

Individual Resonance
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Getting the most sound out of your individual voice is due to your personal “gift”, your experience, and your efficiency! Vocal coaches can’t do much with the first two, but singers CAN be trained to be more EFFICIENT.

Obviously AIR is the primary component of singing so the “acquisition of air” by an efficient Tension & Release (T&R) movement pattern is fundamental. The efficient singer gets warm, moist, low-pressure air in a relaxed manner and then uses it by gently and consistently by increasing the Elastic Potential Energy (EPE) in the body. Repeat. Repeat. Repeat, etc. See the T&R paper.

The second component (the one addressed in this paper) is efficient use of the vocal instrument. The vocal instrument is made up of two parts: the tone producing mechanism (the vocal folds or “cords”), and the resonating chamber (the head).

When singing the vocal folds produce sound that is made of many musical tones: the lowest pitched tone you produce is usually the one on the sheet music and is called the fundamental tone. The other, higher pitched tones, are called higher harmonics (or overtones). Every voice produces a variety of these tones and every voice is different in the frequencies (itches) and intensity (loudness) of the tones produced; this is called the “quality” of the voice. Musical instruments often produce 4 or 5 or so overtones, while the human voice can produce many more. (That’s why the human voice can “imitate” instrument sounds by manipulating the overtones). BUT, the vocal folds are limited in that they only cause a small column of air to vibrate causing the tones. It takes a good resonating chamber to make the voice powerful (more intense) and beautiful (higher quality).

The resonating chamber is the complicated structure of your head! It is made of moveable solid and fleshy parts with air and fluid filled chambers of assorted and variable sizes. Everyone’s head is built differently so everyone’s head resonates (and therefore reinforces or diminishes tones) differently. That’s why everyone has a distinctive “voice print” or analysis of his/her own voice. The savvy singer knows how to maximize the resonance of his/her own head to produce the best quality of sound:

1) Know your voice, part 1: Know what kind of resonator you are (1, 2, 3 or mixed). The 1’s resonate primarily in the “mask” – the bones in the face. The 2’s resonate primarily in the “hard palate” – the bones in the top of the mouth right behind the teeth. The 3’s resonate in the bones at the top of the throat – almost in line with the ears. The mixed voice resonates more or less uniformly in two or three of the locations. See the “Resonator Warm Up” for help identifying the type you are. The voices with the greatest “carry” are the mixed voices so strive to build resonance in areas not your “default” area.

2) Know your voice, part 2: Just like every musical instrument there are parts of the head that vibrate more than others. When you “bubble” properly, your head vibrates strongly in one or more places. The savvy singer knows to keep that vibration going when singing. Practice bubbling, then singing a word, until the transition is smooth and the same vibration is felt in the head.

3) Know your voice, part 3: Know your “tessitura” or “vocal range”. Sing as far down as you can with quality, then sing stepwise up the scale to the fifth tone. Find out what that note is. This is your “core tone” and you should practice speaking in it as much as possible to get the throat as relaxed and comfortable as possible. It will put the least strain on your throat. Now sing stepwise up the scale to your highest quality note. You’ll notice the most strain on your voice at the extreme high and low notes. This is where your vocal folds try to compensate for diminishing resonance by tightening up. Don’t let them! Attempt to relax the throat and strive for more resonance as you sing away from your core tone until all the notes are similar to your core tone.

4) The value of “church”: When you say the word “church” your lips naturally, and in a relaxed manner, leave your front teeth exposed. The savvy singer sings this way all the time as the teeth can only vibrate (resonate with the air vibrations) if the lips are not touching the teeth. If they touch, they dampen the vibration and whatever resonance the teeth had (and could convey to the larger bones in the head) is lost. If the teeth are allowed to vibrate it’s possible to get the large bones in the head to resonate with the musical tones and a greater quality of sound is produced.

5) Produce in the throat – resonate in the head: Finally, the vocal folds are like the strings of a guitar or a piano – they only produce a tone! It’s the resonating chamber that gives it quality and beauty. A good guideline is to feel vibration more strongly ABOVE the teeth than below. And remember that the only way for the sound to get from the throat TO the head is if there is SPACE between the molars! Don’t push for volume and tense your throat - strain on the throat will hamper your ability to sing well. Good resonance will enhance your ability to sing well!

Resonator Warm Up

Words by Steve Jamison

The musical score is written for Tenor Lead and Bari Bass. It consists of two systems of music. The first system has three measures, each with a number above it (1, 2, 3). The lyrics are: "Min-ny, min-ny, min-ny, min-ny, ming, ming, ming, ming. What a pi-ty, what a pi-ty,". The second system has three measures, each with a number above it (4, 5, 6). The lyrics are: "what, what, what, what. Zoom, zoom, zoom, zoom, zaw!". The Tenor Lead part is written in a treble clef with a 2/4 time signature. The Bari Bass part is written in a bass clef with a 2/4 time signature. Both parts feature a rhythmic pattern of eighth notes.

Start low and repeat as many times as needed moving up a half-tone after each round. This exercise can also be done on a unison or a in a different voicing or chord.

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