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The Throat and the Voice, by J. Solis Cohen, M.D.  
1879

Rare Medical Books

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## The Throat and The Voice: Part 2, Chapter 3: Varieties of Voice

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### Recommended Citation

Solis Cohen, Jacob, "The Throat and The Voice: Part 2, Chapter 3: Varieties of Voice" (1879). *The Throat and the Voice*, by J. Solis Cohen, M.D. 1879. Book 20.

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greater facility in a foreign language, so that, often, very little of their original accent is apparent in speaking the newly-acquired language. The children of foreigners in this country, who habitually speak the language of their parents in their homes, rarely acquire an English accent absolutely free from foreign tinge.

So important is it deemed by some teachers of vocal art, that proper positions of the mouth should be maintained for certain sounds, that they actually make their pupils practise before a mirror until they become expert, or have learned to break themselves of adopting awkward positions of the mouth and its contents, which impair the purity of the tone, or attract attention as contortions or actual deformities.

It is thus evident that the human vocal apparatus—lungs, windpipe, larynx, mouth, throat, and nose—is a musical instrument, capable of rendering shades of expression far more delicate than any that can emanate from a musical instrument “the work of men’s hands.” It is emphatically a reed instrument, with bellows (lungs), pipe (windpipe), reed-box (larynx), two flexible reeds (vocal bands), and resonance attachment (throat, mouth, nose). These parts are movable upon themselves and their adjacent structures; and are kept moist and flexible by a bland lubricating fluid continuously secreted from the glands of the delicate mucous membrane which covers and protects them.

### CHAPTER III.

#### VARIETIES OF VOICE.

FOUR chief varieties of voice are recognized in vocal music or utterance;—two in the voice of the male, and two in that of the female. These are the bass and tenor, and the contralto and soprano respectively. The peculiarity depends in part upon the natural pitch of the voice, and to a much greater degree upon its timbre or quality. The bass voice descends lower in the scale than the tenor, and its strength and beauty are resident in the graver notes; still, some bass singers can ascend as high as the tenor, though not with equal richness and delicacy, for the peculiar power of the tenor voice resides in the higher notes. In like manner, the contralto, whose superiority is manifested in the lower notes, may ascend as high as the soprano, but without the melody of the soprano, whose forte is in the higher notes. A baritone voice is a tenor voice possessing but a moderate compass in the higher scale, and yet incapable of going very low; and a mezzo-soprano is a soprano voice in the same relative condition.

There are other varieties of voice named by professional vocalists, but they are not of scientific interest, and are mere modifications of bass, tenor, contralto, and soprano.

In singing from the same score, the male voice will be pitched one octave below the female voice. In exceptional instances, however, the female voice can be pitched at the compass of the male, and the effect is the peculiar tenor-like quality with which we are sometimes regaled by these phenomenal vocalists.

The physical cause of this difference in the tone-character of the male and female voice, or of the two varieties in either sex, is not understood. Mere size of the larynx does not account for it, inasmuch as a small male larynx does not furnish the soprano or contralto quality, nor a large female larynx produce a tenor or bass voice. The voices of young boys, before puberty approaches, approximate the character of female voices; and formerly the best teachers for the female voice were those males in whom the feminine character of voice used to be artificially preserved for church purposes by a cruel operation, now happily abandoned. The difference between male and female voice may be in part due to differences in quality; in its turn physically due to the effect on the form of the sound-waves from the shape of the larynx as a resonator, above the vocal bands, and the shape of the windpipe and thorax as a reso-

nator below them. The outline of the larynx, in front, is rounded in the female, and more pointed or angular in the male, as is easily determined by feeling the Adam's apple, as it is called, in the neck. The outline of the windpipe, too, is more spherical in the female, and more hemispherical in the male (see page 17). The outline of the chest in respiration, and of course during vocalization, is different in the two sexes,—the chest of the male expanding to a greater extent low down, and that of the female to a greater extent higher up. These differences in the shape of the tubes and resonators must make their impress upon the composite form of the sound-wave (see page 101), and thus modify the quality of the sound.

Various unaccepted theories have been propounded to account physically for the possession of bass or tenor voice in the one sex, and of contralto or soprano in the other. The difference cannot be attributed to the general contour of the larynx, nor to the actual or relative size of the vocal bands. All tall individuals are not basses and contraltos, nor all short ones tenors and sopranos; and the compass of voice is not in absolute correspondence with the actual magnitude of the vocal apparatus, nor its relative proportion to the stature or figure of the individual.