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# The Boy's Changing Voice: A Comparison of Theories

Richard D. Kruger

*Eastern Illinois University*

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THE BOY'S CHANGING VOICE:

A COMPARISON OF THEORIES

(TITLE)

BY

Richard D. Kruger

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## CHAPTER I

### INTRODUCTION

Over the years there has been a controversy among vocal music instructors and choir masters as to whether a boy should sing during the time his voice is changing. Will a boy ruin his voice by singing, or will the voice be improved? Does a boy's voice change or does it break? What causes this change or break, and when is it likely to occur? What do the experts say in answer to these questions?

The answers to these questions are needed by all teachers of vocal music who deal with boys from the sixth grade through high school. The teacher must understand what is happening in the vocal development of these boys to guide them properly during the adolescent years. The boys should then be helped to understand what is happening to their voices so healthy attitudes toward singing can be developed.

The principal theories concerning the adolescent boy's voice are the traditional or break theory and the modern or change theory. The terms traditional and modern are misnomers because each theory has been in existence for over a century, with the traditional break theory being the most accepted in the late nineteenth and early twentieth centuries, and the modern change theory gaining prominence and acceptance more in modern times.

The proponents of the break theory believe that the boy's voice suddenly breaks from a high treble voice to a voice of uncertain control, and that the voice should be rested for several years during the break, until it settles down into an adult voice of bass, baritone, or tenor. If the voice is not rested, it may be permanently damaged.

The change theory, widely followed today, asserts that the boy's voice, when handled properly, will lower gradually, and that it strengthens the voice to use it during this period.

The cause of this break or change is physiological, although it has many psychological implications. Frederick J. Swanson, through research and testing of boys' voices in Moline, Illinois, found the following facts:

- (1) Voice change occurs as a secondary sexual characteristic.
- (2) It occurs because of the rapid change in size and proportion of the larynx, resulting from the presence of certain hormones in the body as the male sex organs grow and function.
- (3) Age, height, and weight are not reliable indices of advancement into the period of voice change.<sup>1</sup>

For predicting when voices would change, Swanson used the Davenport Scale. This presents the course of male sexual development in six stages. The first is pre-puberty; numbers two through five are puberty, and number six is post-puberty.<sup>2</sup>

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<sup>1</sup>Frederick J. Swanson, "Voice Mutation in the Adolescent Male: An Experiment in Guiding the Voice Development of Adolescent Boys in General Music Classes." (University of Wisconsin, Ph. D., 1959, Ann Arbor, Michigan, University Microfilms, Inc., 1960), p. 40.

<sup>2</sup>Frederick J. Swanson, "When Voices Change," Music Educator's Journal, (XLVI, Feb.-Mar., 1960), pp. 50-56.

Swanson found that the development of pubic hair preceded voice mutation. "Signs of voice mutation typically appear at about stage three on the Davenport Scale, rarely before stage two, and always by the time stage four has been reached. Height and weight may be only fairly dependable predictors. . ."<sup>3</sup>

As the adolescent develops, his voice begins to lower in pitch. The voice box enlarges and the vocal bands become thicker and longer, and all supporting muscles, such as chest and abdominal muscles, become stronger.<sup>4</sup>

The physiological facts are not disputed by either the break or the change theorists. Their differences lie, rather, in the treatments of the voice during the period of change. To compare these two theories and consider their merits, various authorities have been consulted. This thesis will attempt to find, through these authorities, the most practicable methods of guiding boys through the period of the voice change.

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<sup>3</sup>Ibid., p. 50.

<sup>4</sup>Madeline D. Ingram, and William G. Rice, Vocal Technique for Children and Youth. (New York: Abingdon Press, 1962), p. 64.

## CHAPTER II

### THE BREAK THEORY

The break theory originated in England and maintains that the boy's voice breaks during adolescence; that it goes through a period of uncertainty to the voice of a tenor or bass. While this break is occurring, roughly between the seventh and ninth years of school, the voice should be rested. If the voice is not rested, permanent damage may occur to the after-voice. "This is the theory generally adopted by church musicians and school music educators in England and by church musicians in America."<sup>5</sup>

Emil Behnke and Lennox Browne, in a work published in 1885, asked 190 choirmasters and vocal teachers whether they thought it was safe for a boy to continue singing while his voice was passing through the breaking stage. They found this:

- 2 correspondents say that it is safe.
- 11 say it is safe, if the voice be only moderately used, and not strained.
- 9 say a boy can continue to sing if he take a lower part.
- 3 recommend a lower part for a time, and afterwards perfect rest.
- 3 deprecate the custom of taking a lower part when the voice breaks.
- 2 comment on the danger of singing too soon after the break, before the voice is settled.

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<sup>5</sup>Duncan McKenzie, Training the Boy's Changing Voice. (New Brunswick, New Jersey: Rutgers University Press, 1956), p. 3.

- 11 remark that there is often no real break but only a gradual change.
- 6 give inconclusive replies.
- 6 note certain peculiarities attending the break.
- 158 say that it is decidally not safe for a boy to sing while his voice is breaking.

Considering that most recommend either limited use or no use of the voice during this time, here follows a sample of the answers to the question: Do you consider it safe for a boy to continue singing during the voice-breaking period?

Dr. A. E. Dyer: 'When a boy continues singing treble while the voice is breaking, or up to that time, it usually ruins the voice for after years. A boy may continue singing always without injury under the following conditions:--Before the voice shows symptoms of breaking, let him sing alto; then, when symptoms appear to indicate difficulty of producing the upper notes, let him sing tenor, when [sic] his voice will remain; or, if it appears that the upper notes become difficult, let him sing baritone or bass. I always proceed this way, and the voice in after life is always good. Voices differ, of course; a careful supervision is always necessary.'

