Connecting Voice Science to Vocal Art

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Lecture IV: *The Triumvirate of Motor Learning: Talent, Training and Practice*

Voice Science or Vocal Art?

Which vocal teaching method is better? A scientific approach, based on a thorough knowledge of physiology and acoustics, or an empirical one, based on professional artistic experience? Lynn Helding, Associate Professor of Voice at Dickinson College, offers a series of lectures entitled ***Connecting Voice Science to Vocal Art*** to explore this dilemma. Helding is both a professional singer and trained vocologist. Her work has positioned her between both worlds, where she believes a rapprochement between science and art can be found within the field of cognitive science.

It is almost twenty years since the the 1990s was named *The Decade of the Brain* by presidential decree, in order to "enhance public awareness of the benefits to be derived from brain research". Now is the time for research in the physiology and acoustics of singing to include the fruits of cognitive science research. Cognitive science augurs profound implications for the future of enlightened vocal pedagogy, generating a paradigm shift in emphasis from how well teachers teach, to how well students learn.

Her presentations, ***Connecting Voice Science to Vocal Art*** are based on her two-part article *Voice Science and Vocal Art: In Search of Common Ground,* and *Voice Science and Vocal Art Part II: Motor Learning Theory*, published in the November/December 2007 and March/April 2008 volumes of the Journal of Singing. She has given ***Connecting Voice Science to Vocal Art*** presentations at Indiana University, The State University of New York at Fredonia, the 50th National NATS Conference in Nashville, Tennessee, and at the Third International Physiology and Acoustics of Singing Conference in York, England.

Lecture IV: *The Triumvirate of Motor Learning: Talent, Training and Practice*

This lecture explores the "triumvirate" of motor learning: *talent, training* and *practice*. Each of these facets of motor learning has been re-examined in light of recent cognitive research, and the results have laid open to argument doctrines that were once thought to be unassailable. Questions raised include: is there such a thing as "innate talent"? Is talent or training a better predictor of success? How much practice is necessary to achieve a level of expertise in motor tasks? Is 10,000 practice hours a magic number or a myth? How can *expertise* even be defined?

In their now infamous article, Innate talents: Reality or myth?, cognitive researcher Michael Howe and his team concluded that "Innate talents are, we think, a fiction, not a fact." They further theorized that *practice* is more important than innate talent.

Indeed, according to two of the leading researchers in the field, Richard A. Schmidt and Tim Lee, "practice itself" is the single most important variable for motor learning. Recent research sheds light on such questions as: How much practice? Does practice carry a "quality rating scale"? Are there different types of practice and if so, which ones are most beneficial for motor learning? New research illuminates the many ways in which singers,

voice teachers, coaches, choral directors and even stage directors' methods may be ineffective at best and, in some cases, detrimental to true learning.

Finally, the connector between *talent* and *practice* which must be considered is *training*, and what trainers provide, *feedback*. A refreshed look at the types of feedback traditionally provided by trainers, (verbal and manual) as well as new methods of feedback (computer-assisted voice analysis) is in order.