

Female Chest Voice



Jeannette LoVetri

Written questions that teachers and performers have submitted for discussion at sessions devoted to systematic voice technique are wide ranging, often penetrating the very heart of voice pedagogy. This column continues to examine some of them.

ISSUE

What is your opinion as to the function and use of female chest voice? I have heard a number of views expressed, including the following:

1. Female chest voice should be used very sparingly, if at all, and only with mature singers.
2. Chest is an important asset in developing the low female range, and for providing an expressive and useful color possibility. It should be introduced early. By developing the chest voice, the entire instrument is strengthened. It should be exercised daily along

- with all other ranges of the female voice, not only in low range, but well into upper range as well.
3. Chest should never be carried upward beyond E^b_4 (above middle C_4) by most sopranos, and no higher than E_4 or F_4 by a mezzo. Contraltos can carry it up to $F^{\#}_4$ or G_4 above middle C. Carrying it beyond these points may prove physically dangerous.
4. It is an essential component of the Broadway sound.

RESPONSE

Until relatively recently, it was not uncommon for a woman in the United States to speak in a head register dominant quality. In the last twenty-five years, however, there has been a trend for women's voices to be lower in pitch and chest register dominant. In addition, since rock music took over as the dominant influence of popular music in the 60s, mainstream music has been chest register driven for female as well as male singers.¹ Finally, with the continued increase in the decibel level of all amplified music,² including music theater³ and now some opera, the ears of the average listener have become accustomed to heavy, full, loud sounds as the norm in most vocal music. One only need listen to recordings of young Gigli or Lily Pons to know that voices as light as these would have a difficult time establishing major careers today, especially in the United States.

Given all of the above, the question concerning the use of chest register in the female voice seems more per-

tinuous than ever. While there still may be pedagogues who believe that chest register is "bad" and should be avoided, most singers today, both male and female, need to utilize this quality in order to have viable careers. Indeed, chest register has long been a component of the time honored traditions of classical vocal training. It is referred to by both Lamperti and Garcia and is discussed at length in the books of Vennard, Reid, and Bunch, as well as many others.

In classical singing, the chest register can be addressed in the female voice in a number of ways, depending upon the results desired. In all voices, it needs to be handled with care, as there are certain side effects in the use of this register quality, both in acoustic parameters—or resonance—and in function.

If one is working with a young voice with little or no training, both registers must be developed, but head register is best developed first, as it allows the voice to rise easily and stretches the upper limits of the pitch range. A light sound is not fatiguing to most voices and can be strengthened over time. Although there often is a tendency to breathiness in a head register tone, this clears up as the voice strengthens and the breath management becomes more deliberate. After these vocal behaviors are established, it is possible to bring in a spoken quality (chest register or modal voice) on the lower tones and gradually strengthen it and allow it to rise to E_4 .

In an older singer or a singer with a stronger voice, the lower register may be more naturally present and

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may rise without difficulty several pitches higher. Ideally all other technical work progresses apace, allowing for a blending of the notes around the E₄ to G₄ *passaggio* until the singer reaches a high level of skill and full vocal function.

The light coloratura soprano (think again of Pons or Mado Robin) can sing in what could be called a "falsetto" quality, or pure head register. At the level of the folds, this is primarily a cricothyroid driven sound. I speculate that it perhaps could be related to the vibratory function of the countertenor's folds. The very light coloratura has little color or weight, particularly in the lower pitches, but makes up for it in flexibility and high range. If the instrument is beautiful in its own right and the musical ability is there, no one minds that the chest register is missing. This voice type has become quite rare, particularly in the United States, perhaps because it does not carry well in the middle and lower pitches over a large orchestra in a big house.

The other female voice that can manage without an obvious chest register quality is the dramatic soprano. Voices that are naturally large without weight, such as those of Birgit Nilsson and Joan Sutherland, are able to fill a house without using a noticeable chest register quality in their lower pitches.

It has long been stated that chest register will make the voice more impressive but will pull it down in range, and I believe that to be true, not just for women, but for everyone. Singing roles that were too heavy or singing them too soon has derailed many careers, and I believe this is the source of the fear that chest register is "bad" for the voice.

From an objective or more scientific standpoint, it is still very unclear

what we mean when we talk about "weight" in a voice and how it functions, both positively and negatively, particularly in relationship to technique rather than natural capacity. I believe, nevertheless, that a voice deliberately can become chestier over time quite effectively, as in the case of a spinto, but that the training must be done carefully in order to avoid problems.