Mr. Alfred J. Eyre: 'When the first signs appear, he should be released from singing the upper treble part, although, for a short time, he might sing the second treble or an alto part, and afterwards rest entirely.'

Dr. Abram: 'I think it is a great mistake when a boy's voice commences to break that he is encouraged to sing alto. In my estimation, a most dismal croak is the result.'

Dr. Stainer: 'I have found that a large majority of young men begin to use their voice before it is "settled" and so injure their vocal organs permanently. I have also found that their voices are liable, before settling, to remarkable changes in compass and quality.'

Dr. Bridge: 'No. I believe that a boy should cease to sing as soon as his voice shows signs of breaking.'

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<sup>6</sup> Emil Behnke, Lennox Browne, The Child's Voice. (Chicago: A. N. Marquis and Co., 1895), pp. 64-65.



Sir Robert Stewart: 'No. No more than to move his arm while the bone knits, after breaking it.'

Mr. George Kenneth: 'Singing should be totally suspended while the voice is undergoing the change, i. e., between the ages of fourteen and eighteen.'<sup>7</sup>

Behrke and Browne, after finding that the large majority thought it wrong to continue singing, asked their correspondents what the results were of boys being made to sing through the period of puberty. They received 152 replies. The results are listed below:

- 40 correspondents have no knowledge.
- 5 think that the voice is improved by the experiment.
- 10 know of the experiment having been made, and consider it has caused no harm to the voice.
- 8 mention results so variable as to admit to no conclusion.
- 79 say that the experiment causes certain injury, deterioration, or ruin to the after-voice; and of this number, ten observe that they have suffered disastrous effects in their own persons.<sup>8</sup>

The results of this questionnaire showed that most of the choirmasters and teachers knew of instances where the results of singing through the break were damaging to the after-voice, although a small minority thought the voice was not harmed, but helped; and some thought it made little difference. Samples of the answers the correspondents gave on boys made to sing during puberty are given below:

Mr. Humphrey J. Stark: 'I have watched such experiments very frequently, and I have not the slightest doubt that the general result is to permanently injure the tone-quality (timbre) of the voice.'

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<sup>7</sup>Ibid., pp. 65-72.

<sup>8</sup>Ibid., pp. 75-76.

Mr. Charles H. Lloyd: 'An excellent bass singer of my acquaintance assures me that he sang soprano as a boy; and then alto, tenor, and finally bass, without intermission.'

Mr. Arthur G. Leigh: 'The result in every case has been ruin to the voice.'

Rev. G. Willoughby Barrett: 'I have known one or two instances; but in each case the boy had little or no voice when he became a man.'

Mr. James F. Seabrook: 'I have made many such experiments, with the result that, in the large majority of cases, the boys have afterwards become very fair singers of alto, tenor, or bass.'

Mr. George Kenneth: 'My own voice was spoiled by having to make constant use of it during the critical period from fourteen to eighteen.'<sup>9</sup>

In 1895, Francis Howard acknowledged that within a few months a boy's voice may change from a soprano to a light bass with only a range of eight to twelve notes, or the change could extend over a period of three years after the first distinct break before any certainty to the voice could be regained.<sup>10</sup>

Howard believed that if the voice changed rapidly, all singing should be stopped. "Really, in such cases, boys cannot sing even if they attempt to do so."<sup>11</sup> These boys get so hoarse, and their pitch fluctuates so unexpectedly between "an uneasy treble and a preternatural bass" that a boy can sing only in monotone if he has the courage to brave ". . . the ridicule occasioned by his uncontrollable vocal antics, [when] he tries to join in."<sup>12</sup>

<sup>9</sup>Ibid., pp. 76-82.

<sup>10</sup>Francis E. Howard, The Child Voice in Singing. (New York: The H. W. Gray Co., 1895), pp. 114-115.

<sup>11</sup>Ibid., pp. 114-115.

<sup>12</sup>Ibid.

Howard does cite cases where voices break less rapidly, making singing possible during the break. Whether to sing or not to sing depends on the individual voice and how much time is to be spent in singing. Howard believes that although singing is possible during the break, it is wiser to rest the voice. In Howard's day, the amount of time spent singing in schools was quite limited, while the amount of time spent in church choir singing was considerably greater. He believed it would have been as sensible to forbid reading aloud and talking during the break as it would to inhibit the use of the voice during fifteen or twenty minutes of daily singing.<sup>13</sup>

Howard thought it absurd to advocate complete non-use of the voice during this period in either talking or singing, but that it was important to guard against its misuse:

If boys have up to this time used only the thick register, they will in singing through the break intensify their bad habits; throatiness, harshness, nasality, will become chronic. This would be bad enough, but each bad vocal habit results from the abnormal use of the vocal organs, and occasions hoarseness, chronic sore throat, catarrh, etc.<sup>14</sup>

Claude Ellsworth Johnson, organist and choirmaster of the Church of the Holy Cross in New York, wrote that choirmasters should caution boys whose voices break to rest entirely until their voices have completely settled. He suggests that the boys use their former

<sup>13</sup>Ibid., p. 117.

<sup>14</sup>Ibid., p. 118.

training to judge the merits of other choirs they hear, and study music in other ways while resting their voices. He thinks the boys should continue singing treble up to the time that the voice reaches the point of complete break.<sup>15</sup>

Frank R. Rix, in 1910, asked a similar question: Should boys sing soprano until the voice break and should they sing during the period of "uncertain control" that follows the break?

