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# Vibrametrics - Vibrato Training / Voice Balancing

(Vibrametrics CD track all) (DVD chap 8)

Vibrametrics, a systematic method, developed by Howard Austin, is tremendously effective beyond the obvious benefit of vibrato control. Greater control of all the vocal skills is achieved by training the breathing system for PRECISION CONTROL of the out flowing air beyond Support alone.

Because of the 'balance' that is achieved, Vibrametrics will improve: ♦ Pitch Accuracy ♦ Range ♦ Register Blending ♦ Breath Extension for holding notes and singing long phrases ♦ Tone (Resonance) Control - Voice Coloring ♦ Endurance: eliminate vocal fatigue ♦ Improve Diction ♦ Expressive Phrasing ♦ Improvisation ♦ Versatility ♦ Consistent Results - Confidence ♦ Personal Style ♦ ... every skill that a singer needs to reach the highest goals of artistry in any musical genre.

Vibrato Control includes speed variation, delayed vibrato and straight tone.

Vibrato is the pulse or wave in a sustained tone that gives your voice a professional sound. The ability to control your sustained tone with or without vibrato is valuable for any vocal style. Although vibrato is a musical effect routinely taught in the study of many string instruments and wind instruments, it is rarely studied systematically in voice training. For your convenience, all the tracks on vibrato in the Born To Sing program are consolidated in the Vibrametrics CD.

VIBRAMETRICS CD TRACK	BORN TO SING CD SOURCE	SUBJECT
02	Techniques CD-track 17	Vibrato - 3 types
03	Techniques CD- track 18	Learn vibrato
04	Techniques CD- track 19	Phrases
05	Techniques CD- track 20	Diphthongs1
06	Techniques CD- track 21	Diphthongs2
07	Vocal Style CD- track 22	vibrato-straight tone -delay
08	Vocal Style CD- track 26	Rock style
09	Vocal Style CD- track 42	Musical Theater style
10	Super Vocals CD- track 03	Delayed vibrato
11	Super Vocals CD- track 06	Exercise
12	Super Vocals CD- track 07	Decrescendo
13	Super Vocals CD- track 13	Crescendo
14	Super Vocals CD- track 15	Increase vibrato speed
15	Super Vocals CD- track 16	Delayed vibrato
16	Super Vocals CD- track 17	Blending voices
17	Super Vocals CD- track 19	No Vibrato
18	Super Vocals CD- track 21	Throat vibrato
19	Super Vocals CD- track 22	Learn throat vibrato
20	Super Vocals CD- track 39	Flexibility & vibrato
21	Super Vocals CD- track 43	High voice vibrato
22	Sing-Aerobics CD - track 02	Vowel-Vowel-Word exercise
23	Sing-Aerobics CD- track 09	Sustaining demo
24	Sing-Aerobics CD- track 10	Sustaining exercise
25	Sing-Aerobics CD- track 11	Volume-demo
26	Sing-Aerobics CD- track 12	Volume-exercise
27	Sing-Aerobics CD- track 13	LOW voice
28	Sing-Aerobics CD- track 14	HIGH voice

## Vibrametrics CD TRACK 2 – 3 TYPES OF VOCAL VIBRATO + VIBRATO VARIATIONS



H. Austin & Christina Paras, *Miss Saigon*

Although the **Vibrametric** method involves the entire breathing system, it is helpful to think of the vibrato pulse as having an epicenter at the solar plexus, located just below the center of the chest (sternum).

When producing vibrato with this method, you will experience “*singing on the breath*” -

a free-flowing vocal tone that is free from undesirable throat tension.

Vibrametrics training also allows you to produce straight tone (no vibrato) free from throat tension. You can turn the vibrato on or off and even control the pulse rate.

A string player, such as a violinist, creates the vibrato by pressing down on the string with the finger in a rapid back and forth motion. This motion causes the string to lengthen and shorten alternately, producing a slight fluctuation in pitch. For the guitar, the player presses the string sideways, alternately tightening and loosening the string. A quicker back and forth motion produces a faster vibrato and a slower motion produces a slower vibrato. The skilled player can vary the vibrato speed and where in the music to use it, according to artistic taste and musical style.

Vibrato for a wind instrument such as a flute or clarinet may be controlled with the lips, tongue, throat or breath pulse or a combination of these. Fluctuating the air pressure (breath pulse) is the Vibrametrics technique that works best for the singing instrument.

