



Interspeech 2018 - Plenary Speaker-1

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Title: Universal Tendencies for Cross-Linguistic Prosodic Tendencies: A Review and Some New Proposals

Abstract

The present talk aims first to review the literature on similar tendencies regularly observed in typologically unrelated languages. The tendencies concern the use of fundamental frequency (F0, including declination line as the reference line, the top-line, up-stepping, down-stepping, register change and range widening-reducing), lengthening-shortening maneuvers and strengthening-weakening phenomena at the glottal and supraglottic levels, for instantiating acoustically the syllable, the word, the minor and major phrases, and the utterance. Our presentation concerns only attitudinally and emotionally neutral utterances. The second part of the talk will present particular aspects: 1) the different centers of articulatory “effort” at the syllable level; 2) the suggestion of the existence of an unmarked strong-long pattern, neither trochaic nor iambic, at the word level in languages where natives don’t have the consciousness of a “lexical stress,” or don’t agree on its existence or position; 3) the regrouping of one or more words into a prosodic phrase by the application of two established principles: a) the “hat-pattern” principle (t’Hart) favoring initial high-rising and final low-falling F0, and b) the intensive or the temporal rhythmic basic tendencies (Woodrow, Fraise) favoring a more intense, stronger, more precisely articulated beginning and a lengthened ending; 4) the existence of a multilayer rhythm at the utterance level composed by the repetition/alternation of integrated Gestalts at the levels of the syllable, word, and phrases. One or two Gestalts will prevail perceptually depending on a) the language, b) the style, and c) the rate of speech. The impressionistic evidence of a particular type of language-dependent “rhythm” depends on the listener’s expectations, related to his maternal language and the languages he already masters, and up to a certain extent, to his pre-existing theoretical beliefs.

Biography

After a thesis in 1970 on French prosody synthesis at the IBM Research Center, La Gaude (France), and the Centre d’études pour la Traduction Automatique, Grenoble, Jacqueline Vaissière joined the Speech Communication Group at MIT, directed by Ken Stevens, as a visiting scientist, where she acquired a specialization in acoustic phonetics. In 1975, she joined the Centre National d’Etudes des Télécommunications (France), where she worked for 15 years on automatic speech recognition and automatic directory services. When the speech processing community moved towards black-box models for recognition and synthesis, she chose to become a professor at the Université Sorbonne Nouvelle in 1990 and became the director of Laboratoire de phonétique et de Phonologie, associated with the Centre National de la Recherche Scientifique (CNRS). She was the director of 125 masters and 34 doctoral theses, with students of different backgrounds (medical doctors, engineers, and linguistics native of a large variety of languages). She was awarded a CNRS silver medal in 2009. Since 2010, she has been the principal coordinator of the 10-year project « Laboratoire d’Excellence « Empirical Foundations of Linguistics ». She is currently developing methods and applications for acquiring or improving pronunciations, based on visualization of spectrograms, and F0 curves (CleanAccent) and give courses decoding segmental and suprasegmental cues from spectrograms, F0 and intensity curves in different languages. Jacqueline Vaissière is a Fellow of ISCA.