



and light purple segments. The singer also had a falsetto register. Involuntary transition between modal and falsetto in glides occurred between D4 and D#4, across a phonational gap near the bottom of the C4 octave. This characteristic gap is shown as the white segment that bisects the alto and tenor ranges of the test piece. This singer was reluctant to use his falsetto range, defaulting on every occasion to modal unless specifically asked to use the falsetto. When asked to blend falsetto and modal in the same vocalise, the singer was able to eliminate the phonational gap, the most comfortable crossing point found being between C#4 and D#4. An abrupt change in tone and volume, however, was readily perceptible. When tested to its extremes, the falsetto voice was found to range between A3 and A#5.

What does this mean in practice? Neither soprano, alto or tenor part comfortably matches the voice profile, though soprano is the only part that avoids the hazard of the phonational gap that threatens all adolescent male singers. If the boy were to use only his falsetto voice, he could sing the soprano part entirely in this register without any break. Singing in this way has been common practice in many English choirs for a long time, but is now strongly condemned by a large majority of singing teachers knowledgeable about adolescent male voices. In this actual case, though able to sing the soprano part, the boy reported falsetto in this range to be difficult and uncomfortable.

The second possibility is for the boy to sing the alto part. This he could do in either modal voice, falsetto voice, or a combination of the two. In actual practice, he chose to use the modal voice when tested, resulting in a tense performance mostly well above the tessitura and bisected by the phonational gap. Had he chosen falsetto, the phonational gap would be avoided, but he would be right at the bottom of his falsetto where the tone would be weak and feeble, perhaps leading to the sensation that he was not making as much sound as the other singers. This might account for his choice of modal register during the test (where other singers could be heard through headphones). Although the boy demonstrated through test vocalises that he could blend his falsetto into his modal voice across the gap, significant concentration and effort was required to overcome circumstances that are inevitably only a relatively short-lived transitional point in the singing career. A final objection to use of modal voice only is that the lowest notes of the alto part also fall within the natural tessitura and the TA dominant part of this range, requiring vigilance against a register flip or crack. This is hardly a satisfactory or rewarding singing situation.

Finally, would he be better on the tenor part? It is pitched toward the top of the tenor range. Indeed the lowest note is comfortably within his current tessitura. However the tenor part is awkwardly bisected by the phonational gap at precisely the point where the tenors are prominently heard as their part falls from E4 to fill in the third of the chord. The only way to avoid a potential crack at this point is to force TA dominance higher than it ought to go, leading to strident "shouty" tone, possibly distorted posture and tongue root tension. A persistent strain throughout rehearsal would be inevitable as the voice would function for considerable periods well above its tessitura.

These circumstances apply to only one particular repertoire item. Any given programme might include pieces where the tenor and alto parts were pitched differently within the respective ranges, leading to other sets of difficulties specific to each piece. One can therefore understand why boys were trained in the past to continue in the soprano voice during this phase of puberty, and to “rest” from singing altogether for a period when this became too difficult (the old idea of “voice break”). One can equally well understand why much current advice is for boys to sing gently within the tessitura once the new voice begins to emerge. Only cambiata parts fit such a tessitura comfortably. Fitting boys to a conventional SATB part at this time has been shown in this case to present challenges that ought at the very least to promote serious reflection.