

A Comparison of Breath Management Strategies in Classical and Nonclassical Singers: Part 3



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INTRODUCTION

Experience has shown us that classical and nonclassical singers use different breath management strategies during singing. Although these strategies can be observed in the chest and abdominal wall movement of singers, it has been difficult to quantify the movements and discern their importance to the management of breath in singing. Recently, several new studies have given us additional insight regarding breath management in singing. Thomasson and Sundberg (1997) examined the breathing dynamics of classically trained singers, and Hoit, Jenkins, Watson, and Cleveland (1996) considered the breathing habits of country singers. This article examines the results of these recent studies and determines how the new findings

may affect our pedagogical approach to various singing styles.

In Part One (Vol. 54, No.5, pp.1-4), we discussed the influence of gravity, elastic recoil, and muscle action on the breathing system. In Part Two (Vol. 55, No.1, pp.45-46), we defined several fundamental terms, i.e., vital capacity, inspiratory capacity, expiratory capacity, expiratory reserve volume, and residual volume, related to breath management and explored how singers in different styles employ these capacities during singing. In Part Three, several comments are appropriate regarding the results of the findings in Part Two.

First, it is interesting to note that the initiation lung volume (ILV) was approximately 70% of the vital capacity (VC) for classically trained singers. As a result of this finding, an appropriate question would be, "why do the classical singers initiate their singing at 70% VC rather than at 90% to 100%?" To answer this question, we must remember that the elastic recoil force of the rib cage and lungs is very strong, especially at 100% VC. Try it and see. As I suggested in Part One, take a full breath and let it go; as you let go, notice that exhalation occurs rapidly at first and then slows as you get closer to the Resting Expiratory Level. On the other hand, if, when you take a full breath, you hold it and refuse to let it go, it is uncomfortable until you do

release the breath. Because the elastic recoil forces are so strong, singers appear to want to initiate their singing at a point where the elastic recoil forces are reduced and less antagonistic effort of the inhalatory muscles is required. It appears that this point is the vicinity where these singers initiated their breath, i.e., the 70% to 80% of vital capacity range.

Rather than initiating their breath at 70% VC, country singers appear to initiate their singing at a point very close to tidal breathing, or about 55% of their vital capacity. At this point in their vital capacity there is little concern for strong elastic recoil force in the rib cage or the lungs and is very close to the point of initiating a spoken phrase. This finding suggests that country singers breathe in much the same way for both speech and singing. As a consequence of initiating singing at such a reduced capacity, we can only expect that country singers will not be able to sing as long a phrase as the classical singer will.

Second, the termination lung volume (TLV) finding suggests that country singers get some of the breath they may not have in the beginning by using more of the breath available beyond the resting expiratory level. You can see how this feels if you take a full breath and let it go. When exhalation stops you have reached a point approximating the resting expiratory level. Now, don't take an-

other breath, but continue to breathe out from this point. Note that the further you breathe out beyond the resting expiratory level, the more difficult it becomes to exhale the air and the more your breathing system wants to spring back to the resting expiratory level. These studies show that classical singers and country singers use breath that is beyond the resting expiratory level when they sing, but the country singers go farther beyond the resting expiratory level than the classical singers. Rather than suggesting that country singers do not know how to breathe, these studies show that there is simply a difference in technique and that the difference may be appropriate for the respective styles. For example, the country literature is filled with “baby done me wrong songs,” and the breath appropriate for such songs is that more depicting of sadness and down-heartedness. In addition, the musical phrases are probably not as long as those employed in classical singing. In other words, country singers probably do not need as much breath as classical singers do. Down-heartedness is not accomplished with a full breath of air, but with a vital capacity that is more exhausted. Changing the patterns of breathing might interfere with the style and change the sound to an inappropriate production.

Third, it is interesting to note that the breathing strategies used by the country singers were more like the breathing patterns of speech in untrained singers, and the breathing strategies in speech and singing were similar for the country singers. In other words, the country singers used similar breathing strategies in both speech and singing. This may

also be quite appropriate as they try to maintain the appropriate dialect of the style. Classical singers, on the other hand, show very different breathing strategies between speech and singing and appear to employ extremely large volume ranges, sometimes encompassing the full vital capacity when they sing.

An additional finding involves respiratory transitions. Whereas transitions between phrases of the respiratory cycle were unremarkable in country singers and the untrained singers, the classical singers exhibited inspiratory-expiratory transitions characterized by rapid isovolume adjustments. Attesting to a higher skill level of the classically trained singers, Hoit observed that, “classically trained singers exhibit inspiratory-expiratory transitions characterized by rapid isovolume adjustments (i.e., equal and opposite decreases in abdomen volume and increases in rib cage volume) with no change in lung volume and expiratory-inspiratory transitions characterized by rapid decrements in lung volume immediately preceding the onset of inspiration.” This suggests that the breath control system is more highly refined for the specific task requirements of classical singing.

In conclusion, we might as whether these findings should affect our pedagogy. Actually, each may work quite well for the task at hand and the goals of the singer, so the answer is most probably “no.” However, if you do make changes, let your changes be directed toward those that enhance vocal health rather than those that may alter the vocal style, and we lack evidence confirming that the breathing patterns affect the vocal health of these singers.

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