

# **Physiological and Acoustic Comparison of Normal and Resonant Voice**

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**Purpose:** Research has examined what is called a “Singer’s Ring” in the voices of professional singers. Acoustically, a clustering of formants is seen from 3 kHz to 4 kHz on vowels. Similar formants in speaking voice have been reported for professional speakers actors but has not been studied extensively. Voice therapy by speech-language pathologists may incorporate resonant voice therapy of various types to improve the quality and power of speaking voice. I have long been interested in “Singer’s Ring” and wanted to know more. As a speech-language pathology undergraduate student, Dr. Schmidt suggested that I could investigate this clustering of formants in speakers’ voices to compare normal and resonant voice using acoustic and physiological methods.

**Method:** Two participants were recorded repeating vowels in carrier phrases with normal voice and again with resonant voice. In addition, vocal structures for each participant will be examined using nasendoscopy (fiberoptic viewing of the vocal folds) producing the same materials.

**Summary Findings:** It is expected that a clustering of formants will be evident in resonant voice but not evident in normal voice. Also, a lowered larynx will result in an additional resonator in resonant voice creating an extra formant frequency. This resonator should not be present in normal voice.

**Conclusion:** It is expected that evidence will be found to support the existence of resonant voice that is similar to evidence found for “Singer’s Ring”.