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Tonal Markers, Melodic Patterns, and Musicianship Training, Part II- Contour Reduction

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Tonal Markers, Melodic Patterns, and Musicianship Training
Part II: Contour Reduction

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In Part I of this two-part series on "Tonal Markers and Musicianship Training" (Volume 11, 1997), I presented a reduction technique based on rhythmic/metric procedures used to identify tonal markers. Tonal markers are pitches that are selected by a specific reduction procedure and form patterns commonly found in tonal music on levels above the surface. Common tonal patterns— scales and scale segments, neighbor notes, triads, sequences, pedal points, and pitch segments (psegs)[1]— are found on the surface as well, where they connect tonal markers. Fundamental to this reduction procedure is an understanding that tonal melody is hierarchical. Because the focus of these studies is on the identification of these tonal markers and the relevance of common tonal patterns to musicianship training, the levels we are studying are the most foreground ones, namely the surface and levels close to it. The reduction techniques are frequently applied to melodies of one to four phrases in length and do not attempt to show any large-scale background unity. The musicianship skills addressed in relation to these techniques are memory, ear training, sight singing, improvisation, and dictation.

This article, Part II, focuses on a second type of reduction, one based on melodic contour. While contour reduction is a fairly straightforward procedure, there are several aspects to it which need to be explained. I begin with a short explanation of some ideas about contour reduction in relationship to atonal melody as pre-

[1]Psegs are pitch segments of 3-5 pitches which form common tonal patterns having one or more leaps: SD 1-2-3-5 and 1-5-2 are typical psegs.

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sented by Robert Morris.[2] Contour analysis traditionally has been applied to a study of the surface level features of folk, atonal, and non-tonal melodies. The "new direction" Morris presents is an approach to contour analysis in which he admits to "taking a cue from tonal music."[3] This involves two important innovations. The first is the hierarchical approach, whereby the traditional identification of pitches found at melodic turning points on the surface level is expanded so that some of those contour pitches are selected, through a designated process, to represent higher levels. Each new level, which he labels a *depth,* consists of a group of contour pitches that form a unit including the first, last, and all pitches found at turning points either within separate phrases or a complete piece.

The second innovation Morris brings to contour analysis comes form his understanding of the importance that composers place on the outer voices of a composition. He first discusses this compositional idea in his book, *Composition with Pitch-Classes,*[4] and takes a two-voiced approach to melodic contour analysis by labeling local high pitches *maxima* (*max*-pitches) and local low pitches *minima* (*min*-pitches). Thereafter he treats each group as a separate voice, taking the max-pitches to form a *max-list* and the min-pitches a *min-list.* From each list he selects, according to a *contour reduction algorithm,* the appropriate pitches to represent the higher levels, accomplished by *pruning* pitches that no longer represent local turning points at that level. The final reduction is called the *contour prime.* Its depth number indicates a contour complexity. For example, the surface level written without rhythm and labeled depth, a melody whose contour prime occurs at depth 2 is recognized as less complex than one whose contour prime occurs at depth 4. Another important aspect to the analysis of the Schoenberg melody presented in Morris' article (see Example 1) is that he discusses relationships among the pitch-class sets found at various depths, illustrating aspects of unity among levels.

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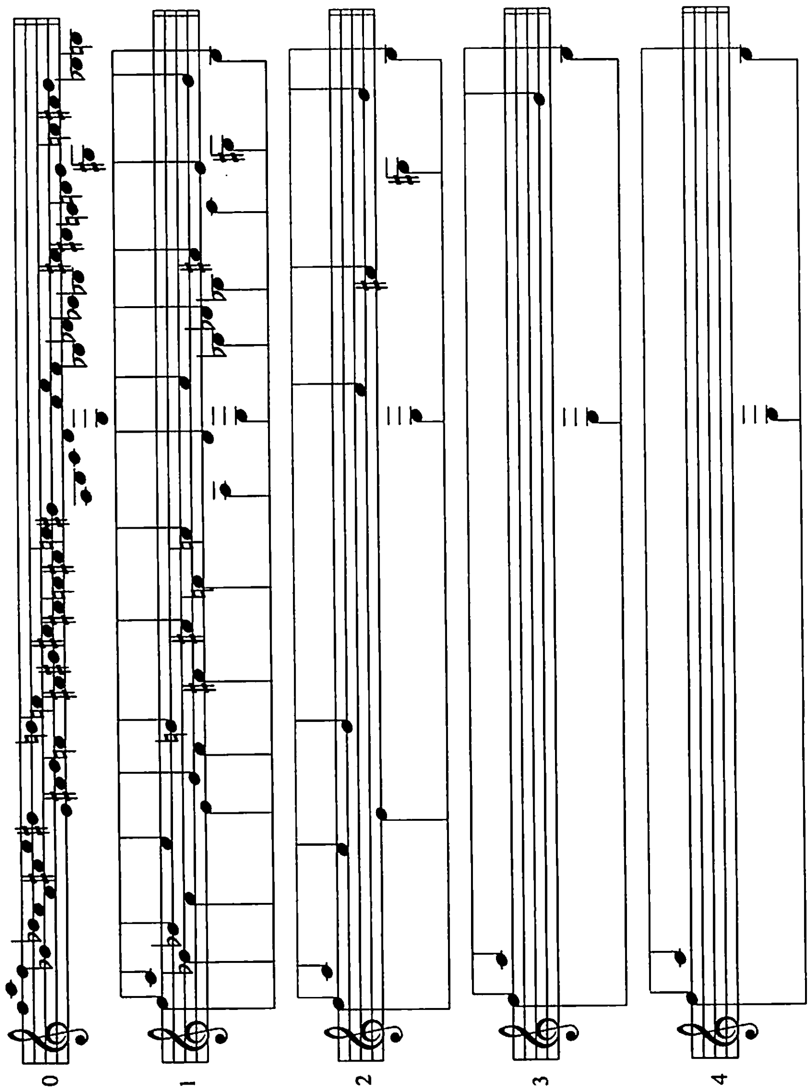
[2]Robert Morris, "New Directions in the Theory and Analysis of Musical Contour," *Music Theory Spectrum* 15 (1993): 205-228. The "melody" he uses is from Schoenberg's Piano Piece, Op. 19 No. 4.

