

## Lecture #17 – The Human Voice

### I. Introduction

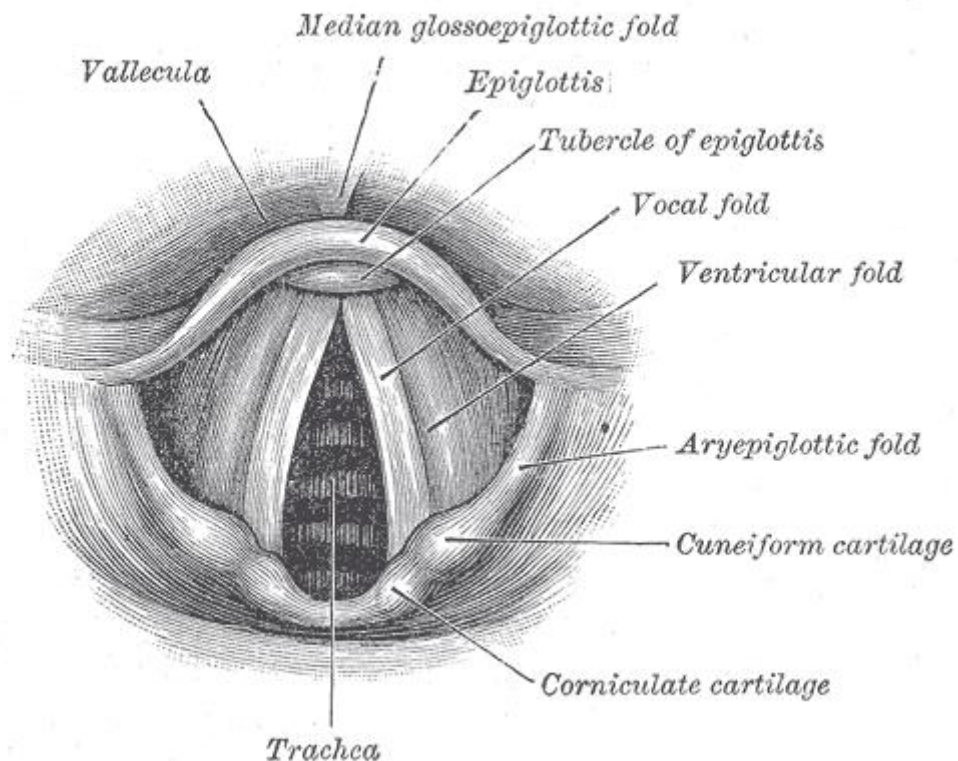
In this lesson, we will look at the voice, voice types, and vocal technique. We will see how the voice is produced and the different classifications used in Gospel music.

