Alternative Facts: The Cognitive Dissonance of Hearing versus Feeling

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Sound perception is one of the biggest impediments to student singers’ learning. There are many challenges and outright roadblocks which impede mastery in singing, but this presentation is located in the nature of sound itself, and the way in which singers, alone among all other musicians, experience the sound of their instruments. This impediment has been recognized as such for as long as there have been singers and teachers of singing.

All musicians guide their own music-making, both in lessons and performance, through feedback. The kind of feedback utilized depends upon whether the musician is an instrumentalist or a singer. Instrumentalists’ sound is generated externally, outside of their own body, via their chosen instrument. Thus, they mainly rely on external auditory feedback to monitor their performance. Singers’ sounds are generated internally, from within our own bodies. Therefore, singers experience internal feedback, or proprioception – what our bodies’ sensory systems are telling us. This proprioception among singers (dubbed “internal voice sensitivities” or IVS, in voice research) is further subdivided into two categories: pallesthetic (vibratory) and kinesthetic (muscular) sensitivities.i However, we singers retain the ability to also receive external auditory feedback just like instrumentalists – the sound we generate is reflected back to our ears. Thus, we have two feedback systems, both external and internal, operating simultaneously. This dichotomy creates a dilemma: the singer is faced with facts and “alternative facts.”

Expert singers got that way by reconciling these facts; the most common path to reconciliation is to trust the ears of a teacher, and learn to match proprioception (both pallesthetic and kinesthetic) with the teacher’s directives. But how, exactly, do singers accomplish this reconciliation as they struggle to reconcile the teacher’s facts with their own “alternative facts?” This struggle is the very definition of cognitive dissonance, a theory originated in 1957 by social psychologist Leon Festinger, who explained it this way:

“Two items of information that psychologically do not fit together are said to be in a dissonant relation to each other. The items of information may be about behavior, feelings, opinions, things in the environment and so on.”

As long as this dissonance remains unresolved, learning and progress are hindered. Thus the question “how” must also be directed at teachers: how might teachers guide their students to match the desired timbre with the appropriate proprioceptive adjustments? Indeed, as noted by one voice scientist, this is still an open question at least as far as scientific research is concerned:

“Because of their extreme importance in high-volume singing, internal sensitivities [IVS] have been described by many singers – including Lilli Lehmann – in the manuals and books devoted to their art, but paradoxically, scientists have not shown much interest in them... The singer’s perception of his or her own voice is not reliable enough for objective judgement of the emission. This fact poses enormous problems in learning to sing.”

Whether voice science offers us any research at present should not dissuade us as teachers from applying our collective knowledge to the problem. The presentation concludes with a scheme for how to inculcate internal voice sensitivities (IVS) in student singers using voice science facts, research from learning theory, and the critical importance of empathy and goodwill within a community of learners.

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Endnotes


iii Scotto, “Internal Voice Sensitivities,” p. 79 & 84