Until recently the general custom was to keep the boy singing soprano as long as he can sing it. Some boys are even kept singing when they are merely using the falsetto which remains after the mutation. Many teachers advise entire rest from singing during the changing period. Others say that the voice may be used softly within a small range. Experience shows that a majority of boys can do this, but in individual cases where the voice changes rapidly and is wholly uncontrolled, it should rest for a time.<sup>16</sup>

Rix believes that it is a serious matter whether or not a boy should be kept singing soprano until the break occurs. If he does sing until the break occurs, the change very frequently is sudden and will result in total incapacity for some time. The professional choir boy is tempted to do so, and the choirmaster does not like to give up the boy when he seems so able and experienced. He fears that the future usefulness of the voice isn't always considered. To prevent damage, Rix recommends the cessation of soprano vocal assignments at least a year before the change is

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<sup>15</sup>Claude Ellsworth Johnson, The Training of Boys' Voices. (Philadelphia: Oliver Ditson Co., 1909), pp. 34-36.

<sup>16</sup>Frank R. Rix, Voice Training for School Children. (New York: The A. S. Barnes Co., 1910), pp. 56-57.

expected. He feels that the boy needs time and patience to become accustomed to the lower register of his voice, using mellow, unforced tones. Vocalises and songs in the contralto or tenor range should be used to strengthen the voice. These ideas of Rix's are much the same as some modern theories.<sup>17</sup>

Behnke and Browne in their work, the first to be published on the problem of the boy's changing voice, asked another question of their correspondents: Is there a temptation to use the boy soprano voice even up to the time when he ought to have stopped singing? They received 170 replies, and only four said that the temptation did not exist. The following sample of replies to this question illustrate the feeling:

Dr. Henry R. Pringuer: 'Very much temptation, but not necessarily harmful. I have found that boys with very good high notes (developing a good top register), and who have sung much up to the last, seldom turn out to be tenors afterwards; but, as basses, have not materially injured their voices. This has been the case in several well-remembered instances under my personal notice and control, when I have carefully discouraged the use of the lowest register of the boy's voice.'

Mr. J. Stark: 'Boys are often kept in choirs at the time their voices are changing, from other than musical motives. Probably the boy does not care to leave, and there is a chance that, if he once gave up his regular attendance, he would be lost as an adult chorister. These reasons often compel a choirmaster, against his convictions, to retain a boy whose voice is changing.'

Dr. Charles W. Pearce: 'Undoubtedly there is such a temptation, and still more unfortunately this

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<sup>17</sup>Ibid., pp. 58-59.

temptation is not often resisted. Only last evening I met at a choir rehearsal a young man whom I had not seen for ten years. Then he was a solo boy in an important London choir. Now he is a very second-rate alto singer (I mean as regards the quality of his voice). When remonstrating with him for singing alto at all, he informed me that his choirmaster had kept him singing treble as long as he was able to produce a note; and then, when his voice failed him, after many disappointing attempts at singing tenor and afterwards bass, he took refuge in the alto rank, where he is able to use (in a ghastly manner) what little remains to him of his fine treble voice.<sup>18</sup>

Dr. T. Tertius Noble, for many years the choirmaster at the St. Thomas Church in New York, in a 1950 magazine article echoed the belief that a boy should rest his voice for two or three years during the changing period. He felt that it was difficult to obtain proper resonances during the period, but it did not harm the voice to sing during the change.<sup>19</sup>

In the same article, Harald Hedding, who was musical director of the Vienna Choir Boys, said he believed that a boy should sing up to the time the voice changes, at about age fourteen. After the change, the voice should be rested until age seventeen to keep the voice from being injured. Only about five out of one hundred voices may safely be used during the change.<sup>20</sup>

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<sup>18</sup>Behnke and Browne, pp. 85-90.

<sup>19</sup>Harold W. Gilbert, "The Changing Voice," Etude, LXVIII, April, 1950), p. 56.

<sup>20</sup>Ibid., pp. 56-63.

The earliest authorities of the breaking voice, Behnke and Browne, the majority of their contemporaries, and several modern musicians felt that the boy's voice would break when it reached the age of adolescence, and for the safety of the future bass, baritone or tenor voice of the adult male, the boy should refrain from singing during the time of the break. Although some authorities thought that singing through the break was not harmful, they felt singing treble (soprano) until the break was harmful. Their solution to the problem was to have the boy sing lower parts as his voice changed. This idea is the basis of the change theory, which is very highly accepted in modern times.

### CHAPTER III

#### THE CHANGE THEORY

While most of the musicians in the late nineteenth and early twentieth centuries believed that it was harmful to sing during the period that the voice was breaking, a growing minority felt that it was beneficial, or at least not harmful to sing during this period. This minority felt that the voice was changing, not breaking, and the proper procedure was to let the boy sing lower parts and allow his voice to change naturally. This theory introduced such terms as alto-tenor and cambiata into the vocabulary concerning the changing voice. No matter what the terminology, proponents of the changing voice theory felt that it was not harmful to sing during this period if the boy was carefully watched and coached. Changing voice theorists maintain two primary reasons for boys' singing during this adolescent period: It is good for the voice, and strengthens it; it helps continue interest in singing. "If they are allowed to drop out completely in the junior high school, there is more than a fifty-fifty chance that they will be at the end of their singing activities."<sup>21</sup>

Kenneth N. Westerman, in a work written in 1947, was very emphatic about letting a boy sing while his voice was changing, but he cautioned against the voice's misuse:

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<sup>21</sup>Esther M. Keller, "Vocal Problems in the High School Vocal Program," The Bulletin, (XIII, Feb., 15, 1957), p. 12.



