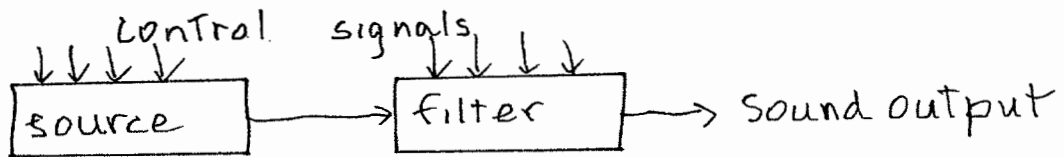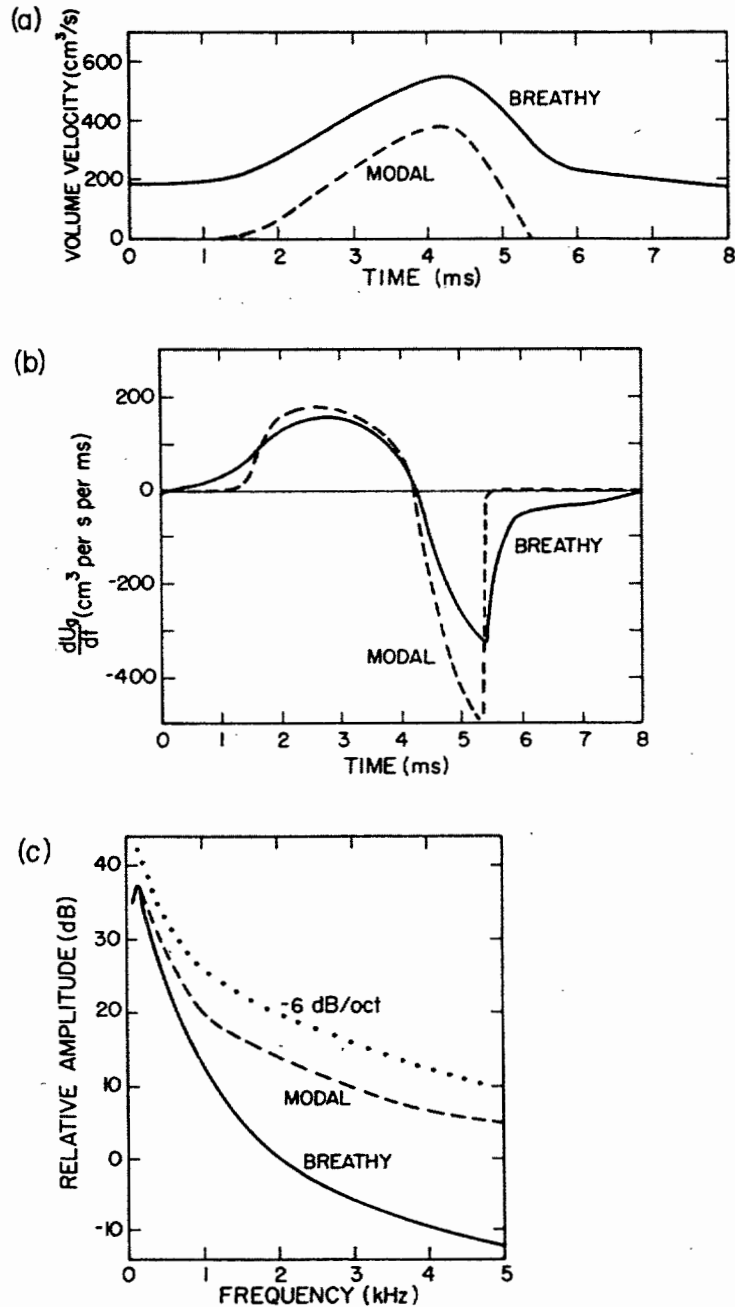# Speech Synthesis