### II. Anatomy

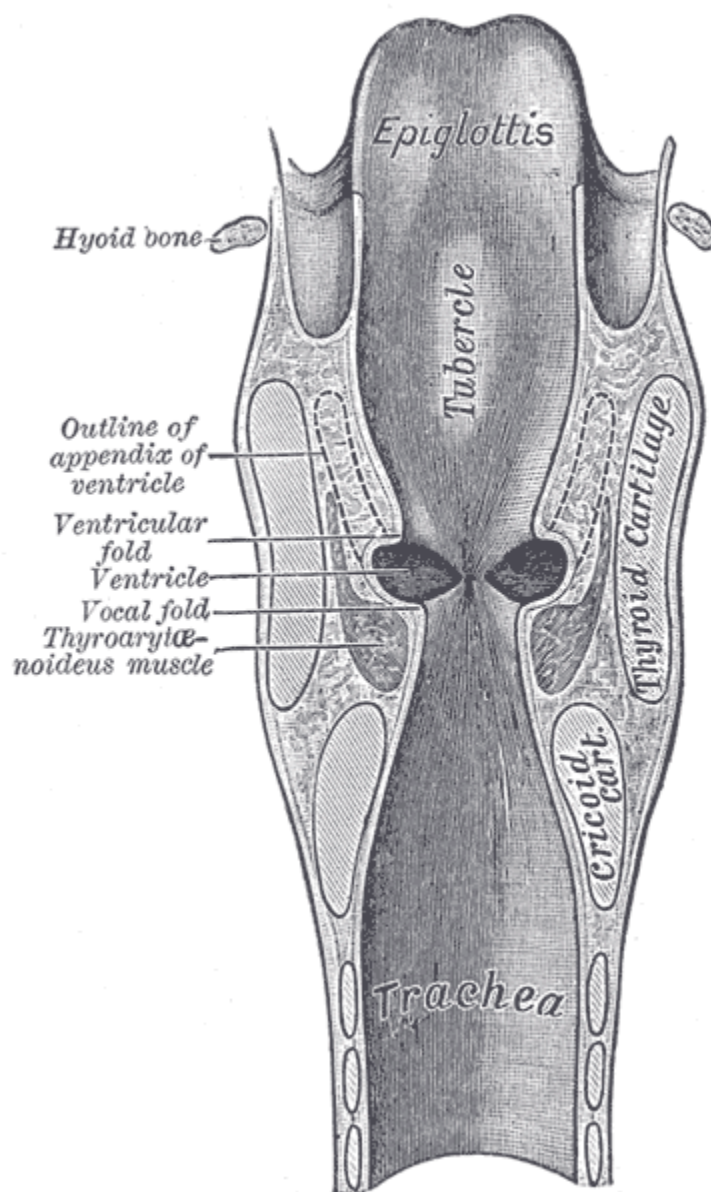
The human voice is the sound produced by the vibration of the **vocal cords** (also called **vocal folds**) as air passes through them. The air flow is produced by the contraction of the lungs and passes through the **larynx**, also called the **voice box**. Muscles contract and relax the vocal cords to produce different vibrations and tones.

Generally speaking, men have larger vocal cords and larynx, as seen in their prominent “Adam’s apple” on their necks. Adult men have vocal cords that are around 17-25 millimeters in length, and adult women have vocal cords that are around 12-17 millimeters in length.

The following illustrations from *Gray’s Anatomy* (1918) shows the vocal cords as view from above.



<sup>1</sup> <https://www.bartleby.com/107/illus1204.html> - accessed 9-19-22



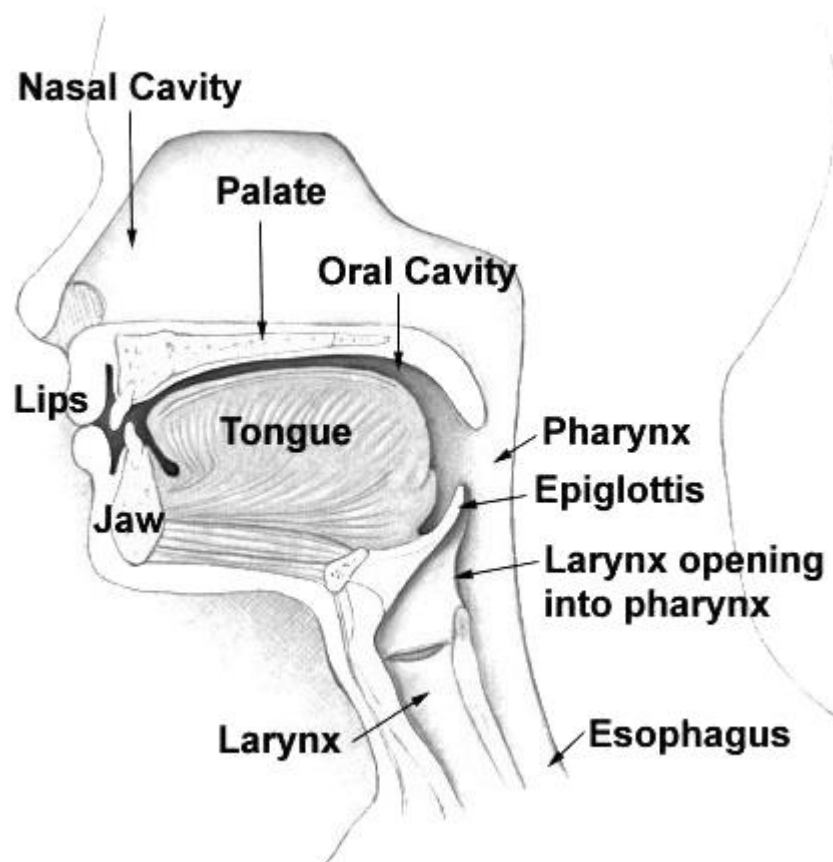
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## Resonance

