FIRST THOUGHTS ON TIMBRE

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**timbre, n.3**

Etymology: < modern French timbre: see timbre n.1, timbre n.2 From the sense ‘bell’, ‘small bell’ (see timbre n.1) arose that of ‘sound of a bell’, ‘sonorous quality of any instrument or of a voice’, and finally that of ‘character or quality of sound’ (= German Klangfarbe), in which the word has passed into English use, retaining its French pronunciation.

The character or quality of a musical or vocal sound (distinct from its pitch and intensity) depending upon the particular voice or instrument producing it, and distinguishing it from sounds proceeding from other sources; caused by the proportion in which the fundamental tone is combined with the harmonics or overtones (= German Klangfarbe).

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(The auditory sensation where a listener judges that two sounds are different using criteria other than pitch, loudness, duration.)

Timbre tends to be the psychoacoustician's multidimensional waste-basket category for everything that cannot be labeled pitch or loudness, including short-term spectral changes such as onset transients, long-term spectra, those dynamic qualities which a musician would term "texture," and so on.

**Stephen McAdams and Albert Bregman, “Hearing Musical Streams,” Computer Music Journal, Vol. 3,**

**No. 4 (Dec., 1979), p. 30.**

The perception of timbre and the identification of an event can come about only from the patterning of acoustic energy. The acoustic patterning creates perceptual differences among events, and it is by means of this patterning that identification is possible. In order for identification to occur, the difference among several instances of one instrument, one speaker, or one event must be less than the differences between different instruments, speakers or events. This need not be true for all attributes, but it must be true for one attribute or a combination of attributes. Only if we can determine what acoustic information reliably signals one event as opposed to another in each context will it be possible to model how a listener can make a correct identification.

**Stephen Handel, *Listening: An Introduction to the Perception of Auditory Events*, p. 226.**

In brief, timbre refers both to the overall sound that enables us to distinguish one instrument from another, and to the different sounds within a single instrument. The composite sound is made up of different partials, or frequencies. In classical vocal production a concentration of partials around 3,000Hz—known as the singer’s formant—is favored. This creates the characteristic “ring” in the voice (the intense “core”) and enables it to cut through and be heard over the massive sound of a symphony orchestra. Many vocal pedagogical texts feature in-depth discussions of the physics and vocal training that go into its production.

**Nina Sun Eidsheim, *The Race of Sound: Listening, Timbre & Vocality in American Music*, p. 216n20**

Racialized conceptions of vocal timbre persist. But why has vocal timbre resisted analysis when most aspects of the racialized body have been critically treated? I contend that fundamental misconceptions about voice and vocal timbre have prevented careful and critical analysis. Therefore, if we think about this problem simply through questions around race, and voice examining basic understandings of voice, we will fail to get to the root of how categories, including race, are constructed through vocal timbre. In other words, we will easily note the attitudes about people that are overlaid on top of voice, but we will not be able to identify the distinct building blocks with which racialized timbre is projected, perceived, manifested, and sustained.

**Nina Sun Eidsheim, *The Race of Sound: Listening, Timbre & Vocality in American Music*, p. 40**

How is gender signaled vocally?...Parameters and characteristics that have been identified as gendered markers include word choice, precise articulation (clearly pronounced consonants and endings of words), uptalk (ending declarative sentences with a rising intonation, or a pitch contour associated with a question), more upward shifts in F0 [fundamental frequency], fewer downward shifts in F0, variable intonation contours, and longer word durations…[O]ne [interesting] differentiating factor is the use of what I call timbral scare quotes—the use of a portion of the voice that is set apart timbrally from what the singer deems to be the normative part of his or her voice. [I.E. falsetto in male singers.] [NOTE: F0, fundamental frequency, associated with the lowest frequency in a harmonic series.]

**Nina Sun Eidsheim, *The Race of Sound: Listening, Timbre & Vocality in American Music*, p. 40**

The materiality of voice has to do with the sound itself as well as with the bodily process of producing and attending to voices. When we consider the musical voice as a sonic phenomenon, not merely as a vehicle for words or music, timbre—commonly referred to as voice quality or tone color, or colloquially referred to as an instrument’s or vocalist’s “sound”—becomes central. Perhaps because words used to describe timbre—such as “warm,” “bright,” “open,” “husky,” “gruff,” “creaky,”—are seemingly subjective and highly culturally variable, they are also an extremely socially meaningful aspect of vocal sound and performance. The materiality of voice is also a feature of spoken language. Linguistic variation, a classic topic within sociolinguistics, is a sonic vocal phenomenon with powerful social meanings and effects, as are intonational patters and other “prosodic” features of language such as timbre, pitch, and volume. Particular vocal practices may originate in a very specific kind of event but then become generalized as vocal “gestures” that can be used to project a certain status for the speaker, retaining some aspect of the original situation in their sonic iconicity.

**Amanda Weidman, “Voice,” in *Keywords in Sound* p. 235**

The realm of language is vast, and styles of speech are its internal borders that divide this linguistic universe into multiple areas of usage. The container for language is human speech and, miraculously, the human brain makes it possible ‘to store and hear’ speech in the mind even when nobody actually utters anything. Our memory holds samples of speech, visual representations of situations, emotional impressions, sounds and voices. When we read a page, our memory allows these samples to echo each other variously, together with the new incoming voices of the text adding prominence to some elements and obscuring the others. And when we finish reading, miraculously again, we keep in our memory the ebbs and flows of intonations, rhythms and timbres as a general sensation of the living human speech that can be brought to life only and exclusively by the voices of the people who lived in the past and still live among us.

**Marklen Knurbaev, *The Style and Timbre of English* Speech *and Literature*, pp. 9-10.**

See also:

“Definitions of Timbre” compiled by G. Sandell. <http://acousticslab.org/psychoacoustics/PMFiles/Timbre.htm>