## Hearing in the Sixth Sense

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In the middle of the sixteenth century a new type of theory emerged that reflected a fundamental shift in the way music might be written and heard. Gioseffo Zarlino and Nicola Vicentino published within three years of one another treatises that assign affective qualities to melodic and harmonic intervals and that assert that the composer should use intervals to match the affective content of the text being set to music.<sup>1</sup> Although their exact descriptions of affective quality differ in some details, both theorists establish dualisms that pit major against minor intervals. In general, say these theorists, major intervals should be used to express happiness, hardness, harshness, cruelty, and so forth, while minor intervals should be used to express sadness, softness, gentleness, or sweetness. In the present venue I will compare Vicentino's and Zarlino's comments on interval affect, examine both musical and extramusical factors that contributed to the emergence and subsequent shape of such theories, and discuss the type of listener and listening these theories suggest.

Vicentino assigned affects to each melodic interval from the minor second through the perfect fifth, including several variants resulting from the microtonal tuning of his theory of genera. The direction of a melodic interval may contribute to its affect; for example, the intervals larger than the fifth are lumped together and labeled "tense" (*incitato*) in ascent and "slack" (*molle*) in descent.<sup>2</sup> Vicentino is less specific about the harmonic intervals in general. He focuses on the imperfect consonances: the major third is lively and cheerful (*vivace et allegra*); the minor third is very weak and somewhat sad (*molto debole et ha del mesto*) and will serve well for sad words because it is rather static; the minor sixth is "somewhat sonorous and sad" (*alquanto sonora, et ha del mesto*); while the major sixth acts more like a dissonance than a consonance, and when it moves to the perfect fifth, it is good for harshness (*asprezza*).<sup>3</sup>

Vicentino describes a three-step process for good composition: determine the affect of the words to be set and apply the appropriate melodic intervals, match the tenseness or slackness of the melodic intervals with tense or slack harmonic intervals, and add an appropriate rate of motion. Of the three, the harmonic intervals are the most important because the "ear feeds on consonance."<sup>4</sup> He summarizes his views on the relationship between text and tone as follows: Music set to words has no other purpose than to express in harmony the meaning of the words, their passions and their effects. If the words speak of modesty, you proceed modestly, not intemperately, in the composition. When they speak of joyfulness, you do not make the music sad, and when they speak of sadness, you do not make it joyful. When they are about harshness, you do not render it sweet. When they are gentle, you do not set them otherwise, because their meaning will seem distorted. When they speak of speed, the music will not be sluggish and slow; and when they speak of standing still, it will not run . . . When a composer is writing something sad, slow motion and minor consonances help him. When he is writing something joyful, major consonances and rapid motion are appropriate.<sup>5</sup>

Zarlino also groups the melodic and harmonic intervals into two categories of affective quality, yet strictly on the basis of whether they are major or minor, without regard for direction:

When a composer wishes to express [harshness (*asprezza*), hardness (*durezza*), cruelty (*crudeltà*), bitterness (*amaritudine*), and similar things,] he will do best to arrange the parts of the composition so that they proceed with movements . . . of the [major second] and the [major third]. He should allow the major sixth and major thirteenth, which by nature are somewhat harsh, to be heard above the lowest note of the [composition], and should use the suspension of the fourth or the eleventh above the lowest part, along with somewhat slow movements, among which the suspension of the seventh may also be used. But when a composer wishes to express effects of [complaint (*pianto*), sorrow (*dolore*), grief (*cordoglio*), sighs (*sospiri*), tears (*lagrime*), and other things of this sort] he should . . . use movements which proceed through the [minor second], the [minor third], and similar intervals, often using minor sixths or minor thirteenths above the lowest note of the [composition], these being by nature sweet [*dolci*] and soft [*soavi*].<sup>6</sup>

I find it significant that Zarlino mentions the harmonic sixth in this particular passage, but not the harmonic third. Elsewhere Zarlino describes the major consonances (third and sixth) as lively (*vive*), cheerful (*allegre*), and accompanied by great sonority, and the minor consonances as sweet (*dolci*), smooth (*soavi*), sad (*mesto*), and languid (*languido*).<sup>7</sup>

Zarlino's emphasis upon an affective distinction between the harmonic sixths illustrates the impact of cultural conditioning on the way music is heard. According to Zarlino, the pitch collection C–E–G would be "major" (major third and perfect fifth above the bass) while the collection E–G–C would be "minor" (minor third and minor sixth above the bass). An educated modern listener would hear both as C major triads, albeit in different positions, and might therefore misread the intended affect. We think of major triads as brighter than minor triads regardless of position, because we hear them as a fusion of their respective tones. Zarlino's interpretation of these sonorities hinges on the intervallic thinking of his day and suggests intervallic hearing as well.<sup>8</sup> Modern listeners also might wish to rearrange the content of the affective categories to suit current tastes, especially the placement of bitterness and cruelty in the "major" camp. Because different types of hearing exist, and because aural affective associations require conditioning to a greater or lesser extent, the same sonority may assume antithetical meanings in different cultural contexts.<sup>9</sup>

