

An Appeal for Patience and Long-suffering by Singing Teachers in Their Assessment of the Value of Voice Science

Ingo R. Titze



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RECENTLY MY READINGS IN THIS JOURNAL have led me to conclude that a number of voice pedagogues, eager at first to embrace some scientific concepts in their teaching, are reverting to the “tried and true” methods of old. There is great value in that, but not at the cost of abandoning what has been a well crafted union of art and science over recent decades. The conceptual and empirical insights of Garcia and many of his followers in the nineteenth and twentieth century, as well as the wisdom of great singers who turned teachers later in their careers, have unquestionable value and should be required reading for every budding vocologist. But it is the careful digging out golden nuggets from an abundance of incorrect information (based on today’s knowledge of the human voice) that brings about the greatest new pedagogic insights.

Discovery is often incremental, and never complete. Singing teachers may need to accept the fact that closure on a topic is not obtainable by taking a few courses or reading a few books. But this is unsettling to many teachers who reach the twilights of their careers, or want to establish themselves professionally. Closure then becomes an ever more important issue because uncertainty and insecurity about one’s approach, or admission of an incomplete understanding of the vocal instrument, do not command the respect and trust of students (so we think!). Individually, and for ourselves, we therefore may make the choice to limit, or even bring to a close, our trial and error explorations. We rely on our existing knowledge base to build the best practice we can. Only a few, like the late Oren Brown, still question and alter their views on teaching well into their nineties.

Scientists are often clumsy in their first explanations of new discoveries to nonscientific audiences. They use fancy terminology and highly technical illustrations because the peer review process in science requires exact definitions and repeatable methodologies. What appears to be a snow job, a cover up, or a lengthy exposition of jargon to a lay audience is usually a reflection of trying to satisfy the paradigms of their discipline. It is no different from musicians insisting on exactness in diction, harmony, or compositional forms. After the discoveries have been repeatedly confirmed and explained in a variety of ways, the useful translations to the consumers emerge. It requires patience and longsuffering. And much to our chagrin, the moment a concept is beautifully explained and not longing for additions and corrections, a revolution

Journal of Singing, May/June 2008
Volume 64, No. 5, pp. 593–594
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National Association of Teachers of Singing

is lurking around the corner that brings into question even the most basic principles and assumptions.

Consider, as an example, our understanding of the acoustics of the singing voice, which has been featured about once every decade in *Scientific American*. Over thirty years ago, Sundberg provided a lucid explanation of how the harmonic frequencies of the source (the larynx) combine with the resonance frequencies of the vocal tract to produce the acoustic output at the mouth.¹ The article became a classic because the language and illustrations of the underlying linear source-filter theory had reached a consumer quality. This year, a new article appeared in *Scientific American* by this author.² With much assistance by the editors and illustrators of the magazine, I have tried to bring one aspect of the newly emerging nonlinear source-filter theory to the general scientific community. It may take yet another level of writing, in journals and textbooks, to find the right language and

illustrations for singing teachers. How is this different from the endless process of finding the best mental images and motivational anecdotes that have been part of effective voice training for centuries?

In summary, I understand the frustration that many readers feel with the ever-growing onslaught of new technologies and new descriptions about something as simple as the human voice. My plea is to stay receptive as long as possible and comfortable. When the need for closure is inevitable for your life's journey, at whatever time that comes, be respectful of the younger generations by not letting your finality have too strong an influence on theirs.

NOTES

1. J. Sundberg, "The Acoustics of the Singing Voice," *Scientific American* 236, no. 3 (March 1977): 82–91.
2. I. R. Titze, "The Human Instrument," *Scientific American* 298, no. 1 (January 2008): 94–101.

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