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# "Cracking" in Male Voices

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## Question:

*Why is it that many young male singers, even after considerable training, tend to "crack" in upper-middle and upper ranges while females seldom do?*

## Comment:

This question presents the opportunity to discuss some fundamental differences in the training of female and male voices. The most direct comment is to reca11 that as singers arrive at upper-midd1e voice, energy levels between the genders differ greatly.

To begin with, the male generally speaks in modal register (traditionally termed "chest voice") over a much longer segment of his negotiable range than do females of both mezzo-soprano and contralto categories. This means that when the male reaches his primo passaggio (i.e., the pivotal point in the ascending scale that corresponds to the upper extent of his habitual speech-inflection range ), were he to continue to try to speak, he would need to call or shout. He could do so for an additional brief segment of the ascending scaleroughly the interval of a fourth but only with great effort and discomfort. He would probably be incapable of shouting beyond that point without subjecting his vocal instrument to serious abuse.

In the singing voice, the area between the first and second register pivotal points (primo and secondo passaggi) is termed the zona di passaggio (the passage zone), from which any retention of the calling voice must be eliminated. In traditional vocal pedagogy, this region is termed voce mista (voix mixte, gemischte Stimme) – what more current pedagogy calls upper-middle voice. Lower-middle voice, of course, occurs below the primo passaggio, extending downward about a sixth, with low-voice registration then taking over the remainder of the descending scale.

The locations of pivotal registration points differ drastically between female and male voice categories and within gender Fach designations. A female may speak in what traditionally is termed "head," "chest," or, altemately, in both. However, her so-called "chest" voice is not in use to the same extent in ascending pitch as is the "chest" of the male.

In the singing voice, the classic "Melba point" occurs in the generic soprano instrument at E64 (somewhat higher in that of the

mezzosoprano and the contralto ). This pivotal transition note in the scale is the point at which the female singer may descend into either "mixed" or "chest" timbres or can remain entirely in "head."

In traditional pedagogies, pitches that lie between E64 and F#5 constitute the long middle range of the soprano; a register subdivision between lower-middle and uppermiddle registers is discernible at C#5. (This portion of the scale, extending from E64 to F#5, is traditionally known as voce mista. The pitches below C#5 [the subdivision pivotal point between lower-middle and upper-middle voice] comprise ”lower-middle voice,” those between C#5 and F#5 ..upper-middle voice." For these physical reasons, the female singer does not have the same need for registration adjustment [aggiustamento] in her uppermiddle voice that the male has in comparable range).

It is in the upper-middle range where the young male may experience a failure to coordinate the aerodynamic/myoelastic (breathmanagement and vocal-fold) action that permits mounting pitch to be accomplished in a graduated fashion. If, in an ascending scale, he does not increase his breath energy at the appropriate pitches ( determined, as mentioned above, by locations of his primo and secondo passaggi points), intrinsic and extrinsic (internal and external) muscles of the larynx, and the surrounding external-frame support musculature, will not coordinate, and a “crack” will occur, an event the French descriptively call a canard (a duck squawk). This occurs not because too tense a relationship pertains among muscle groups involved in the vocal-fold elongation and the mass diminution necessary to produce rising pitch, but because there is laxity among intrinsic and extrinsic muscle groups. The degree of vocal-fold approximation and air resistance to the occluding folds is then not commensurate with the energy requirements of the mounting scale.

On the other hand, undesirable “pushed” male vocalism typically will not “crack”; it simply sounds driven and rigid, generally without vibrancy. Slackness or laxness of energy causes the involuntary canard or "crack" of uppermiddle range (zona di passaggio) in many young male voices. By contrast, in comparable range, because of the nature of laryngeal construction and registration events, a female does not need to increase the energy factor to the same extent that her male colleague should.

In hope of avoiding “cracking”, the young male singer is sometimes told to “relax”, when in point of fact he should be increasing the flexible dynamic muscle equilibrium ofhis torso. To do so, he must stay in a noble, axial position. He must augment the sensation of expansion in the anterolateral abdominal wall, thereby ensuring that he remain near the inspiratory posture of the complete breath; he needs to increase his appoggio gesture, not to reduce it.

A teacher should not expect the young male, or a male of any age, to sing his upper-middle voice with the same ease as does the female singer. The male will require greater physical involvement if he is to avoid "cracking" than will the female. Indeed, the canard itself may result from urging on his teacher's part to "relax" at exactly those points in the scale where breath-energy and external-frame support should be heightened.

Although the posed question deals only with "cracking" in the young male voice, some young women are not immune to the same phenomenon (although with less frequency). A wise teacher, reexamining the

degrees of energization taking place, may recognize that even with female voices, an increase in energy in the zona di passaggio, and above, is desirable. 🕮