The use of harmonic major and minor thirds to express happy or sad emotions is a well-known sixteenth-century device; we would not need the theories of Zarlino and Vicentino to acquaint us with this practice.<sup>10</sup> Their claim of an affective distinction between the harmonic major and minor sixths, on the other hand, has not been well documented. Although many studies have observed that sixths may be used generically for expressive purposes, such as the use of fauxbourdon to invoke antiquity or anguish, there is little mention of differing affective associations for the harmonic major and minor sixths.<sup>11</sup> Not only do both theorists posit such a distinction, but they also view the sixths as particularly potent affective devices, arguably even more than the thirds.

Why this theoretical emphasis on an affective distinction between the sixths? It results more from practical concerns than speculative ones: Zarlino and Vicentino were attempting to explain contemporary compositional practice in which they themselves engaged, yet explain it in such a way that it meshed with their theories. In this regard, both Zarlino and Vicentino make frequent reference to at least two distinct dichotomies-happy versus sad, harsh versus sweet-for major and minor intervals. While the "minor" affections-sadness and sweetnessmake congenial partners, one has to wonder: can the same major fivethree that sounds happy also sound harsh and bitter?<sup>12</sup> Not acoustically, but perhaps psychologically in conjunction with musical punning: major for hard (durum), minor for soft (molle).<sup>13</sup> There might be musical reasons for the seemingly incompatible affective assignments. References to harshness tend to be linked with specific mention of the major sixth. Zarlino mentions the natural harshness of the major sixth on several occasions,<sup>14</sup> while Vicentino says the major sixth acts more like a dissonance than a consonance.<sup>15</sup> The inherent sonic character of the major sixth provides theoretical justification for the association of harshness with major, yet, as we will see in a moment, ample evidence for such an association can be culled from compositions known to the theorists.

Why would there be an emphasis on the harmonic sixth as an affective device in contemporary practice? I suggest three primary factors bear on this issue: the limited set of harmonic combinations that sixteenthcentury composers drew from the diatonic pool, the contextual harmonic instability of the sixth, and the nature of the diatonic system itself. As for the harmonic resources of the sixteenth century, we know that, except for the odd suspended, passing, or other dissonance, most vertical structures are major or minor triads, with the five-three position outnumbering the six-three position. In relief of the ubiquitous fivethree, the six-three provides a relatively consonant but less stable sonority that may be used frequently and with decorum.<sup>16</sup> Dissonant sonorities may be used for expressive purposes, yet they require special treatment and thus are more difficult to introduce and sustain. The sixths make attractive affective devices because they sound sufficiently different to be readily recognized, yet not so sharply dissonant that they cannot be assigned a wide range of affective associations nor be introduced with relative freedom. Given the stylistic paradigms within which the sixteenth-century composer worked and the clear mandate that music should express the passions and effects of the words, the affective use of the sixth seems almost inevitable.

There are other acoustical factors, in harness with cultural conditioning, that favor the use of the sixth. Because the sixth is perceived as less stable than the fifth, it requires motion. This impetus focuses the ear upon the sixth. One only need think of the cadential motion of the major sixth expanding to an octave to appreciate the harmonic tension generated by the sixth. In fact, one stumbling block to using the major sixth as an affective device is that it already has a well-defined cadential role. It is perhaps partially for this reason that Zarlino recommends using longer note values (breves and semibreves) to make the sixths more pronounced,<sup>17</sup> while Vicentino recommends moving from the major sixth to the perfect fifth rather than the octave to express harshness (as noted above). Both of these suggestions would be helpful for distinguishing affective and cadential uses of the sixth, which nonetheless need not be mutually exclusive.

Finally, the structure of the diatonic system supports the affective use of the sixth. The tones in the "natural" diatonic system that bear a major third (C–E, F–A, and G–B) also bear a major sixth (C–A, F–D, G–E), while most of the tones that bear a minor third (E–G, A–C, B–D) also bear a minor sixth (E–C, A–F, and B–G). The only exception occurs on D, which bears a minor third and a major sixth. Extrapolating from Zarlino's affective categories, the five-three and six-three above the same bass tone will either both be major or both be minor in five out of seven cases.<sup>18</sup> One may introduce a sixth as a "dissonance" and then resolve it down by step over the same bass tone. Alternately, one may step from the fifth to the sixth over the same bass tone. In both cases the appropriate affective quality sustains while the step motion prevents tonal stasis. In addition, the minor sixth would move to the perfect fifth by minor second, while the major sixth would move by major second, thus matching the steps and the consonances as advocated by both Zarlino and Vicentino.