There traditionally has been debate among pedagogues as to whether or not chest register is responsible for the deeper, darker color of the sound or for the "edge" or brilliance in the resonance. Many studies indicate that head register produced tones allow the larynx to remain comfortably low in the vocal tract, which would more easily allow it to remain in a longer, more open configuration, hence, producing a darker, fuller tone. The chest register quality has been shown to have more compression at the level of the folds and may cause the larynx itself to change configuration and vertical height. Depending upon the philosophy of the training, it could be that the high frequency amplification that we call "ring" is enhanced by this chest register response. These observations would seem to run counter to the subjective experience most singers have that head register is responsible for brilliance and chest register for warmth in the tone. It is fair to say that the jury is still out as to the cause of these vocal tract responses, because it cannot yet be ascertained what is strictly source and what is filter. We can speculate from an empirical place, of course, but whatever school one falls into, the subjective choices need to be clearly made. In terms of music theater, the vocal quality changes must be addressed directly or problems will surely arise.

In the case of contemporary commercial music, or CCM (anything not classical), an entirely different understanding of chest register is necessary. When dealing with any style of CCM, there is a good deal of confusion about what exactly chest register is, particularly in women. Some people think that any bright, brassy sound is chesty, period. This is not correct. Some think that anything that is spoken is automatically chest register, but that depends on the speech of any given individual. It is important to be able to hear what is and what is not a register quality. It is imperative also to be able to hear a difference between the vowel sound quality or resonance adjustment and the register quality. Without this ability, the entire subject becomes murky.

Certain teachers have proposed that belting, which is simply the chest register quality carried up above the traditional E-F₄ break at a loud decibel level, is a separate register unto itself. Research has strongly suggested that all register balance is a combination of cricothyroid and thyroarytenoid activity, and that, coupled with laryngeal height, vocal tract configuration, subglottic pressure, and transglottal airflow, is what the ear hears as tonal texture. Therefore, *belting is just a label given to a certain aspect of chest register function*. This definition is supported by decades of use in the theatrical community to characterize a specific type of singing and singer who could be heard at the back of a house long before there was electronic amplification. (The two most famous exponents in the 30s were Al Jolson and Ethel Merman.)

What is not clear from the research (or more accurately, lack of research), but is known to those who perform CCM is that it is possible to sing in a chest register quality that is soft and

light. (That's what "crooning" is.) It stands to reason that if it is possible to make a loud head register sound like the aforementioned classical singers (countertenor and coloratura) and carry it down in pitch, it must also be possible to make a soft chest register sound and carry that quality up higher as well. In fact, this is very much what happens in a beginning student who has a "nice voice" and sings pop music exclusively, but doesn't belt. The confusion has arisen because operatic training eliminates this vocal behavior. Chest register in an opera singer behaves entirely differently than chest register in a pop singer. If one's experience with this quality comes entirely from opera singing, the only conclusion possible would be that chest register doesn't want to go up easily, and *that would be true*. In the case of a natural chest register driven speaking and singing voice, where the larynx rides easily high in the throat, it is not difficult to take the chest register quality up in pitch, provided there is no other unnecessary tension anywhere in the phonatory system and other physical factors are favorable.

In all but the rarest of cases, female singers must have some access to their chest register quality in contemporary pop music, and it is not uncommon to find this quality carried to very high pitches in many styles. The debate used to rage as to whether it was safe to take chest register above G₄, but it is quite possible today to hear women singing an octave higher than that in chest register on Broadway eight times a week. The number of women who take chest register into this high pitch range has been steadily growing for many years, and not all of these people are damaging themselves, vocal freaks, or unaware of what they sound like and are doing.

Through conditioning, it is possible, over time, to take the chest register quality higher in pitch without damaging the vocal folds, particularly if the singer is well trained, i.e., has good breath management and excellent posture, is physically in very good condition, has learned to eliminate any unnecessary tension in the mechanism, and is using this quality with a high level of awareness. Singing a well prepared chesty F₅ once an evening is not the same as singing a nontrained chesty F₄ over and over for several hours very loudly, which is worse. Chest register does not make the voice more beautiful, but often that's the desired goal. Obviously some women will be able to sing in chest register more easily than others, and perhaps it is a more stressed quality no matter how it is handled, but it is not necessarily automatically damaging.

It is true, however, that singing in the above manner would make it difficult, if not impossible, to sing with equal facility in a lower larynx, head register dominant position, as the muscular coordination would be at opposite functional extremes. In essence, I am saying that Aretha Franklin couldn't sing like Renée Fleming, and vice versa, even if they were inclined to try. There are vocal reasons why "crossover" is difficult, and why no one has as yet been able to successfully negotiate both classical and nonclassical music at the same time in a way that has been acceptable to either the professional community or the general public.