The sound produced from the vibrating vocal cords then resonates in the body. This can be altered purposefully to produce differing qualities of sound. The chest and trachea are not good resonators as the vibrations occur after the air flows through them. The primary resonators are the pharynx, oral cavity, and nasal cavity.

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<sup>2</sup> <https://www.bartleby.com/107/illus954.html>



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### **III. Vocal Registers**

The human voice has four **registers**, or types of vibration in the vocal cords.

The lowest register is known as **vocal fry**, or sometimes **vocal grind**. In this register the vocal cords are very loose with air slowly “popping” through them. This creates a rattle or popping sound as the vocal cords vibrate. Because it is a lower quality tone and not easily controlled it is used in minimal in traditional singing methods. The most common use of this register in Gospel music is bass singers singing very low notes.

The normal speaking voice is called **modal voice** and is the primary register used in singing. In this register the vocal cords vary their length and tensions to modulate the tones created by their vibration. Many singing instructors subdivide this category into **chest voice**, **mixed voice**, and **head voice**.

The next register moving upward in tone is **falsetto**. It is produced when only the topmost portions of the vocal cords are allowed to vibrate. It is typically quieter and of less tonal quality than the modal voice. This register is almost never heard in Gospel music, but does appear in some classical, folk, and pop music.

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<sup>3</sup> [https://en.wikipedia.org/wiki/Vocal\\_resonation#/media/File:Illu01\\_head\\_neck.jpg](https://en.wikipedia.org/wiki/Vocal_resonation#/media/File:Illu01_head_neck.jpg)

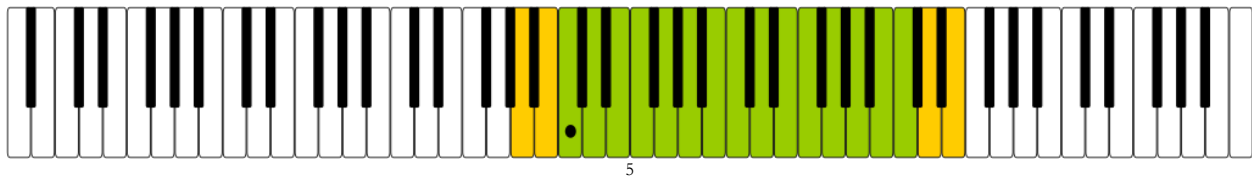
The final and highest is **whistle register**. It is unclear exactly how these tones are produced, as the larynx is so tightly constricted that it makes observing this register in action very difficult. The most popular theory is that only a small section on the top-front of the vocal cords is used, while another is that the vocal cords are not vibrating at all but the air whistles through the gap like whistling with lips. This register is most used by sopranos to reach very high notes.

#### **IV. Vocal Divisions**

The voices of men and women are divided based on their vocal ranges. For Gospel music, there are typically two divisions, one high and one low, for each.

#### **Women's Voice Types**

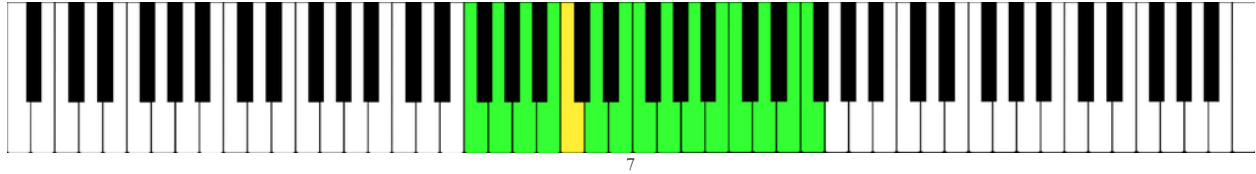
**Soprano** is the highest division of women's voices. Its range is typically defined as from C<sub>4</sub> (middle C on the piano) at the low end and then upwards for two octaves to C<sub>6</sub>. In most Gospel music the Soprano will sing the melody.