The emergence of Zarlino's and Vicentino's theories in such close chronological and geographical proximity suggests a common source. That source is believed to be the Venetian composer Adrian Willaert, in particular his Musica nova collection, which was probably written late in the 1530s and early in the 1540s, yet not published until 1559. In the years between the writing of the Musica nova and its eventual publication, the collection was apparently in the hands of the singer Polissena Pecorina and frequently performed in the home of Neri Capponi but not widely circulated. Both Vicentino and Zarlino studied with Willaert, both knew Musica nova before it was published, and both cite his works as exemplars of good composition. Of the five works Zarlino mentions by name in his discussion of how harmonies should be accommodated to the words (bk. 4, chap. 32), all are madrigals from Musica nova. Vicentino states on the title page of his first book of madrigals (1546) that the compositions contained therein were written "in the new manner discovered by his very celebrated teacher."19 I have not found the affective use of the harmonic sixths to be as prevalent among Willaert's madrigals other than those contained in Musica nova. In fact, Willaert's madrigal "Qual dolcezza giamai," composed in honor of Pecorina and thus intimately associated with the Musica nova circle, was not written in Musica nova style.

Different spins have been given recently to the issue of the motivation behind the curiously singular style of the *Musica nova*. Michele Fromson focuses on the exiled Florentines Neri Capponi and Ruberto Strozzi, both of whom were active patrons of the madrigal in Venice and of Willaert in particular. Fromson finds quotations of liturgical melodies that, along with the texts to which they allude, "For Willaert's Florentine patrons . . . constituted a powerful symbolic network that served to commemorate their native city, its fallen Republic, and the most prominent spokesman for that government, the religious reformer Girolamo Savonarola."<sup>20</sup>

Martha Feldman develops the more traditional view that *Musica* nova resulted from a predilection for the poetry of Petrarch and the literary theory of Pietro Bembo, with its recasting of classical rhetoric, which were the rage in Venice at the time.<sup>21</sup> The affective dichotomy proposed by Zarlino and Vicentino and, as we shall see, substantiated by Willaert's *Musica nova* certainly resonates with Petrarch's frequent use of antithesis and Bembo's notion of quality, which postulated the existence of two opposing categories of affection called gravità and piacevolezza, or gravity and pleasantness. Gravity includes the concepts of honesty (l'onestà), dignity (la dignità), majesty (la maestà), magnificence (la magnificenza), grandeur (la grandezza), and similar things, while pleasantness includes grace (la grazia), softness (la soavità), yearning (la vaghezza), sweetness (la dolcezza), jesting (gli scherzi), playfulness (i giuochi), and the like.<sup>22</sup>

Two examples from Willaert's Musica nova will serve to illustrate the points made above about the practical origins of the affective use of the sixths and the nature of diatonic counterpoint. The guintessential example is the oft-cited opening of "Aspro core" (see Ex. 1).<sup>23</sup> Petrarch's text begins with a harsh affection and harsh-sounding words: "Aspro core, e selvaggio, e cruda voglia" (Harsh heart, and savage, and a cruel will). Willaert responds with three major-sixth-to-perfect-fifth motions over the bass tones G and F (and three more in transposed repetition), each moving by major second.<sup>24</sup> The words shift to a softer affection in the second phrase, both in meaning and in sonic quality: "In dolce, humile, angelica figura" (In a sweet, humble, angelic figure). Willaert now avoids the major sixth entirely. A single 6–5 occurs over bass tone A, with this minor sixth resolving by minor second. The musical contrasts of the opening of Willaert's "Aspro core" were intended to render Petrarch's sonic contrast even more audible. There can be little doubt that Zarlino and Vicentino had this example in mind as they formulated their theories.

In the madrigal "Giunto m'ha Amor," Willaert concentrated three major sixths of semibreve duration in the setting of the text "e rompr'ogn'aspro scoglio" (literally "and break each harsh rock"), as may be seen in Example 2.<sup>25</sup> The first and third major sixths enter by leap over B-flat due to the shape of the imitated motive in the upper voices.<sup>26</sup> Willaert introduced the second major sixth through a 5–6 motion in the quintus over C in the bass. Notice once again the harmonic major sonorities coincide naturally with major melodic steps.

