

Language	Useful features	Materials/methods	Reference
Cantonese	avg. $f_0$ , $sgn(f_0')$ , $ f_0' $	Isol. monosyll., acoustics/perception/discriminant	Khouw and Ciocca (2007)
Cantonese	avg. $f_0$ , $sgn(f_0')$	Synthetic isol. monosyll. perception, MDS	Gandour (1983)
Cantonese	avg. $f_0$ , $sgn(f_0')$ , $ f_0' $	Reanalysis of Fok (1974)	Gandour (1981)
Cantonese	avg. $f_0$ , $sgn(f_0')$ , $ f_0' $	Synthesized monosyllables continuum, perception	Vance (1977)
Cantonese	rel. $f_0$ , $sgn(f_0')$ , $ f_0' $	Isol. monosyll., acoustics/perception	Fok (1974)
Hmong (Green)	H1-H2, jitter, shimmer, $f_0$ quadratic polynomial coeff.	Monosyll. in carrier phrase, perception/ANOVA	Andruski (2006)
Hmong (Green)	$f_0$ quadratic polynomial coeff.	Monosyll. in carrier phrase, acoustics/discriminant	Andruski and Costello (2004)
Hmong (Green)	$f_0$ , H1-H2, V dur; VOT (all normalized), jitter, shimmer	Monosyll. in carrier phrase, acoustics/discriminant	Andruski and Ratliff (2000)
Mambila	$f_0$	Synthesized sawtooth in natural carrier phrase, perception	Connell (2000)
Mandarin	avg. $f_0$ , $f_0'_{fin}$ , $f_0'$	Isol. monosyll., EEG/MMN, MDS	Chandrasekaran et al. (2007)
Mandarin	Syll. duration, creaky voice	Isol. monosyll., resynthesis	Liu and Samuel (2004)
Mandarin	Amp., 50 Hz $< \Delta Amp < 500$ Hz, V duration	Isol. monosyll., Various resynthesis, acoustic/perception	Fu and Zeng (2000); Fu et al. (1998)
Mandarin	Amplitude	Signal-correlated noise, perception	Whalen and Xu (1992)
Mandarin	Syll. duration	?, Acoustic, perception	Gårding et al. (1986)
Mandarin	avg. $f_0$ , $sgn(f_0')$	Synthesized isol. monosyll., perception, MDS	Gandour (1983)
Mandarin	$f_0$ , $f_0'$	Isolated monosyll., acoustic	Howie (1976)
Taiwanese	avg. $f_0$ , $sgn(f_0')$	Synthesized isol. monosyll., perception, MDS	Gandour (1983)
Thai	avg. $f_0$ , $sgn(f_0')$	Synthesized isol. monosyll., perception, MDS	Gandour (1983)
Thai	avg. $f_0$ , $sgn(f_0')$ , $ f_0' $	Synthesized monosyllables, perception, MDS	Gandour (1979)
Thai	avg. $f_0$ , $sgn(f_0')$ , duration, $ f_0' $ , $ rel. f_0'_{fin}  > T$	Synthesized isol. monosyll., perception, MDS	Gandour and Harshman (1978)
Thai	$f_0$ , $ f_0' $ , $sgn(f_0')$	Synthesized monosyllables continuum, perception	Abramson (1978)
Thai	Something not $f_0$	Isolated monosyllables, Whispered speech, perception	Abramson (1972)
Vietnamese	$f_0$ , $f_0'$ , phonation, $ \{roots(f_0')\}  > 0$	Resynthesized isolated monosyllables, perception	Brunelle (2009)
Vietnamese	phonation (only)	isolated monosyllables, acoustic	Pham (2003)
Yoruba	avg. $f_0$ , $sgn(f_0')$	Synthesized isol. monosyll., perception, MDS	Gandour (1983)
Yoruba	avg. $f_0$ , $sgn(f_0')$ , duration, $ f_0' $ , $ rel. f_0'_{fin}  > T$	Synthesized isol. monosyll., perception, MDS	Gandour and Harshman (1978)
Yoruba	avg. $f_0$ , relative $f_0$ , $sgn(f_0')$ , $ f_0' $	Isolated disyllables, perception/MDS	Hombert (1976)

Table 17: Dimensions proposed to be useful for tonal classification in the linguistic literature. Note that in general, the parameter set proposed for a given paper is not intended to be exhaustive. For instance, in some cases, non  $f_0$ -based parameters were proposed/shown to be useful but not  $f_0$ -based parameters because the studies were not designed to address the usefulness of  $f_0$ -based parameters.