## Expressive Singing

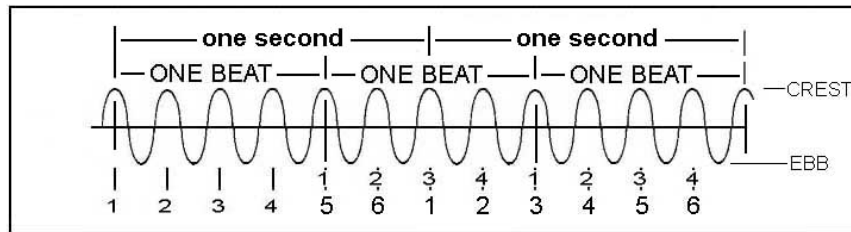
Professional singers often use vibrato variation for expressiveness. If your career is to include studio work, back-up or group singing, the ability to control your vibrato and straight tone is a basic requirement.

## Vibrato for the Singer

Vocal vibrato is actually a slight fluctuation of pitch and volume of a sustained tone although the pitch variation should be minimized. If either the pitch or volume fluctuation is too great, the tone may wobble or sound off-pitch. It is rare but there are a few non-classical singers who use a wide vibrato effectively. In general, 5 to 7 pulses per second produces an aesthetically pleasing sound.

## EXAMPLE:

With your metronome set at 90, 4 pulses per beat equals 6 pulses per second as shown in Figure A.



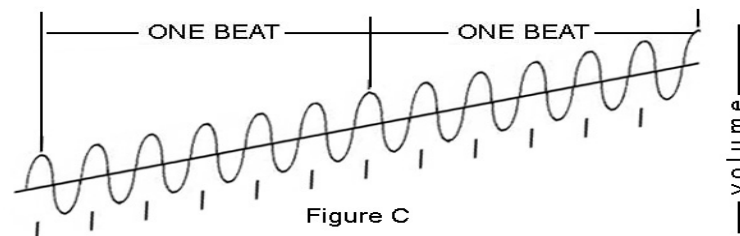
**Figure A**

Figure B below is a Vibrametrics chart, showing variations in vibrato pulse rate as determined by metronome settings and used for training vibrato speed control.

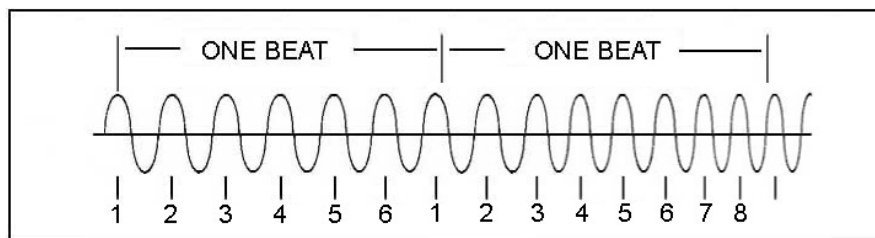
<b>VARIOUS METRONOME SETTINGS EACH WITH 4 VIBRATO PULSES PER BEAT</b>
At 60 = 4 VIBRATO PULSES PER SECOND.
At 75 = 5 VIBRATO PULSES PER SECOND.
At 90 = 6 VIBRATO PULSES PER SECOND.
At 105 = 7 VIBRATO PULSES PER SECOND.
At 120 = 8 VIBRATO PULSES PER SECOND.

**Figure B**

Figure C shows a constant pulse rate during a crescendo.



While a crescendo will increase the dramatic intensity of a sustained tone, a singer trained in Vibrametrics can increase the vibrato pulse rate for even greater intensity as shown in Figure D below.



**Figure D**

## **Vibrametrics CD TRACK 14 – ACCELERATING VIBRATO**

## VIBRAMETRIC EXERCISES

Although the Vibrametrics approach gives the singer the greatest control and freedom, for the sake of completeness we can identify two other common types of vocal vibrato.

### **Vibrametrics CD TRACK 2 – 3 TYPES OF VOCAL VIBRATO**

#### **Vocal Cord Vibrato (not recommended for most singing)**

Vocal cord vibrato is produced by rapid interruptions (flutter) in the adduction of the vocal cords. This vibrato has a kind of “machine gun” quality or something like the “ba-aa-aa” of a lamb. Versatility is limited because it is very difficult to vary the speed and width of the pulse. Vocal cord vibrato is typical of the singing styles of some Middle Eastern cultures and is a familiar characteristic of the French chanteuse (cabaret singer, i.e. Edith Piaf). It was also common to the style of some American folk singers of the 1960’s (i.e. Joan Baez).