The affective use of intervals can inform a composer's choice of tonal type.<sup>27</sup> If the control of major and minor sonorities is to be an important compositional issue, we would expect that a composer would choose a mode based on the presence of major or minor sonorities on its more commonly used degrees, as Zarlino suggests.<sup>28</sup> In "Aspro core," Willaert no doubt chose G as the tonal center because G is the only tonality for which the five-three built on the final would change from major to minor with the addition of B-flat. This allows Willaert to highlight the harsh-sweet contrast of the words with a major-minor contrast while using the same essential melodic material (Ex. 1).<sup>29</sup>

For "Giunto m'ha Amor" Willaert chose G in cantus mollis, essentially a minor mode, despite the frequent appearance of harsh, hard, or



Example 1. Willaert, "Aspro core." Reproduced by permission of Haenssler-Verlag GmbH



Example 2. Willaert, "Giunto m'ha Amor." Reproduced by permission of Haenssler-Verlag GmbH

cruel imagery in the text. While in "Aspro core" the opening lines suggested the choice of tonal type, in "Giunto m'ha Amor" I believe the final tercet and its "sweet" affection guided Willaert's choice. Figure 1 contains the poem and translation and also shows the percentage of

Giunto m'ha Amor fra belle e crude braccia	Love has brought me within the reach of lovely, cruel arms	47/53
Che m'ancidono à torto, e s'io mi doglio	That unjustly kill me, and if I complain	37/63
Doppia'l martir; onde pur com'io soglio	He redoubles my torment; thus it is still better	59/41
Il meglio è ch'io mi mora amando e taccia;	That I die loving and be silent, as I am wont;	63/37
Ché poria questa il Ren qualhor più agghiaccia	For she could burn the Rhine with her eyes	67/33
Arder con gli occhi, <u>e rompr'ogn'aspro</u> <u>scoglio</u> ,	And break his every ridge of ice wher he is most frozen	
Et ha sì egual a le bellezze orgoglio	And her pride is so equal to her beauties	75/25
Che di piacer altrui par che le spiaccia.	That it seems to displease her that she pleases.	60/40
Nulla posso levar io per mio'ngegno	With my own wit I can take away none	59/41
Del bel diamante ond'ella ha il <u>cor sì duro,</u>	Of the lovely diamond with which her <u>heart is so hard;</u>	79/21
L'altro è d'un marmo che si mova e spiri;	The rest of her is a piece of marble that moves and breathes;	56/44
Ned ella a me, per tutto'l suo disdegno	Nor will she ever, for all her disdain,	66/34
Torrà già mai, né per sembiante oscuro,	And for all her dark looks, take	
To maio amountano o i maioi de lai commini	away from me	51/49
Le mie speranze e i miei dolci sospiri.	My hopes and my sweet sighs.	44/56

Figure 1. Petrarch, "Giunto m'ha Amor" and percentage of major and minor harmonies (major/minor) per line in Willaert's setting. Translation from *Petrarch's Lyric Poems*, edited and translated by Robert M. Durling. Copyright © 1976 by Robert M. Durling. Reprinted by permission of Harvard University Press.

> major and minor harmonies accompanying each line of the poem. A modally regular beginning and ending enhance Willaert's reading of the poem and result in the highest percentages of minor harmonies in the madrigal. Willaert does not respond to the harsh keyword "crude" in the first line, perhaps so as not to upset the prevailing affection of sweet torment. The percentage of major harmonies surges in tandem with the shift to harsh and hard imagery in the second quatrain and the first tercet, reaching twin peaks in passages with concentrated major sixths at the words "e rompr'ogn'aspro scoglio" and "cor sì duro" (underlined in Fig. 1). Both of these passages follow cadences on B-flat, and in them one finds little support for the G tonality. In "Giunto m'ha Amor,"

Willaert fabricated a double arch of affective tonal quality to mirror his reading of the text. The minor opening and ending of the madrigal frame the shifts to major harmonies for the appropriate words and render them more effective.

These examples and the voice leading associated with them might suggest that the presence of the sixth could be secondary to a desire to create motion over a sustained major or minor third, yet other examples prove that the sixth is not a mere by-product of affective use of the third. The clearest example I have found to date occurs in Vicentino's three-voice setting of Petrarch's "Solo e pensoso" (see Ex. 3).<sup>30</sup> This thirty-three-measure setting contains only four harmonic sixths, all of which are major, and all of which appear in conjunction with the words "aspre" (harsh) and "selvagge" (savage), the same words set to major sixths by Willaert in "Aspro core." These are the only references to harshness in the poem, as shown in Figure 2.