The age-old question of whether to allow a boy to sing during the time his voice is changing has a very simple answer. Certainly! Let him sing! But be sure. . .you never allow him to use any muscle blocks during the changing period. Bad habits are easily formed during this time, but there is no more reason to stop singing than talking. . . .Watch for signs of tension such as scowling, thrusting out the jaw, straining the cords of the neck, tipping the head back, and the instant you see any of these signs, have the boy move down one part.<sup>22</sup>

Genevieve A. Rorke, associated with the Los Angeles city schools, also saw no reason for a boy to discontinue singing during the adolescent period as long as the voice was watched carefully. She felt that the first sign of mutation, a boy should be placed on first bass. Keeping the boy on high parts too long would cause irreparable injury to his voice. Miss Rorke maintained that with skillful direction, a boy could pass through the critical vocal period with no inconvenience or embarrassment.<sup>23</sup>

Helen Steen Huls, instructor of voice at St. Cloud State College, St. Cloud, Minnesota, feels that boys' voices do not break unless they have been singing too high or have in some way strained their vocal cords. She thinks that boys should be kept singing most of the time, if not all of it, while the voice is changing:

Boy's voices should move into the new, lower pitches gradually, and should normally develop toward the

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<sup>22</sup>Kenneth N. Westerman, Emergent Voice. (Ann Arbor, Michigan: Dr. K. N. Westerman, 1947), p. 134.

<sup>23</sup>Genevieve A. Rorke, Choral Teaching at the Junior High Level. (Chicago: Hall and McCreary Co., 1947), p. 63.

quality of the adult male one or two tones at a time. If there is a sudden shift to a lower area, in which the boy is 'one day a soprano, the next day a bass,' some abnormality may be indicated. Often this sudden 'break' occurs because the boy has been singing too high, too long, and the vocal cords are strained beyond their capacity. . .

In recent years it has been conclusively demonstrated that not only can boys sing during the change, but also it is advisable for them to do so. This premise must be qualified by the assumption they have adequate vocal guidance in schools and choirs. It presupposes teachers who will watch them carefully for symptoms that indicate the advisability of their moving to other voice parts, and who will be alert to the beginning of poor vocal habits. Singing under proper supervision, at this time, is beneficial because it is one of the best ways to counteract the effect of playground yelling and the many weird, nameless sounds that are constantly being made by teen-age boys.<sup>24</sup>

In discussing the American teacher's role in the changing voice theory, Duncan McKenzie, a leading contemporary authority on boy's changing voices, stated that the position taken was that the period of rest was not necessary. He felt that if a boy is taught the correct use of his voice and is properly classified for range, he can go on singing throughout the period when his voice is changing. The boy should then be "ready to take part in choral work for mixed and male voices at an earlier age than would have been possible if the voice had been rested."<sup>25</sup> McKenzie also believed that if a boy discontinued singing during adolescence, the chances were great that

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<sup>24</sup>Helen Steen Huls, The Adolescent Voice: A Study. (New York: Vantage Press Inc., 1957), p. 53.

<sup>25</sup>McKenzie, p. 7.

he would never again take up choral music. "He may not be moved to return to it if, during the formative period of voice and character, he is cut off from the physical benefits of singing and the yet unrealized spiritual force of song."<sup>26</sup>

George Oscar Bowen, director of vocal music education at the University of Tulsa, Tulsa, Oklahoma, states that a boy whose voice is changing should be encouraged to sing, even though he feels he cannot and does not want to try. Bowen says that the adolescent years are a crucial period for the boy who enjoys singing. At times a boy is inclined to believe that he can no longer sing, and sometimes refuses to try. With proper guidance the boy can become aware of the fact that a transformation is taking place in his body and he can be encouraged to try to sing. The boy discovers that his new voice has lost the flexibility and range that were present in his unchanged voice. His changing voice range, maintains Bowen, occasionally has only four or five tones. The use of the voice during this time is "decidedly helpful to a speedier development to the new normalcy."<sup>27</sup> Bowen thinks because the change that is taking place is one of nature's own, it is not a pathological condition, or one which requires complete disuse of the vocal apparatus.

It is pointed out that the vocal mechanism consists of materials similar to those which make up other muscular parts of the body, and that they need exercise

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<sup>26</sup> Ibid.

<sup>27</sup> George Oscar Bowen, "Experiences and An Experiment with Boys' Voices," The Bulletin, (VIII, No. 1, Sept.-Oct., 1951), p. 15.

for their development, just as the muscles of the legs and arms must have exercise or they become useless. With proper guidance, which consists of a good deal of 'horse sense' on the part of the teacher, the boy's voice will gradually grow and develop, and within the course of four or five years, sometimes a shorter time, become a new musical instrument.<sup>28</sup>

Bowen organized The Tulsa Boy Singers in 1948. The group was sponsored by the University of Tulsa and had forty-three boys, aged nine to eleven, as members. All the boys had good voices, true ears and the desire to sing. All voices were "in treble quality, with no suspicion of change or lowering."<sup>29</sup> He found that in the second season of the choir, the voices began to show richer quality and a little more range in the lower voices. At the beginning of the third season, he found, "Two had voices like father's; others dodged when they saw 'middle C' coming up, and others were inclined to pinch on the third space C tones."<sup>30</sup>

These boys had been trained for two years and sang well, so Bowen kept them singing, "but. . .we did not keep them singing and pinching in the upper parts of their voices until they 'broke' and were definitely ruined for singing."<sup>31</sup>

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<sup>28</sup>Ibid.