The glottal source

Figure 2.21 (a) Calculated airflow for breathy voicing configuration, as in figures 2.19 and 2.20. The airflow for the modal condition is shown for comparison. (b) Derivatives of airflow curves in (a). (c) Spectra of derivative waveforms. The dotted line shows a −6 dB per octave slope for comparison with the spectra.
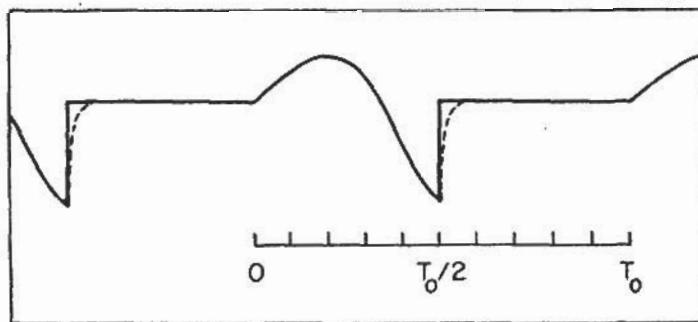
Figure 2.28 Waveform of derivative of glottal airflow U_g based on the LF model (Fant et al., 1985). The period is T_o and the open quotient $OQ = 50$ percent. The solid line is for an abrupt discontinuity in the derivative of U_g (i.e., parameter $T_2 = 0$) and the dashed line corresponds to $T_2 = 0.025T_o$. See text.

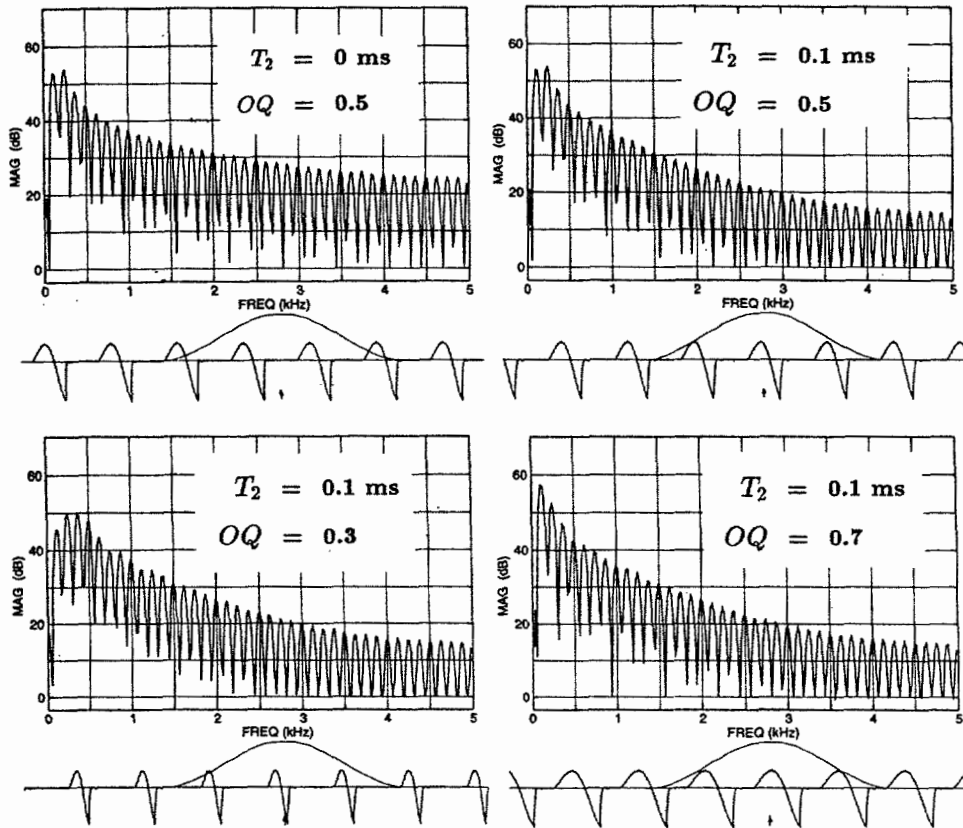# Effects of some parameters on glottal source

Figure 2.29 Spectrum of derivative of glottal airflow for LF model for several combinations of values of return time T_2 and open quotient OQ as indicated. Fundamental frequency = 125 Hz. These spectra were calculated from a version of the LF model developed by Dennis Klatt (Klatt and Klatt, 1990).

