

Abstract

Melody is a suprasegmental feature of speech and its perception depends mainly on the speed of vocal fold oscillation reflected in the fundamental frequency (f_0). Whisper is defined by the absence of phonation and therefore the lack of fundamental frequency. Intended melody in whisper, however, seems to be discernable regardless of this lack of f_0 .

In my thesis, I consider the topic of melody in whisper from a perceptual and acoustic point of view. I present a perception experiment assessing the discernability of melody in whispered words as well as words sung in whisper. This experiment proved that melody in whisper in certain cases can in fact be discerned.

I then further assess the effect of intended melody in whisper on formant frequencies, formant to formant ratios, center of gravity and spectral slope. In whispered speech, the acoustical parameters affected by intended melody turned out to be F2 and center of gravity of stop-band filtered signal with frequencies containing main formant bandwidths removed. In words sung in whisper, the affected parameters are F2, F3, F2:F1 and F3:F2 ratios, center of gravity and spectral slope.