<sup>29</sup>Ibid.

<sup>30</sup>Ibid., p. 21.

<sup>31</sup>Ibid.

<sup>32</sup>Ibid.

Six boys whose voices had changed or were close to it still could sing as high as middle C and could give power and depth to the third part. "The third part consisted of some sixteen boys whose voices were beginning to change, but who could use the light quality as high as third space C."<sup>32</sup> The second part had twenty boys who could sing high E or F.

Bowen's experiment was successful, although some of the voices almost did not hold out to the end of the season. "It didn't sound like a boys' choir as the term is generally understood, but was most satisfactory and satisfying."<sup>33</sup>

Agreeing with Bowen that boys should be encouraged to use their changing voices are Madeline D. Ingram and William C. Rice, who wrote, in Vocal Techniques for Children and Youth: "Most of today's trained choral directors. . .agree that, under proper guidance, a boy's voice is not harmed by his singing during the change."<sup>34</sup> They believe that the voice improves by being used wisely. "Of equal importance is the fact that his interest is maintained and probably heightened because of the exciting challenge of his new voice and all the music he can sing or soon will be able to sing."<sup>35</sup>

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<sup>32</sup>Ibid.

<sup>33</sup>Ibid.

<sup>34</sup>Ingram and Rice., p. 68.

<sup>35</sup>Ibid.

The most important principle in handling young voices, according to Ingram and Rice, is that singing must be easy and it must be fun. At the first signs of tension or discomfort on high notes, the boys should be moved to a lower part. For a time their ranges may be limited to five or six tones centered around middle C. The boys should sing down through the break as long as they are able to do so without strain. "As the additional lower tones become singable, [their] need for the 'unchanged' higher tones will decrease."<sup>36</sup>

Ingram and Rice feel that music instructors frequently are inclined to push the voice down too fast and too far in order to obtain a "manly" bass quality. To offset this, they suggest the use of a falsetto voice at every opportunity. "Most fourteen year old changed voices are light baritones. Every effort should be made to keep as much of the voice as high as possible, subject only to the limitations of easy singing."<sup>37</sup> The tenor-baritone part, according to these two authorities, should rarely go above D and never above E<sup>b</sup>. The tessitura should center around G with the lowest note C or an occasional E<sup>b</sup>. The young bass should sing almost as high, but not as frequently, as the young tenor sings high. Ingram and Rice say that the voice should not be "forced, squeezed, driven, or confined."<sup>38</sup>

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<sup>36</sup>Ibid., p. 69.

<sup>37</sup>Ibid., p. 92.

<sup>38</sup>Ibid., p. 93.

Good posture, correct breath support, and free, easy singing will permit a boy's vocal mechanism to grow naturally and his voice to move without interference along the way to maturity.<sup>39</sup>

John C. Wilcox proposes another method of helping the voice change naturally. He advocates systematic practice of the full vowel tones in the low range to facilitate a smooth, gradual change. He thinks singing up the octave from A or A<sup>b</sup> below the staff will strengthen the muscles which take on the weight of the maturing voice, and will prevent the sudden break. Wilcox believes that boys should also continue to sing in their higher voices as long as it is comfortable.<sup>40</sup>

A boy should be "victor over tonal quality, and not the victim of it," states Chrystal Waters.<sup>41</sup> He can be the victor if he has a loose, open throat passage. This frees the vocal cords to vibrate evenly and adjust themselves to the slow changes of maturing size and strength. Waters feels a boy should relax the muscles of the throat, neck, jaw, soft palate, and tongue. When the throat is free and opened, the breath will stream more easily and there will be fewer problems with the changing voice.<sup>42</sup>

<sup>39</sup>Ibid.

<sup>40</sup>John C. Wilcox, "Vocal Guidance for Children and Adolescents," Etude, (IX, No. 3, Mar., 1942), pp. 194-211.

<sup>41</sup>Chrystal Waters, "When a Boy's Voice Changes," Parents' Magazine, (X, No. 2, Feb., 1935), p. 25.

<sup>42</sup>Ibid.

The minority opinion of music educators in the nineteenth and early twentieth centuries was that it was not harmful for boys to sing during adolescence. This minority thinking has been accepted by the majority of contemporary music educators. In fact, it is almost universally accepted that boys should sing while the voice is changing. Various methods of easing boys through this crucial period have been tried. Most methods suggest having boys sing lower parts when their voices begin to change, and making certain that their voices are not strained or abused. Singing soprano for too long when a voice should be naturally lowering causes strain to the vocal mechanism. Music educators generally feel that correct singing through the period of change strengthens the voice and helps facilitate the change. Singing during the junior high years also helps maintain the student's interest in vocal music and does not force him to seek other sources to fulfill his esthetic needs.



## CHAPTER IV

### ALTO-TENOR AND CAMBIATA TERMINOLOGY

Two terms, the alto-tenor voice and the cambiata voice, have come into large scale use in modern discussions of the boy's changing voice. The use of alto-tenor to designate a period in the voice change seems to have evolved because of the unique properties of certain voices during this period. The alto-tenor range overlaps part of the ranges of alto and tenor voices. The quality of this voice is somewhere between that of a boy alto and an adult tenor.