Spectrum of turbulence noise source
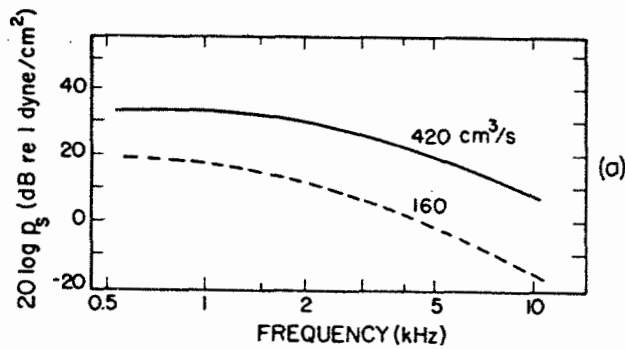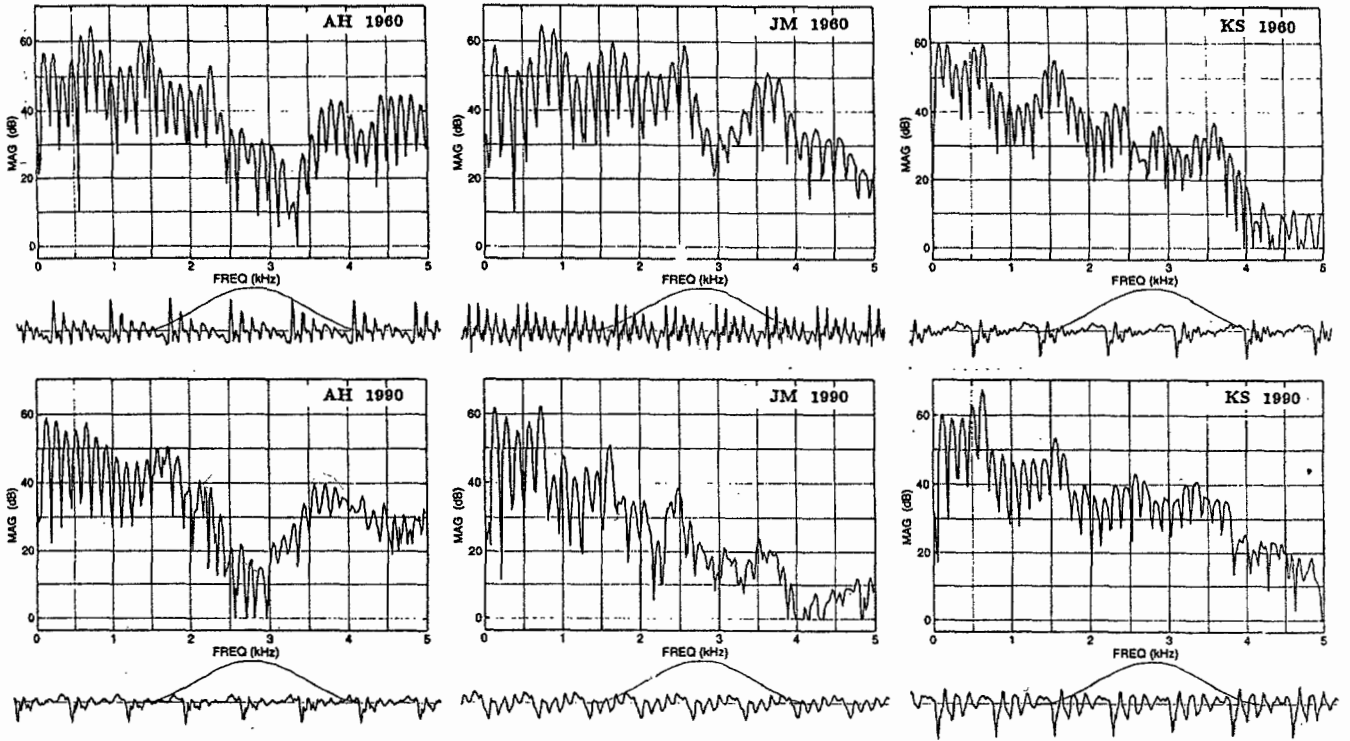
Illustrating differences between speakers!
Same vowel (æ), 3 male speakers on 2 occasions