#### **Throat Vibrato (not recommended for most singing)**

Throat vibrato is produced by manipulating the throat muscles to create fluctuations in pitch. Because of the muscular tension used, you often see a shaking tongue, jaw and even a shaking head which is aesthetically undesirable. Throat tension may also flat the pitch. If too much prolonged tension is used, it leads to vocal fatigue and hoarseness.

Throat vibrato varies with the singer and could be rapid and narrow or slow and wide,. It is heard in almost any style but most often used in the Pop field. Many Jazz and Blues singers use throat vibrato effectively to imitate instrumental effects. Even though many Pop singers use throat vibrato, it should be used with discretion, if at all. Many singers use throat vibrato in combination with Vibrametric vibrato.

### **Vibrametrics CD TRACK 18 - SPECIAL EFFECTS, FAST THROAT VIBRATO**

**The Straight Tone** is a tone without vibrato. (**Vibrametrics CD track 6**)

In Pop music, notes of short duration are almost always straight tones and a sustained tone often begins with a straight tone that moves gradually into a vibrato. This is *delayed vibrato*.



In general, Pop singers use much less vibrato than Classical singers and Classical singers almost never use delayed vibrato.

### **Vibrametrics CD TRACK 15 – VIBRATO, STRAIGHT TONE / DELAYED**

Vibrametric Vibrato (preferred), Also Known As abdominal or diaphragmatic vibrato, is produced by pulsations in the airflow initiated by the breathing system while maintaining steady support. The pulses in the airflow cause a slight fluctuation in pitch and volume. It is usually desirable to minimize pitch fluctuation.

With Vibrametrics, you can control the speed and width of your vibrato. The width of the vibrato is the difference in pitch and volume levels between the crest and ebb of the vibrato pulse. (Figure A, page 37)

The type of vibrato you use is your individual artistic choice and depends on your personal style and the musical material. However, I recommend Vibrametric vibrato because it is consistent with good support and helps avoid undesirable throat tension that could flat your pitch, tire your voice or diminish the aesthetic quality of your sound. Surprisingly few singers, including professionals, are aware of how they produce their vibrato. Many teachers and singers claim that

the vibrato is *natural* or should be natural. However, we are not born with vibrato. It is usually learned by imitating other singers, often with questionable results and rarely learned from a voice teacher. Even the Harvard Dictionary of Music states that, “*among singers, there exists uncertainty as to what vibrato means*” and refers to the “*singer’s use of it without being aware of doing so.*”

We can recognize various uses of vibrato by artists in all areas of vocal music. For example, R&B singers, in general, use a slower vibrato than Opera singers. Jazz singers imitate the many vibrato styles of Jazz instruments like the trumpet, sax and flute.

### **Vibrametrics CD TRACK 18** [at 16 seconds in]

Vibrato speed may vary from one song to another and also within a song, changing with the emotional expression. Usually, a slower vibrato is used in a song with a slower tempo and a faster vibrato in a faster song. Speeding up the vibrato as you sustain a tone increases the energy and intensity of the sound and emotion. (see Fig. D, page.38, Vib.CD, track.14) The ability to control the pulse rate of your vibrato gives you many more options in creating your own style.

### **Vibrametrics CD TRACK 14 – ACCELERATING VIBRATO** **VIBRAMETRIC EXERCISES**

#### **Vibrametrics CD TRACK 3 – BASIC VIBRATO EXERCISE**

1. Using the exclamation, “Hey!” send out an easy “*calling-out*” sound, as if calling to someone far away.
2. With a continuous tone, send out “Hey!” with 2 pulses.



Feel subtle outward pulses at the solar plexus, keeping your rib cage up and open. Maintain steady support without bouncing the abdominal area.



There should be no shaking of the head or jaw.

End the tone with the last vibrato pulse. Make it sound as though it vanished into thin air and not clipped, coughed or choked off. Keep the pulses even. Keep your jaw and tongue free of tension and flexible. You can also use a hiss (s-s-s-s-s) or “shhh” sound to practice the vibrato. Alternating between pulsing the hiss exercise and pulsing the vocal tone is an effective way of beginning the process of developing your vibrato control.