It is possible, however, to "cross-train" the vocal mechanism so that it produces more than one kind of vocal quality, and this is in fact a necessity in the female commercial singer, especially one who sings music theater material. Music theater requires singers to be as versatile as possible

and often asks women to sing in chest, mixed (chest with head), and a "legit" head within the same show and sometimes within the same song. In order to do this safely, without injury, it is absolutely necessary that women learn to feel specifically what "weight" means in their sound, and learn to make the sound have a spoken (modal) quality without extra pressure in the throat itself. While this isn't necessarily easy, it isn't any harder than learning to be a good opera singer!

NOTES

1. Richard Middleton, "Rock Singing," in *The Cambridge Companion to Singing*, John Potter, ed. (Cambridge: Cambridge University Press, 2000), 29.
2. Robert Trace, "Musicians No Longer Turn A Deaf Ear To Hearing Conservation," in *ADVANCE for Speech-Language Pathologists and Audiologists* (September 21, 1992): 10-11.
3. Anthony Tommasini, "Some Advice For RENT From A Friend," *The New York Times*, Arts and Leisure Section (July 26, 2002).

Jeannette LoVetri is in demand as a specialist in training singers for contemporary commercial music of all styles. Her expertise has been recognized worldwide through invitations for lectures at national and international symposia, seminars, and professional congresses, and for master classes at universities and conservatories.

LoVetri has recently taught at the University of South Alabama in the Vocal Pedagogy and Vocology Week with noted opera teacher Oren Brown. She has also just completed the first-ever for credit graduate course in Music Theater Vocal Pedagogy for Shenandoah Conservatory in Winchester, Virginia featuring her own method of voice training called Somatic VoiceworkSM. She taught in July at the National Center for Voice and Speech, Denver Center for the

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Performing Arts, in the nationally recognized Summer Vocology Institute, in cooperation with the University of Iowa.

As Director of The Voice Workshop, Jeannette has maintained a private practice teaching since 1971. Her students have appeared on and Off-Broadway, on network TV, in major films, national tours and regional theater as well as at Carnegie and Town Halls. She has been on faculty for both the School of Education and Tisch School of the Arts at New York University. Jeannette is also Director of Vocal Studies for the award winning Brooklyn Youth Chorus Academy (BYC).

Jeannette is a past president of the New York Singing Teachers' Association (NYSTA). She is a member of the New York City Chapter of the National Association of Teachers Singing (NATS) and the Amer-

ican Academy of Teachers of Singing, where she holds the office of secretary.

She has worked in liaison with noted medical and clinical specialists retraining injured singing voices, and has a consultant at the Grabscheid Voice Center at Mt. Sinai Hospital in New York. Jeannette has presented two joint workshops in New York with Daniel R. Boone, PhD, one of the founding fathers of voice science research in speech pathology and Professor Emeritus at the University of Arizona. She was the subject of a research study conducted by The Swedish Institute of Technology's Dr. Johan Sundberg, one of the world's foremost voice scientists, and the late Dr. Patricia Gramming, of the Karolinska Hospital in Stockholm.

Jeannette is primary author of two research papers and secondary author on two others published in the Journal of Voice and

was recipient of the prestigious Van Lawrence Fellowship given by The Voice Foundation and NATS in recognition of the use of voice science in the the teaching of singing.

Jeannette is on the faculty of the Voice Foundation's Symposium: Care of the Professional Voice. She was guest teacher-in-residence at the Houston Grand Opera for Meredith Monk, her student, who mounted the world premier of Monk's opera Atlas there and has been working with Ms. Monk for more than twenty years. Jeannette was twice keynote speaker and international guest lecturer for the National Cabaret and Music Theater Training Seminar in Sydney, Australia.

She was guest lecturer at Freie Universität in Berlin, addressing the Department of Speech, Audiology and Phoniatics. Jeannette has participated in research study conducted by Dr. Ingo Titze at the University of Utah on the origins of vibrato. She was the opening speaker at the April 2000 Conference, Science and Singing Teacher in New York. In March/April 2001 she was guest teacher/lecturer for the British Voice Association's Annual Conference and for the Hamburg University Hospital Department of Otolaryngology in Germany.

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November's sky is dull and drear,
November's leaf is red and sear.
Sir Walter Scott (1771-1832)
Marmion (1808)



April is in my mistress' face,
And July in her eyes hath place,
Within her bosom is September,
But in her heart a cold

December.

From *Thomas Morley, Madrigals to Four Voices* (1594)