<sup>4</sup> <https://upload.wikimedia.org/score/m/4/m4mvcuynck6yw86crfx4l7xv6yjxrey/m4mvcuyn.png>

<sup>5</sup> [https://en.wikipedia.org/wiki/Soprano#/media/File:Soprano\\_voice\\_range\\_on\\_keyboard.svg](https://en.wikipedia.org/wiki/Soprano#/media/File:Soprano_voice_range_on_keyboard.svg)

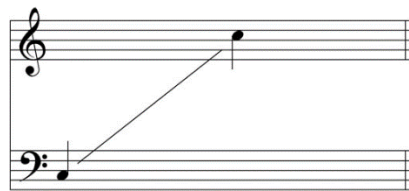
**Alto** is the lower division of women's voices used in Gospel music. Its range is typically defined as being from F<sub>3</sub> to F<sub>5</sub> on the piano.



There are other divisions used in classical music not used in Gospel Music. The **mezzo-soprano** is just below the soprano and **contralto** is the term used for the lowest voices.

### Men's Voices

The highest male part in most Gospel music is **tenor**. The range is typically from C<sub>3</sub>–C<sub>5</sub> on the piano.



C one octave below Middle C to C one octave above Middle C 8



<sup>6</sup> <https://upload.wikimedia.org/score/h/z/hziucmabbadkfc3lwkq3r3o6p8klxav/hziucmab.png>

<sup>7</sup> [https://en.wikipedia.org/wiki/Alto#/media/File:Alto\\_vocal\\_range.png](https://en.wikipedia.org/wiki/Alto#/media/File:Alto_vocal_range.png)

<sup>8</sup> <http://www.dummies.com/art-center/music/singing/highest-range-of-the-dudes-tenor/>

<sup>9</sup> [https://en.wikipedia.org/wiki/Tenor#/media/File:Tenor\\_voice\\_range\\_on\\_keyboard.svg](https://en.wikipedia.org/wiki/Tenor#/media/File:Tenor_voice_range_on_keyboard.svg)

The lowest male part in most Gospel music is **bass**. The range is typically from E<sub>2</sub>–E<sub>4</sub> on the piano.



The **baritone** is a division used in all-male four-part harmony. It is between the tenor and base, typically with a range of G<sub>2</sub>–G<sub>4</sub>.

A higher part used in some classical music is the **countertenor**, which has a range of E<sub>3</sub>–E<sub>5</sub>.

The lowest basses in classical music are called either **basso profundo** or **contrabass**. The range is C<sub>2</sub>–C<sub>4</sub>. Though the term may not be used, many Southern Gospel quartets have basses with this range. In Russian Orthodox music, there is an even lower classification, called **oktavist**, with a range as low as A<sub>1</sub>.

## **V. Vocal Sections in Groups**

Most Gospel music arranged in four-part harmony is **SATB**. This has two parts for ladies: soprano (high) and alto (low); and two parts for me: tenor (high) and bass (low).

In four-part men's harmony you will see **T'TBB**, with parts for first tenor (highest), second tenor (sometimes called the lead), baritone, and bass. In most Southern Gospel style arrangements, the top line of notes is the second tenor or lead, while the second line of notes is the first tenor.

In four-part women's harmony you will see **SSAA**, with first soprano, second soprano, first alto, and second alto.

For three-part harmony, the lowest voice is generally dropped from a four-part arrangement.

For duets, the soprano and alto lines are used, dropping the two lowest voices.

<sup>10</sup> <https://upload.wikimedia.org/score/9/1/9lfhvzsw5lk6a5pjymabdeafguzg8xe/9lfhvzsw.png>

<sup>11</sup> [https://en.wikipedia.org/wiki/Bass\\_\(voice\\_type\)#/media/File:Bass\\_voice\\_range\\_on\\_keyboard.svg](https://en.wikipedia.org/wiki/Bass_(voice_type)#/media/File:Bass_voice_range_on_keyboard.svg)