William Raymond Sur, professor of music, Michigan State University, and Charles Frances Schuller, professor of education at the same university, describe the alto-tenor voice as a changing voice with a reedy quality. A boy with this voice may give the impression that he has a cold. The range of this voice, according to Sur and Schuller, "may be restricted for a time to five tones such as F--C."<sup>43</sup> They feel that even though a boy's alto-tenor range is limited to a few tones, he should be encouraged to sing the tones which he can sing easily.

Disagreeing with Sur and Schuller as to the range of the alto-tenor voice are Harriet Nordholm of the Michigan State music education department, and Ruth V. Sakewell, assistant supervisor of music in the

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<sup>43</sup>William Raymond Sur, Charles Francis Schuller, Music Education for Teen-Agers. (New York: Harper and Brothers, 1958), p. 60.

Billings, Montana, public school. They believe the alto-tenor range to be from F below middle C to B, third line, or a total of eleven tones.

Nordholm and Bakewell describe the alto-tenor voice as being rich and mellow in quality. They feel that "the alto-tenor voice part should be filled with interest and often used as the melody part, for it has a beautiful tone quality. It is full of vigor, yet is capable of lovely pianissimo. Quickly moving melodies are not recommended for the alto-tenor voice."<sup>44</sup>

Duncan McKenzie defines alto-tenor voice in the following way:

"Alto-tenor" is the term used to describe and classify the boy's voice after it has lowered to the stage when the changed voice begins to develop. It was coined as a result of the need for a suitable designation for the third part of four-part voice music for adolescent boys in the upper grades of the elementary school, in the days before the junior high school. The term was applied not only to the voice, but also to the part. The voice is still alto, but it has lowered to the extent that the boy can sing in the tenor range; the quality, however, has not yet become masculine, that is, either tenor or bass.<sup>45</sup>

McKenzie states that the accepted alto-tenor range is from G below middle C to G an octave above middle C. This is the safest and most practical range for carrying out the alto-tenor idea of voice classification. He feels there are exceptions to this general

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<sup>44</sup>Harriet Nordholm, Ruth V. Bakewell, Keys to Teaching Junior High School Music. (Minneapolis, Minnesota: Paul A. Schmitt Music Company, 1953), p. 101.

<sup>45</sup>McKenzie, p. 19.

range, with some boys able to sing a few notes higher than high G and some able to sing several notes lower than low G. "The criterion for determining that the alto-tenor stage has been reached is the ability to sing low F together with the development of a timbre peculiarly associated with the changing voice when it has reached this stage."<sup>46</sup>

According to McKenzie, every boy's voice passes through the alto-tenor stage, usually during the junior high school years. Again there are exceptions to this, with some boys reaching the alto-tenor stage in the sixth grade and some slow developers not reaching it until they are in high school. McKenzie states that "either because their voices change to bass quality quickly, or because their voices pass through the alto-tenor stage during the summer vacation, some boys skip the classification altogether."<sup>47</sup>

Although the term alto-tenor has received general acceptance by authorities, Thaddeus P. Giddings, for many years director of music in the Minneapolis schools, and Hollis Dann, author of many music textbooks, never recognized the term. The principles of the alto-tenor plan are carried out in their work, but Giddings considered the term misleading, and Dann surrogated the term "boy tenor" in place of alto-tenor. Giddings' argument was that "a boy's voice [is] either alto or tenor, even though an alto might also be able to sing the

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<sup>46</sup> Ibid., p. 20.

<sup>47</sup> Ibid.

tenor part, and a tenor the alto part."<sup>48</sup> Dr. Dann believed that the range (E or F below middle C to A or B above middle C) was distinctly within the tenor compass. "The compass of the boy alto and the boy tenor is indefinite, the compass of the same voice varying widely at different times, as does the length of time the boy can comfortably sing alto and tenor parts."<sup>49</sup>

The term *cambiata* formerly was used to mean a type of non-harmonic tone progressions.<sup>50</sup> Dr. Irvin Cooper, professor of music education at Florida State University, adapted this term to replace the term alto-tenor. He says:

The designation of the changing voice as 'cambiata' is to avoid confusion with the frequent misconception attending the scope of the alto-tenor range. Recognition and classification of the 'cambiata' voice is one of the greatest problems of the Junior High teacher, because, owing to its most unusual timbre, it is often mistaken for a baritone due to an aural illusion of singing an octave lower than it actually sings. If the teacher tries to identify *cambiata* by individual testing, the result will be negative, as it is only discernable when tested in company with other better known vocal types.<sup>51</sup>

In the book Teaching Junior High School Music, written by Cooper and Karl O. Kuersteiner, Dean of the School of Music at Florida State University, the *cambiata* voice is discussed more fully.

<sup>48</sup>Ibid.

<sup>49</sup>Ibid.

<sup>50</sup>Willi Apel, Harvard Dictionary of Music. (Cambridge, Massachusetts: Harvard University Press, 1961), p. 492.

<sup>51</sup>McKenzie, p. 82.

Cooper and Kuersteiner classify boys' voices as (1) unchanged, (2) first change, (3) second change, and (4) changed. "The term *cambiata* refers to the boy's voice passing through the first change and is a device to avoid confusion with the many conflicting ranges proposed for alto-tenor."<sup>52</sup> The range of the *cambiata* is from F below middle C to C an octave above middle C. A boy's voice in the second change is called baritone and has a range from B<sup>b</sup>, second line bass clef, to F above middle C. The changed voice that is classified as bass has a range of F, first space below bass clef, to middle C. The changed voice that would eventually mature as tenor or baritone would be classified as baritone. The tessitura of the *cambiata* is from A below middle C to the A above middle C.