Alfred Einstein asserted that three-voice writing among Willaert's circle was often intended for epigrammatic or didactic purposes and that it was preferred "for the familiar sonnets of Petrarch, when it is not the composer's intention to exhaust their emotional content."<sup>31</sup> In "Solo e pensoso," Vicentino adopts a light, homorhythmic style atypical of the serious Venetian madrigal of the 1540s, but that does not prevent him from using the major sixth to sketch the harsh, savage paths mentioned in the poem. Note also the symmetrical shape of the cantus, which traces a journey up and down hills, twice moving by three successive whole steps. The lowest voice also tracks a symmetrical line and features six successive whole steps. A didactic purpose seems plausible for this textbook example of how to express a harsh text. This passage demonstrates the independent importance of the sixth as an affective device because none of the major sixths appear with major thirds.

Vicentino's "Solo e pensoso" points toward an important principle concerning the affective use of harmonic sixths: one method of emphasizing the sixth is to avoid it until the appropriate words appear. Girolamo Parabosco, another Willaert disciple, employs a similar technique in his full-length setting of the same text from his *Madrigali a cinque voci*, a collection dedicated to Ruberto Strozzi.<sup>32</sup> Parabosco chose the same tonal center as Vicentino (G), yet he exchanged Vicentino's cantus durus signature for cantus mollis, and a homorhythmic style for an imitative opening (Ex. 4). A careful listener would hear that the first voice to enter is the only voice to sing the motive in inversion. Like the protagonist of the poem, he is alone and separated from society. Parabosco underscores the somber nature of the first two lines of the poem by avoiding the major sixth and placing isolated minor sixths in accented



Example 3. Vicentino, "Solo e pensoso." Reproduced by permission of Haenssler-Verlag GmbH

positions in mm. 5, 8, and 9, and an embellishing minor sixth over a long-held tone in mm. 13–14 (at "tardi'e lenti").<sup>33</sup> Minor-sixth leaps occur in mm. 10, 11, and 12. The first major sixth (of at least minim length) does not appear until m. 19, where it participates in a solemn Phrygian cadence. All in all, one hears eighteen minor sixths and fifteen major sixths of at least a minim in duration in this 120-measure madrigal. Parabosco concentrated five of the major sixths in the eight-measure setting of "ma pur sì aspre vie ne sì selvaggie" (Ex. 5); of the remaining major sixths, all but two occur in cadential roles. Two minor sixths also occur in Example 5. The flat forming the minor sixth in m. 91 appears in Gardane's print. We may assume that Parabosco wished to avoid the vertical false relation between B-flat and E, and perhaps that he wished to withhold the major sixth until "aspre" actually enters. The running figure in the altus at "selvaggie" strides through five successive whole steps before reaching its zenith on F by half step in m. 96, creating a minor sixth above A in the bass. It is perhaps significant that Parabosco "toughens up" this minor sixth with a 4-3 suspension. In m. 92 Parabosco weaves two major sixths into the contrapuntal web along with a descending melodic major second in each voice intoning "aspre." A major sixth also accompanies the statement of "aspre" in the cantus and tenor in m. 94. Dissonant suspended sevenths mimic "selvaggie" in mm. 96–97 and usher in two further major sixths. In the twenty-two measures that separate this passage from the end of the madrigal, only three further sixths appear, all of which are minor. Parabosco used the sixth in two primary roles in this work: both the major and minor sixths are used as affective devices, while the major sixth also retains its cadential function. In order to enhance both roles, Parabosco largely avoids the major sixth unless it is to perform one or the other function.

Solo e pensoso i più deserti campi	Alone and filled with care, I go measuring
Vo misurando e passi tardi e lenti,	the most deserted fields with steps delaying and slow,
E gli occhi porto per fuggir intenti	and I keep my eyes alert so as to flee
Ove vestigio human l'arena stampi.	from where any human footprint marks the sand.
Altro schermo non trovo che mi scampi	No other shield do I find to protect me
Dal manifesto accorger delle genti,	from people's open knowing,
Perchè negli atti d'allegrezza spenti	for in my bearing, in which all happiness is extinguished,
Di fuor si legge come io dentro avampi.	anyone can read from without how I am aflame within.
Si ch'io mi credo homai che monti e piaggie	So that I believe by now that mountains and shores
E fiumi e selve sappian di che timpre	and rivers and woods know the temper
Sia la mia vita ch'è celata altrui;	of my life, which is hidden from other persons;
Ma pur sì aspre vie ne sì selvagge	but still I cannot seek paths so harsh or
	so savage
Cercan non so ch'Amor non vengha sempre	that Love does not always come along
Ragionando con meco et io con lui.	discoursing with me and I with him.

*Figure 2.* Petrarch, "Solo e pensoso." Translation from *Petrarch's Lyric Poems*, edited and translated by Robert M. Durling. Copyright © 1976 by Robert M. Durling. Reprinted by permission of Harvard University Press.