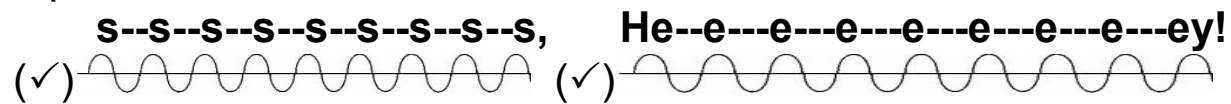
3. Now increase the number of pulses. You can use a metronome to help keep the pulses even and explore variations in pulse rate (Fig. A, page 37 and Fig. D, page 38).

#### **Vibrametrics CD TRACK 3** [at 1:25]

3 pulses:      **s-----s-----s,**      **He----e----ey!**  
(✓)       (✓) 

5 pulses: **s---s---s---s---s,**      **He----e----e----e----ey!**  
(✓)       (✓) 

9 pulses:



As note values:



4. Choose a medium pitch and medium volume. As you progress, try other variations ... high notes, low notes, loud, soft.

Check with your fingertips to make sure you are not bouncing the support muscles. Keep your rib cage up and open. Try not to let the pitch vary or wobble. Think of the vibrato as ripples on the surface of a flowing stream of sound.

5. In head voice, using the vowel “ee”,

**Sing:**



6. Using the hisses as a preparation, three times in a row,

**Sing:** (Vibrametrics CD track 3)



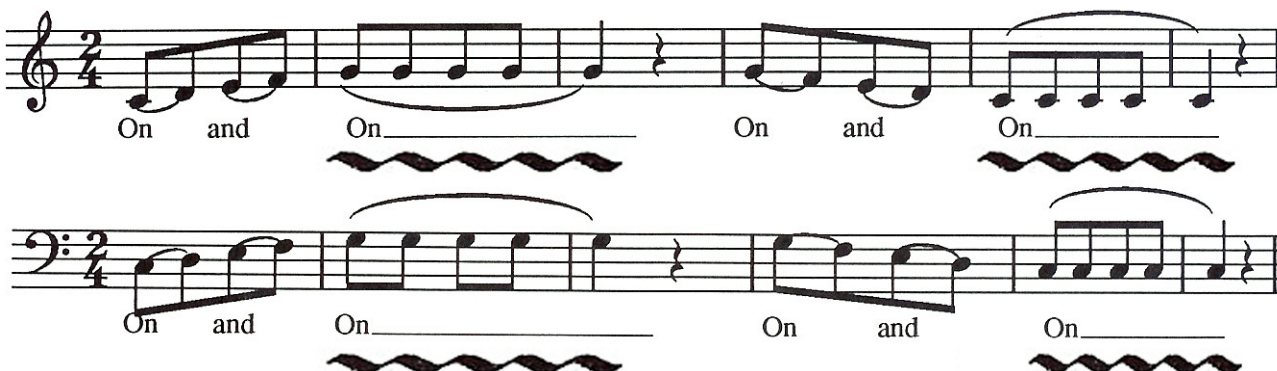
In *head voice*, three times in a row,

**Sing:**



7. Using the words “*on and on*” in *lower register*,

**Sing:** (Vibrametrics CD track 4)



8. In *head voice*, using the words “*you and me*,”

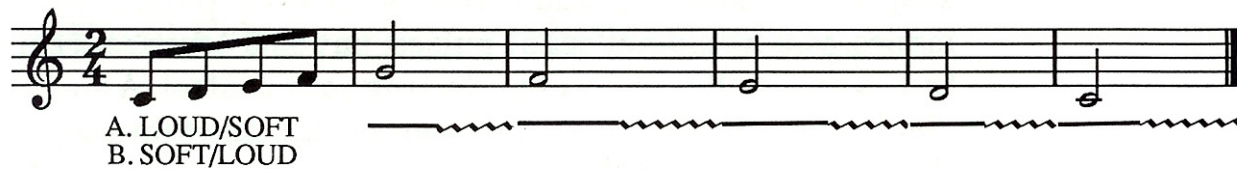
**Sing:**



Repeat this exercise, moving up a half step at a time. Vary word combinations and vary volume.  
Use the practice phrases on page 46.

