

## **Title and abstract for invited talk for the 11th Workshop on "Disfluencies in Spontaneous Speech" (DiSS) in Bielefeld, August 2023**

### More than UH and UM – A Phonetician's View on Fillers in Speech

Studies on disfluencies in spontaneous speech very often focus on non-lexical fillers which are usually denoted as UH, and if applicable UM (or similar spellings) — depending on whether the filler syllable consists of a single vowel or a vowel plus nasal consonant. It seems rather usual to consider UH and UM as homogenous building blocks, as for instance in annotation of an imaginary disfluency like "I bring here some UH really astonishing news". In the majority of studies, including descriptive, corpus analytical and experimental studies, the phonetic substance of fillers remains ignored.

However, it is the phonetic set-up of the filler and its phonetic context that determines its perception. For instance, there are varying degrees of perceptual salience: some filler realisations can be so volatile that they slip the attention of listeners (including corpus annotators), while other instances of fillers can be extremely prominent so that they can dominate the entire message (sometimes in experimental studies).

Usually, it is not considered whether UH and UM is produced within the fluent articulatory stream, i.e. without any pause around, or whether a pause is present before and/or after the filler. The pause context can have a substantial impact on the perception of filler syllables, e.g. by a shortening effect in fluent stretches of articulation. It can be assumed that in those cases coarticulation is at work as well, making the flow of syllables much less interruptive for the listener and less effortful to produce for the speaker.

A closer look at vowel quality reveals that UH and UM show much more variation than just the schwa-like central vowel and that is obviously language-dependent. For instance, Spanish tend to have a fronted vowel for UH, whereas UH in English shows a more open vowel quality than in German, and French more roundedness than UH in other languages.

The usage of a non-modal voice quality such as creaky voice with irregular vocal fold vibrations can be observed quite often in fillers. Although infrequently described and annotated, the different forms of glottalization have a substantial effect on the fundamental frequency and the intensity of the fillers and thus to the perception of pitch and loudness and its interpretation as salient. It remains open for the moment whether creaky voice in fillers has a direct link to specific functions of this filler such as signalling doubt.

In summary, it is argued that it might be important to take phonetic variation into account, a variation that goes far beyond the simple distinction in UH and UM. In this talk examples from various languages, such as German, English, Spanish, Portuguese and Bulgarian, and across speech modes will be given, including speech from second language learners, dysfluent speakers, and simultaneous interpreters.