Because a sixth may serve more than one purpose, an active listener, or aural reader, is important for the recognition of their affective use. Both Zarlino and Vicentino make a distinction between educated and uneducated listeners, and both attach great importance to pleasing the former. Both complain about unruly singers who ignore the affective content of the words and their musical setting and thus ruin the listening experience. Both agree that the audible experience of music trumps its written incarnation: both decry complex canonic structures and notational conceits more apparent to the eye than to the ear, while Zarlino notes that poorly improvised counterpoint need not be written down for the skilled musician to recognize its errors.<sup>34</sup>

Both stress the importance of reason to proper listening, Zarlino as follows:

The function of judging matters concerning sounds and voices should not be given solely to the sense of hearing, but should always be accompanied by reason. Nor should one give this judgment entirely to reason, leaving aside the sense of hearing, because the one without the other can always be cause for error. . . .



*Example 4.* Parabosco, "Solo e pensoso," from Girolamo Parabosco, Mandrigali a cinque voci (Venice: A. Gardane, 1546). Reproduced by permission of the Librarian, Accademia Filarmonica di Verona

Furthermore, there are different appetites, so that what pleases one does not please another, and while one man is delighted by sweet and smooth harmony, another would like it somewhat harder and harsher. Musicians should not despair when hearing such judgment, even if they hear people condemn their compositions and say everything bad about them. Rather,



Example 4. continued

they should take heart and be comforted, for the number of those who have no judgment is almost infinite, and few are those who do not judge themselves worthy of being numbered among prudent and wise people.<sup>35</sup>

Vicentino sounds a similar theme and accentuates the importance of cultural conditioning and education for proper hearing:

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*Example 5.* Parabosco, "Solo e pensoso," from Girolamo Parabosco, Mandrigali a cingue voci (Venice: A. Gardane, 1546). Reproduced by permission of the Librarian, Academia Filarmonica di Verona

To [one guided solely by nature and without reason], everything he performs in singing is good—even dissonances—for he lacks "a good ear." This defect is heard every day in certain folk singers and others who not only make discord when singing but also rejoice and delight in such discord. But others, who sing by mere custom and without reason, cannot hear dissonances because nature and a well-habituated ear have accustomed them to good and bad harmony alike. Still others, though they sing according to reason and custom, nevertheless have some sort of aural defect. The cause of their failure lies in a natural deficiency, although they make a considerable effort in the performance of music. There are certain others who hear music accurately. These are the people who have developed a deep proficiency in music practice through nature and art.

Because of the great diversity between the hearing of one person and that of another, composers must create as much diversity in their compositions as there are listeners' opinions if they want to satisfy all judgments based on the sense of hearing. For it happens that some listeners praise a discordant composition and censure a harmonious one. In contrast to these extremes, some want to hear bland compositions. Others prefer simultaneous accord and discord. Some take pleasure in accord without discord, whereas others loathe harmony altogether. Some want harmony with slow motion, some with fast, and some with motion that is neither slow nor fast.

From this variety in nature we recognize the difference between the learned and the ignorant, the expert and the inexpert. But whenever the adjudication of a composition is at issue, it is mandatory to bow to the judgment of the most experienced people in the profession of that sort of music. For it cannot be denied that all musical compositions that please listeners will always be praised by them, whether these works are good or not.<sup>36</sup>

A running adage in Vicentino's treatise is that "bad" progressions can be used to good effect if justified by the words.<sup>37</sup> At one point he states that the composer "should by no means write two similar sixths, neither major nor minor" in succession, while elsewhere he asserts that every bad leap and poor consonance may be used if in accordance with the subject matter of the words. Parallel major sixths are cited as suitable for "baleful" words, just as Vicentino used them in "Solo e pensoso."<sup>38</sup> Affective devices such as these require technically informed, literate listeners. One must know the rules of counterpoint to appreciate the significance of their having been broken in the service of the words.

Tracing the origins, extent, and influence of the affective use of the harmonic sixth is an ongoing process, yet it is safe to say that it was practiced within Willaert's circle. The affective use of major and minor intervals in general, and in particular the harmonic sixths, altered the way in which certain composers thought about music and its composition and the way in which it was heard by an enlightened audience. The harmonic sixth moved beyond its traditional cadential and contrapuntal uses to assume a new aural role as an expressive indicator. Such new thinking leads to greater consciousness and control of vertical sonority, a recognized feature of the Musica nova style.

As we may deduce from the writings of Zarlino and Vicentino, the affective use of intervals may function on more than one level. On the one hand, intervals are thought to possess certain innate characteristics that make them harsh or sweet, happy or sad. Both theorists state that harmony has an effect on the ear and mind and may induce various passions in the listener. Thus musical affection depends in part on involuntary response to natural stimuli. On the other hand, both admit the importance of reason and experience for correct hearing and for enlightened judgment of what has been heard. Thus musical affection depends also on conditioned response. Proper musical composition captures the mood of the words by manipulating both instinctive and learned responses. Proper listening, therefore, is active. Only experienced and educated listeners, the sort of audience for which Musica nova was intended, could derive maximum pleasure from the composer's effort to communicate word with tone. Only such a listener could hear in the sixth sense.