9. Now let's use *delayed vibrato*, a straight tone followed by pulses on each sustained note. Use a single vowel “*ah*” or “*eh*”, first loud then soft and feel the pulses as sixteenth notes starting on the 2nd beat of each measure.

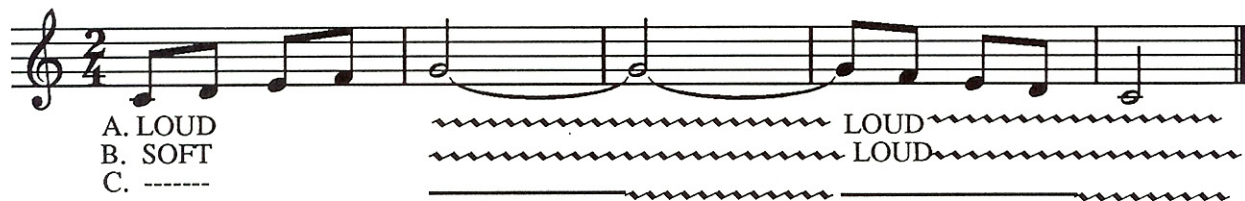




10. Repeat #9, moving up in half steps using your practice phrases on page 46.

11. Sing the following exercises in various parts of your range, using the practice phrases.

**Sing:**



12. Using a slow song, choose the words that you would like to sustain and practice them using 3, 5, 9 or more pulses of vibrato, depending on how long you hold the note. Be specific with the number of pulses.

13. Also in your song, practice delayed vibrato.

For example: (**Vibrametrics CD track 4, 1:05**)

**Sing:**



Work on speeding up and slowing down the vibrato rate, using Fig. B, page 37 as your guide. Keep a smooth flow with even pulses. In performance, you would not count pulses but as a practice technique this is an excellent way of perfecting your control.

A singer with vibrato control can spontaneously adapt the vibrato speed to enhance the emotional energy level and create wonderful musical effects. Mastering the vibrato may take time and patience but the professional sound you will achieve is well worth it.

## Sustaining Diphthongs with Vibrato

The general rule to follow when sustaining a tone on a diphthong is to sustain the first vowel sound and tag on the second vowel sound with the consonant (if any) on the ebb of the final vibrato pulse.

1. Choose a single pitch using the words on the list below. Sustain the first vowel sound and tag on the second vowel sound with the consonant on the ebb of the final vibrato pulse. The final consonant is pronounced just after the final pulse of vibrato.



## **Vibrametrics CD TRACK 5-6 - SINGING DIPHTHONG WITH VIBRATO**

		<b><u>I. P. A.</u></b>
(Smiled)	Smah-----aheeld	[ ai ]
(Boy)	Baw-----awe	[ ɔ i ]
(Moist)	Maw-----aweest	[ ɔ i ]
(Day)	Deh-----ehee	[ ɛ i ]
(Face)	Feh-----eheece	[ ɛ i ]
(Now)	Naa-----aao	[ au ]
(Cloud)	Claa-----aood	[ au ]
(So)	Saw-----awh	[ ɔ u ]
(Home)	Haw-----awoom	[ ɔ u ]

## **Sustained Consonants: Vibrametrics CD TRACK 6** (1:52 INTO TRACK)

Consonant “R” following a vowel (storm, hard, far) tends to close the vowel early, moving to the “R” too soon. Stay on the open vowel and save the “R” for the ebb of the final pulse of vibrato.

**(Hard) Hah - - - - - ahrd**

However, in *Country* music style, you may hear a little more of that “R” sound. We sometimes hear Pop singers sustaining other consonants such as “L”, “M”, and “N”.

## **Vibrametrics CD TRACK 19 / Throat Vibrato**

Throat vibrato should be reserved for special effects and styling (Jazz). The simplest way to feel the sensation of the throat vibrato is to move your voice quickly back and forth through the interval of the minor 3<sup>rd</sup>. For example: C - A - C - A - C - A - C.

The result is a kind of wobble in the sustained tone. Now, decrease the interval to a major 2<sup>nd</sup>. (Example, B - A - B - A - B - A - B) and then decrease the interval to the minor 2<sup>nd</sup>. (Example, Bb - A - Bb - A - Bb - A - Bb).

Working with major and minor 2nds in this manner is the same training method as that used for developing the trill in classical singing.

