

## Voice Qualities: Table

**Source:** Tutorials - Voice Production: National Center for Voice and Speech: <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/quality.html>

**How do we describe perceived vocal qualities?** The short answer: not very well. The average person easily recognizes familiar or famous voices, yet would have difficulty describing them in words. Despite their training, vocologists and voice researchers also disagree about exact descriptions of vocal qualities. Below is a table of terms suggested by Dr. Ingo Titze at the 8th Vocal Fold Physiology Conference in April 1994. The list is likely incomplete and does not necessarily reflect a consensus of the conference or the field of vocology as a whole. Ideally, a group of researchers and vocologists would organize a consensus conference in the future.

Voice Quality	Perception	Physiologic component
aphonic	no sound or a whisper	inability to set vocal folds into vibration, caused by lack of appropriate power (air pressure) or a muscular/tissue problem of the folds
biphonic	two independent pitches	two sources of sound (e.g., true folds and false folds, or two folds and whistle due to vortex in air)
bleat (see <a href="#">flutter</a> )		
breathy	sound of air is apparent	noise is caused by turbulence in or near glottis, caused by loose valving of laryngeal muscles (lateral cricoarytenoid, interarytenoid and posterior cricoarytenoid).
covered	muffled or 'darkened' sound	lips are rounded and protruded or larynx is lowered to lower all formants so a stronger fundamental is obtained
creaky	sounds like two hard surfaces rubbing against one another	a complex pattern of vibrations in the vocal folds creates a intricate formation of subharmonics and modulations
diplophonic	pitch supplemented with another pitch one octave lower, roughness usually apparent	a period doubling, or $F_0/2$ subharmonic
flutter	often called bleat because it sounds like a lamb's cry	amplitude changes or frequency modulations in the 8-12Hz range
glottalized	clicking noise heard during voicing	forceful adduction or abduction of the vocal folds during speech
hoarse (raspy)	harsh, grating sound	combination of irregularity in vocal fold vibration and glottal noise generation

honky	excessive nasality	excessive acoustic energy couples to the nasal tract
jitter	pitch sounds rough	fundamental frequency varies from cycle to cycle
nasal (see <a href="#">honky</a> )		
pressed	harsh, often loud (strident) quality	vocal processes of the arytenoid cartilages are squeezed together, constricting the glottis, and causing low airflow and medial compression of the vocal folds
pulsed (fry)	sounds similar to food cooking in a hot frying pan	sound gaps caused by intermittent energy packets below 70 Hz and formant energy dies out prior to re-excitation
resonant (ringing)	brightened or 'ringing' sound that carries well	epilaryngeal resonance is enhanced, producing a strong spectral peak at 2500-3500 Hz; in effect, formants F3, F4 and F5 are clustered
rough	uneven, bumpy sound appearing to be unsteady short-term, but persisting over the long-term	modes of vibration of the vocal folds are not synchronized
shimmer	crackly, buzzy	short-term (cycle-to-cycle) variation in a signal's amplitude
strained	effortfulness apparent in voice, hyperfunction of neck muscles, entire larynx may compress	excessive energy focused in laryngeal region
strobass	popping sound; vocal fry during singing	sound gaps caused by intermittent energy packets below 70 Hz and formant energy dies out prior to re-excitation
tremorous	affected by trembling or tremors	modulation of 1-15 Hz in either amplitude or pitch due to a neurological or biomechanical cause
twangy	sharp, bright sound	often attributed to excessive nasality, but probably also has an epilaryngeal basis
ventricular	very rough (Louis Armstrong-type voice)	phonation using the false folds anterior rather than the vocal folds; unless intentional due to damage to the true folds, considered an abnormal muscle pattern dysphonia
wobble	wavering or irregular variation in sound	amplitude and/or frequency modulations in the 1-3 Hz range
yawny	quality is akin to sounds made during a yawn	larynx is lowered and pharynx is widened, as people do when yawning - hence the name