## Notes

1. Nicola Vicentino, L'antica musica ridotta alla moderna prattica (Rome: A. Barre, 1555); translated by Maria Rika Maniates as Ancient Music Adapted to Modern Practice (New Haven: Yale University Press, 1996); and Gioseffo Zarlino, Le istitutioni harmoniche (Venice, 1558).

- 2. "Tense" and "slack" are taken from Maniates's translation.
- 3. Vicentino, Ancient Music, 108-17 (bk. 2, chaps. 15-21), 255 (bk. 4, chap. 21).
- 4. Vicentino, Ancient Music, 86 (bk. 2, chap. 1), 254 (bk. 4, chap. 21).
- 5. Vicentino, Ancient Music, 270 (bk. 4, chap. 29).

6. Zarlino, bk. 4 of *Le istitutioni harmoniche* (1558); trans. by Vered Cohen as On the Modes (New Haven: Yale University Press, 1983), 95.

7. Zarlino, bk. 3 of *Le istitutioni harmoniche* (1558); trans. Guy Marco and Claude Palisca as *The Art of Counterpoint* (New Haven: Yale University Press, 1968), 21–22 (chap. 10); see also 177 (chap. 57).

8. Hermann Zenck suggested many years ago that the harmonic style of compositions written around the middle of the sixteenth century provides evidence that musicians had begun to hear tone complexes as unified entities ("Zarlinos 'Istitutioni harmoniche' als Quelle zur Musikanschauung der italienischen Renaissance," *Zeitschrift für Musikwissenschaft* 12, nos. 9–10 [June–July 1930]: 540–78, esp. 575). Zenck refers to a change from hearing tone complexes primarily as the intersection of various lines to hearing them as harmonic entities, yet not yet in the "functional" manner of later centuries. Questions of tonal function and context aside, the theory and practice of interval affect described by Zarlino and Vicentino nonetheless indicates a different means of processing harmonic

entities than that employed by modern listeners. The significant point in the current context is not so much that one listener attaches an affective meaning to a certain tone complex that another would not, but that they would listen to the tone complex differently.

9. In addition to his contribution to this volume, a recent overview of the methodological problems involved in reconstructing the cultural context in which music originally was heard appears in Shai Burstyn, "In Quest of the Period Ear," *Early Music* 25, no. 4 (Nov. 1997): 693–701.

10. Isolated instances of this practice can be traced back at least as far as Guillaume Dufay's Ave regina celorum of 1464, a work discussed in Robert Nosow's contribution to this volume (537–50). See Leon Plantinga, "Poetry and Music: Two Episodes in a Durable Relationship," in Musical Humanism and Its Legacy: Essays in Honor of Claude V. Palisca, ed. Nancy Kovaleff Baker and Barbara Russano Hanning (Stuyvesant, N.Y.: Pendragon, 1992), 327.

11. See, for example, Todd Borgerding's discussion of Lassus's motet *In me transierunt* in this volume (586–98).

12. By "major five-three" I mean a major third and perfect fifth above the bass. A major six-three would have a major third and major sixth above the bass, and in modern terminology would be a first-inversion minor triad.

13. See Richard Freedman's discussion of Lassus's "Bon jour mon coeur" and Todd Borgerding's discussion of Juan Bermudo's *Declaración de instrumentos musicales* in this volume for related uses of accidentals.

14. In addition to the quotation above (n. 6), see also The Art of Counterpoint, 63 (chap. 29), 177 (chap. 57).

15. Vicentino, Ancient Music, 115 (bk. 2, chap. 20).

16. For an excellent discussion of the influence of Ciceronian decorum on both Zarlino's theories and the primary musical oeuvre that forms his touchstone, see Martha Feldman, *City Culture and the Madrigal at Venice* (Berkeley: University of California Press, 1995).

17. Zarlino, The Art of Counterpoint, 177 (chap. 57), 234 (chap. 66).

18. The other two cases involve the diminished five-three and minor six-three over B, and the minor five-three and mixed six-three over D.

19. Nicola Vicentino, Madrigali a cinque voci per theorica et pratica da lui composti al nuovo modo dal celeberrimo suo maestro ritrovato, libro primo (Venice, 1546).

20. Michele Fromson, "Themes of Exile in Willaert's Musica nova," Journal of the American Musicological Society 47, no. 3 (1994): 487.

