustration. The rise-fall in Swabian German is phonologically analysed as a rising pitch accent L*H followed by a low tone L, which represents a tonal affix (cf. [9, 10]) that is attached to the pitch accent [1, 11]. The rise-fall in Upper Saxon is phonologically analysed as a falling pitch accent H*L which is preceded by a low tone affix L [1]. At first sight – and without any phonological analysis of the particular tunes of the dialects – the rise-fall contours appear to be similar between the dialects because in both cases a low tone has its target in the stressed syllable and a high target is reached at the offset of the stressed syllable. Hence, a pre-phonological or surface oriented annotation may, misleadingly, be tonally analysed with identical prosodic labels or categories.

For the purpose of this talk, the rise-fall data were annotated according to DIMA [12, 13], an annotation system for German intonation that does not require a particular phonological analysis. The DIMA annotation disentangles the complex intonation signal into phrases, tones and prominences. The tonal level distinguishes between accentual tones (T*), which are associated with stressed syllables, and non-accentual tones (T), which appear before and after accentual tones at phonologically relevant turning points in the F0-contour. With this approach, the annotation is done without any reference of a particular pitch accent type (e.g. L*H or L+H*). The usage of an inventory of pitch accent types already implies a level of phonological opposition (or contrast) that is not used in DIMA. A phonological analysis of the annotated data occurs at a later step (for instance when enough material is available to contrast relevant minimal pairs). The reason not to use a particular set or inventory of pitch accent types is that for German, different phonological systems are used by different working groups such as GToBI [14], GToBI(S) [15], KIM [16] and off-ramp analyses like [17, 18]. The idea of DIMA is to provide an annotation level that can be shared between different working groups.

The pre-phonological data annotation is compared to the phonological analysis of [1]. I will discuss the issue of how to achieve prosodic categories on the basis of this comparison and in relation to the workshop theme.

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