Cooper and Kuersteiner describe the quality of the *cambiata* voice as "rich and a trifle waddy, a truly beautiful sound if it is controlled in volume and not permitted to become strident from sheer vocal exuberance of the [boy]."<sup>53</sup> To keep a *cambiata* voice from being misclassified because of the octave aural illusion, it is best to have the boy sing with a known baritone or bass to hear the comparison.<sup>54</sup>

According to Cooper and Kuersteiner, the usual tenor part of SATB music is too low for the *cambiata*, even though it is within

<sup>52</sup>Irvin Cooper, Karl O. Kuersteiner, Teaching Junior High School Music. (Boston: Allyn and Bacon, Inc., 1965), p. 15.

<sup>53</sup>Ibid., p. 18.

<sup>54</sup>Ibid., p. 19.

the range of their voices. The cambiate, they feel, can sing up to four or five notes higher than those required for the average tenor part. "It is wrong in the terms of the tessitura defined earlier, compelling cambiate to use only their lower registers and denying them any development of the upper or middle registers."<sup>55</sup> The authors feel that singing the usual tenor part results in nonuse of the upper register and thus causes it to disappear. They believe this loss of the upper register transfers to the next level of voice change.<sup>56</sup>

Cooper and Kuersteiner also believe that after the cambiate have become established in a part, "they serve as a pitch-anchor for the rest of the group. They rarely waver in pitch and can be relied upon with confidence in achieving quite difficult choral modulations."<sup>57</sup> The authors' opinion is that the cambiate learn their part in a new selection more quickly than the other sections, and are unshakable thereafter. Cooper and Kuersteiner recommend that the cambiate part be taught first "unless it happens to be carrying the melody line, in which case the baritone should have preference."<sup>58</sup>

Alto-tenor and cambiate, two terms frequently used in modern times to describe the changing voice, both refer to the early changing

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<sup>55</sup> Ibid.

<sup>56</sup> Ibid.

<sup>57</sup> Ibid., p. 20.

<sup>58</sup> Ibid.

stage of the adolescent boy's voice. The term alto-tenor evolved through lack of any other terminology to describe certain aspects of the boy's changing voice. Authorities using the term alto-tenor differed in opinion as to the range potentials of this voice. The term cambiate was coined by Irvin Cooper to eliminate confusion caused by conflicting information about the range and tonal properties of the early stages of the voice change. This voice in the early stages of change, when properly exercised, has a range from F below middle C to C an octave above middle C, and has a unique, beautiful quality.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

Teachers of junior high school vocal music need to be aware of the problems of the boy's changing voice. These educators must know whether to expect voices to break suddenly or to lower gradually. They must know whether singing during this crucial period will result in permanent damage to the vocal mechanism or whether singing during this time strengthens the vocal mechanism and actually hastens the maturation process.

To aid in understanding these ideas and to find usable procedures for handling the adolescent boy's voice, various authorities have been consulted. These authorities differed greatly in their view of the problem.

A majority of musicians in the late nineteenth and early twentieth centuries believed that singing during the breaking voice period was definitely harmful to the after-voice. These authorities prescribed total rest of the singing voice during the breaking period. It was also a practice at this time for boys to continue singing soprano until the voice finally broke. Most modern music educators disagree with this method of keeping boys singing in their highest range until they are no longer able to sing. They feel this strains and abuses the voice so that it cannot develop naturally. The majority of modern opinion favors letting boys sing lower parts when their voices show signs of changing.



Modern vocabulary concerning the boy's changing voice includes the terms alto-tenor and cambiate. These terms are used to describe the range and quality of the voice in its early stages of change. Modern practice and theory emphasize that singing through the period of voice mutation strengthens the voice and helps maintain the adolescent boy's interest in vocal music.

A boy's voice will "break", but only if it has been abused or strained. Abuse of the voice can be controlled in a music class, but many times the abuse occurs outside of musical activities. George Smith Briggs describes a boy's extra-curricular activities:

He roots for his high school team, shouts at moments of excitement, calls loudly across the school yard, in short--abuses his voice upon the slightest provocation. The same apparatus which produces the shout or scream is used for the singing voice, and it is therefore subjected to greater violence than singing ever demands of it.<sup>59</sup>

Vocal abuse may also be caused by the advice of well-meaning parents, teachers, or school administrators who encourage students to sing loud, so that they can be heard by everyone. These people, who have no knowledge of the condition of the changing voice, can cause a student to strain his voice and force the teacher to re-teach the correct vocal habits. This problem can sometimes put the teacher in an awkward position between the parent and child. However, if the student has been cautioned to expect this advice and to politely disregard it, the problem will be lessened.

The teacher's duty is to insure that vocal abuse and strain do not take place in musical activities. This can be done by careful

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<sup>59</sup>George Smith Briggs, "The Changing Voice." (unpublished Master's thesis, Department of Music, Eastern Illinois State College, 1954), p. 18.

classification of voices so that everyone sings the correct part. Voices should be tested frequently so changes in range can be observed and dealt with by placing the singer on the correct part.

Freedom in vocal production should be constantly emphasized in teaching boys with changing voices. The American Academy of Teachers of Singing states that they believe ". . .that the functioning of the voice of the child, of the adolescent, and of the adult is governed by identical physical laws; that the principles governing the use of the voice are the same in all three stages."<sup>60</sup> The Academy believes that from childhood to adulthood "there is a development of the body structure, but no change in position or muscular action."<sup>61</sup>

To attain freedom in singing, there must be no undue muscular tension. "During adolescence, the physiological properties of the larynx are developing, emerging out of the soft cartilaginous tissue of childhood and growing rapidly toward the hardness and solidity of maturity."<sup>62</sup>

Adolescence is also a stage of personality development, a period of change from childhood values and concepts to those of adulthood. During adolescence, much emphasis is placed upon status within the peer group.<sup>63</sup> If the leaders of various cliques are

<sup>60</sup>Helen Steen Huls, The Adolescent Voice: A Study (New York: Vantage Press Inc., 1957), p. 21.