21. Feldman. See also Todd Borgerding's remarks on Vicentino and rhetoric in his contribution to this volume (586–98).

22. Pietro Bembo, *Prose della volgar lingua*, ed. Mario Marti (1525; reprint, Padua: Liviana Editrice, 1967), 63.

23. "Aspro core" is discussed by, among others, Vincenzo Galilei, *Fronimo*, *Dialogo* (Venice: G. Scotto, 1568), 13; Galilei, *Dialogo della musica antica, et della moderna* (Florence: G. Marescotti, 1581), 88–89; Armen Carapetyan, "The *Musica nova* of Adriano Willaert: With a Reference to the Humanistic Society of Sixteenth-Century Venice" (Ph.D. diss., Harvard University, 1945), 255–57; Dean Mace, "Pietro Bembo and the Literary Origins of the Italian Madrigal," *The Musical Quarterly* 55 (1969): 78–80; Claude Palisca, Humanism in Italian Renaissance Musical Thought (New Haven: Yale University Press, 1985), 357–66; Plantinga, 337–41; and Feldman, 250–53, 328–34, and passim. A complete modern score of "Aspro core" appears in Adrian Willaert, Opera Omnia, vol. 6, ed. Walter Gerstenberg and Hermann Zenck, Corpus mensurabilis musicae 3 (Rome: American Institute of Musicology, 1965), 54–60. The note values in Ex. 1 have been returned to their original lengths in order to facilitate comparison with Zarlino's remarks and the other examples cited here.

24. Harmonic sixths above the bass tone are marked beneath the score, "M6" for major and "m6" for minor.

25. "Giunto m'ha Amor" is discussed in Howard Mayer Brown, "Words and Music: Willaert, the Chanson, and the Madrigal About 1540," in *Cinquecento*, vol. 2 of *Florence* and Venice: Comparisons and Relations (Florence: La Nuova Italia Editrice, 1979–80), 225–31. A complete modern score of "Giunto m'ha Amor" appears in Willaert, Opera Omnia, vol. 6, 40–45. The note values in Ex. 2 have been returned to their original lengths.

26. The bass does not imitate the contour of the motive. The independent bass line has successive major steps and allows easier access to the major sixths.

27. The term "tonal type" as used here was introduced by Harold S. Powers, "Tonal Types and Modal Categories in Renaissance Polyphony," *Journal of the American Musicological Society* 34, no. 3 (1981): 428–70.

28. Zarlino, The Art of Counterpoint, 21-22 (chap. 10).

29. I elaborate on this point in "Structure and Affect in Willaert's 'Aspro Core,' " a paper presented at the American Musicological Society and Society for Music Theory conference in Phoenix, Oct. 1997. As may be seen in Ex. 1, the quintus line presents the same motive in both the first and second phrases, the only difference being the addition of B-flat. The altus line in the first phrase remains largely intact in the second, while the bassus line shifts to the tenor in altered form. By using the same material in both major and minor versions, Willaert captures the two faces of Petrarch's Laura.

30. A complete modern score of "Solo e pensoso" appears in Nicola Vicentino, Opera Omnia, ed. Henry Kaufmann, Corpus mensurabilis musicae 26 (Rome: American Institute of Musicology, 1963), 123–24. The note values in Ex. 3 have been returned to their original lengths.

31. Alfred Einstein, *The Italian Madrigal*, 3 vols. (Princeton: Princeton University Press, 1949), 1:333. See also Henry Kaufmann, foreword to Vicentino, Opera Omnia, viii.

32. Madrigali a cinque voci di Girolamo Parabosco discipulo di M. Adriano novamente da lui composti & posti in luce (Venice: Gardane, 1546).

33. Accented minor sixths such as that in m. 5 are often used to weaken internal cadences.

34. Vicentino, Ancient Music, 298 (bk. 4, chap. 40); Zarlino, The Art of Counterpoint, 221 (chap. 64), 263–66 (chap. 71).

35. Zarlino, On the Modes, 106-8 (chap. 36).

36. Vicentino, Ancient Music, 21-22 (bk. 1, chap. 1).

37. The notion that the composer should write harsh-sounding music to accompany words of harsh affection is presented by Zarlino as a principle, yet he stops short of advising

the use of "bad" progressions in practice. Despite recommending the creation of harsh music for special effect and establishing a dichotomy between harshness and sweetness, both of which may be desirable in composition, at other times both Zarlino and Vicentino follow theoretical tradition by equating good music with sweetness. A separate study could be devoted to tracing the use of the terms "sweet" and "harsh" in the history of theory. See, for example, Sarah Fuller's discussion of fourteenth-century theory in this volume (466–81).

38. Vicentino, Ancient Music, 116, 127 (bk. 2, chaps. 21 and 28).