Finally, try a very minute change in pitch ... about a quartertone or smaller. With throat vibrato, the fluctuation in pitch is usually more obvious than with Vibrametric vibrato.

Like all the other vocal skills, throat vibrato is more easily controlled when there is a foundation of steady support, focus and open resonating space. Again, I recommend using Vibrametric vibrato for almost all applications.

## Helpful Hints

1. If you find you cannot speed up the vibrato and you feel that you are laboring at it, you are probably pumping the pulses too hard and allowing the support muscles to relax between pulses which appears as an undesirable bounce in the abdominal area.
2. Send the tone flowing out. Don't think up and down for the pulse.
3. Don't allow any other parts of the body to pulse along with the vibrato (head, jaw, ribs, stomach). Use your fingertips to check that your support is not pulsing with the vibrato.
4. If you are having trouble keeping the vibrato smooth, emphasize steady support.
5. When the tone is well produced, it takes merely subtle pulses to achieve the desired effect. The result is a vibrato that feels natural, free and ... 'floating on the breath'.

A while ago, when I had vocal studio in New York, I worked with two Japanese singers who were sent on a government grant to study voice and theater arts. When they returned to Japan, they were complimented on their authentic American sound. Their new vibrato was one of the changes that made the difference. Typical of the Japanese pop singer was the straight tone used intermittently with a very slow and somewhat wide vibrato and in recent times that has changed toward the more typical American Pop sound.

Vocal vibrato is a trainable skill, a musical effect that singers can use to enrich the beauty and effectiveness of their singing artistry. As you work the Vibrametrics exercises, you will experience improved control of all your vocal skills and you will be more able to find and perfect your personal style and expressiveness.

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# Background On Vibrato

Vibrato is used in all or most Classical singing, but it is believed that prior to 1700, the pure straight tone was preferred. The straight tone is preferred in singing Renaissance music and earlier works such as the Gregorian Chant. By the late 1800s the vocal repertoire of the Romantic period began to reflect more emotional realism (Verismo), as in the operas, *Pagliacci*, *Cavalleria Rusticana* and *La Boheme*.

Vibrato became popular as a sensual enhancement of the vocal sound and became the throb in the heartbeat of Romantic style. It is inconceivable that an aria by Verdi or Puccini would be performed without vibrato.

In Opera, the type of vibrato varies from one culture to another. We have observed that a slightly wider and slower vibrato is more typical of the Italian style of singing compared to the faster and narrower vibrato of the French style.

Opera singers of the German style, especially when interpreting the operas of Richard Wagner and Richard Strauss seem to use a straight tone, moving into a quick narrow vibrato. The effect is a piercing, intense quality, well suited to the heroic roles of the late 1800s and early 1900s in German opera. Wagner wrote for the voice as if it were one of the instruments in the total musical fabric. Because of the tremendous size of the orchestra used in some of his works, the vibrato described above, coupled with a big voice became necessary for projection.

The more rapid vocal cord vibrato is typical of the contemporary style of the French chanteuse or cabaret singer, such as Edith Piaf. Flamenco singers of Spain, as well as many of Middle Eastern singers also use a fast vocal cord vibrato. Most Pop singers use a slower vibrato. Many Rock singers use little or no vibrato.

The straight tone used intermittently with a very slow and somewhat wide vibrato is typical of the Japanese pop singer. Not too long ago, when we had our studio in New York, we worked with two Japanese singers who were sent on a government grant to study voice and theater arts. When they returned to Japan, they were complimented on their authentic American sound. Their new vibrato was one of the changes that made the difference.

The following quotes from individuals who should know better show an amusing variety of misinformation and lack of clear knowledge concerning vibrato for singing.

"Only opera singers need vibrato."

"It's a gift from God."

"Vibrato is not pure. It distorts the sound of beautiful resonance."

"Vibrato is an undesirable effect because it causes a tremolo."

"It's an emotional reaction when you're excited about the song."

"Rock singers don't need vibrato."

"I plant the seed in your subconscious ... every lesson, I water the seed." Even the Harvard Dictionary of Music states that, "among singers, there exists ... uncertainty as to what vibrato means" and refers to the "singer's use of it without being aware of doing so." This lack of awareness extends to some people who have said, "You can't teach vibrato!" **Vocal vibrato is a trainable skill, a musical effect that singers can employ to enrich the beauty and effectiveness of their singing artistry.**