<sup>61</sup>Ibid.

<sup>62</sup>Ibid.

<sup>63</sup>Ibid., p. 15.

interested in vocal music experiences, other members of the groups will probably seek such singing opportunities.

The possibility of being embarrassed by uncertain vocal control in front of his peer group can cause a boy to avoid singing experiences. "Rejection by the peer group is. . .complete and devastating for [a boy]." <sup>64</sup> A clear understanding of why his voice is changing can often alleviate feelings of self-consciousness.

During this time of personality development, adolescents begin to perceive teachers as persons, not just dispensers of knowledge. Boys' feelings toward teachers seem to depend as much on the personality characteristics of teachers as on their teaching skills. Students admire teaching skill, clarity, and good classroom control. They also appreciate teachers who are friendly, patient, cheerful, sympathetic and understanding. In the eyes of adolescents, teachers are seen as playing three roles, ". . .friends, opponents, and manipulators of status in learning situations." <sup>65</sup> Teachers may be seen as older and wiser friends, helpful counselors, or heroes. They may also be seen as enemies to be fought and outwitted, or they may be feared and respected because of their power. <sup>66</sup>

It is very important for the adolescent to develop a good attitude toward a teacher if the teacher is to have success teaching

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<sup>64</sup>David P. Ausubel, Theory and Problems of Adolescent Development. (New York: Grune and Stratton, 1954), p. 43.

<sup>65</sup>Ibid., p. 478.

<sup>66</sup>Ibid.

him. A teacher must be fair but firm, well-prepared to teach the material he has planned, enthusiastic about his work, and able to keep the pace of the class fast-moving. He also must care about the individual student, not just about the proper performance of the music he teaches.

Because the adolescent is trying to feel more grown-up, materials used for elementary grade children are not appropriate for this age group. Also because of the adolescent's awareness of sex, music for boys definitely must not seem "sissy" to them. Love songs that are not too sentimental, narrative songs, religious music, songs of achievement, patriotic songs and humorous songs are appropriate for this age group.<sup>67</sup> This type of music, if carefully chosen, will maintain interest and not cause embarrassment.

Moreover, it is good for boys to sing individually and in male ensembles. Individual singing gives the teacher chances to hear what stages of development each voice has attained, and helps develop the boy's confidence in singing alone. Singing in all-male groups permits the singing of music of particular interest to boys. General music classes usually include both boys and girls. If girls are present, boys are often embarrassed when asked to sing alone. This situation can be greatly relieved if the teacher can provide occasions for singing when the girls must be elsewhere. This time can be used to help boys understand the voice change and to instruct them in the proper use of their voices during this period.

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<sup>67</sup>Cooper and Kuersteiner, p. 28.

Music should also be carefully chosen for correct range and tessitura. The tessitura of music for the alto-tenor or cambiata should lie mostly in the octave from A below middle C to A above middle C. The tessitura of music for the baritone should be the octave from C below middle C to middle C. Often music with this range is not easy to find, so the teacher may have to make his own arrangements. SACB (soprano, alto, cambiata, baritone) music is now being published. A large portion of it is arranged by Irvin Cooper, and is available in a limited number of selections from various choral music companies, such as Bourne Co., New York; Carl Fischer, Inc., New York; Charles H. Henson Music Corp., New York; Gordon V. Thompson, Ltd., Niagara Falls, New York; and Silver Burdett Co., New York.<sup>68</sup>

An excellent video-sound film, "The Changing Voice," prepared under the auspices of the Research Council of Florida State University, is now available by rental through William Quinley, Director, Audio-Visual Center, Florida State University, Tallahassee, Florida. The film helps the music teacher understand the nature, sound texture, and range scope-limitations of the various junior high voices. It demonstrates the classification of voices and appropriate ranges and tessituras of these changing voices. It stresses the importance of the teacher's high level of inner motivation in order to bring music to every boy and girl with whom he associates.<sup>69</sup>

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<sup>68</sup>Cooper and Kuersteiner, pp. 423-425.

<sup>69</sup>Irvin Cooper, "Realizing General Music Outcomes Through Singing," Music Educator's Journal, (January, 1964), p. 87.

In addition to the need for more choral music written for the changing voice range, there is also a need for music teacher-training to place more emphasis on understanding the boy's changing voice. Both vocal and instrumental students preparing to teach need to understand fully this maturation process, for often an instrumental major will be teaching general music at the junior high level. And, if he is to have success in this area, he must know what is happening to the boy's voice and how to handle it. The vocal teacher, whether he teaches in elementary, junior high, or high school, must be aware of the facts relating to the boy's changing voice. In elementary school the teacher must prepare boys for the change; in junior high and high school, he must contend with the change.

Teacher-training also needs to include work on choral arranging to help a junior high vocal instructor arrange music to fit the boy's changing voice. This is often necessary because of the shortage of appropriate junior high choral material.

With a greater supply of junior high choral music, a more adequate understanding of the problems of a changing voice, and knowledge of choral arranging, a teacher will find that directing boys through the changing voice period is not at all a hazardous situation. . . rather one of real challenge.

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