ABSTRACT

Recent phonetic studies have shown Wu dialects to have breathy voicing (Cao and Maddieson 1992, Ren 1992) and whispery voicing (Rose 1989) in Yang tone syllables. Cao and Maddieson confirmed that spectral slope values were key in differentiating the "voiced" series of initials in four Wu dialects, and Rose shows that high percentages of jitter and shimmer in Yang tone syllables shows evidence of whispery voicing and "growl" in the Zhenhai variety of Wu Chinese. These phonation types are also reported in nasal and sonorant initials in several Wu dialects (Qian 1992, 2005; VanNess Simmons 1998; Zhu 1999, 2005)

Acoustic cues for breathy voicing vary cross-linguistically, with some emphasizing spectral slope differences and others emphasizing differences in additive noise. What's more, different cues may be emphasized by speakers within the same language (Dart 1987). This study examines the prominence of spectral slope, additive noise among other acoustic cues in Yang and Yin tone syllables in Ningbo Chinese and how these cues vary across speakers. It examines the phonetic evidence for the presence or absence of breathy nasals, and whether the same acoustic cues for oral stops are equally salient for nasal stops. Finally, it examines the timing properties of non-modal phonation throughout the syllable.

Keywords: Ningbo Chinese, Breathy Voicing, Whispery Voicing, Pre-glottalization, Speaker Variation.