[3]Ibid, 212.

[4]Robert D. Morris, *Composition with Pitch-Classes: A Theory of Compositional Design* (New Haven: Yale University Press, 1987): 37.

EXAMPLE 1: Morris (1993), Ex. 18, p.217: A contour reduction of the melody from Schoenberg's Op. 19, No. 4 [5]



[5]This analysis is reproduced as it is shown in the article, although the penultimate pitch, Bb_3 should be included in the min-list at depths 1 and 2. It would be pruned at depth 3.

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In Morris's reproduction of Schonberg's melody, the top staff (depth 0) presents all the pitches in the melody without rhythm. At depth 1, the first, last, and all pitches at turning points are stemmed, with max-pitches receiving upward stems and min-pitches receiving downward stems. At depth 2 each list or "voice" is pruned separately. In the max-list, for example, only pitches that represent a new high pitch *within the max-list* are retained; all others are pruned. The third pitch of the max-list, Db_5,[6] is eliminated at depth 2 because it is not an upper turning point (Db_5-E_5-G_4). It is removed at depth 3 because it is no longer a local turning point in the upper voice. The same procedure is followed for the min-list except, of course, that the pitches which remain are local low turning points. After the first pitch, which remains a member of both voices, Bb_4 and A_4 are pruned since they do not reflect a change of direction in the bottom voice. The motion does reverse direction with E_4, and that pitch represents the min-list at depth 2. It is subsequently pruned in depth 3. This process continues until no further pruning can take place, leaving only the contour prime, here at depth 4.

CONTOUR ANALYSIS APPLIED TO TONAL MUSIC

While Morris's contour theory focuses on atonal music, I apply that theory to the study of tonal melody, taking a cue from Morris's work on atonal melody and using this procedure to identify tonal markers. I combine the concept of hierarchy in tonal music with Morris's contour theory which, as noted above, is also hierarchical and influenced by the two-voiced concept of melody. This can be accomplished by adapting his *contour reduction algorithm* to tonal music, by means of a few supplementary rules. In addition, I use his terminology of depths, max- and min-pitches, max- and min-lists, and the visual representation in which the surface level is on top and subsequent depths below. Included in the visual representations are noteheads with and without stems, beams, and slurs that show hierarchical relationships. The noteheads with stems are tonal

[6]The notation of pitches is based on the practice of the Acoustical Society of America, where middle C is C_4.

markers and the beams group them. The adoption of this terminology and visual representation separates this work in contour reduction from my preceding work in rhythmic reduction (where hierarchical levels are given rhythmic representations such as half and quarter notes) and levels are notated *above* the surface, visually reinforcing the idea of higher levels. The representations are meant for analytic purposes rather than pedagogical ones; they are not intended for classroom use.

In contour analysis we are concerned with pitches that establish specific boundaries, in particular the opening and closing pitches of a phrase, as well as the upper and lower turning points. While there is only one opening and one closing contour pitch, there may be any number of upper and/or lower turning points, depending upon the shape of the melody. A melody which is a simple arch form may, for example, have only an opening, closing, and one upper turning point, but a wavy-line melody may have two or more upper and lower turning points.

In applying contour analysis to tonal melody the focus is on identifying contour pitches that reinforce the tonality of a given melody and serve as tonal markers. Herein lies the first and most important difference between contour analysis as applied to atonal melody and contour analysis applied to tonal melody. In atonal melody an upper or lower boundary (Morris's max- or min-pitches) is the *exact* pitch that is highest or lowest at a turning point. In tonal melody, however, the actual highest or lowest pitch may be tonally subordinate to the pitch it precedes and/or follows. In other words, the tonal marker may not be the actual highest or lowest pitch at a particular turning point.

The melody by Haydn shown in Example 2 is analyzed twice, once strictly following Morris's algorithm (levels A-1 - A-3) and once with tonal adaptations (levels B-1 - B-4). The surface level and depth 0 belong, of course, to both analyses. Depth A-1 reveals a max-list of B_4-C_5-E_5-D_5-G_4, and a min-list of B_4-A_4-$F\#_4$-A_4-G_4. In the subsequent depths each list is reduced separately, following the algorithm. In the max-list at depth A-2 both C_5 and D_5 are de-selected and

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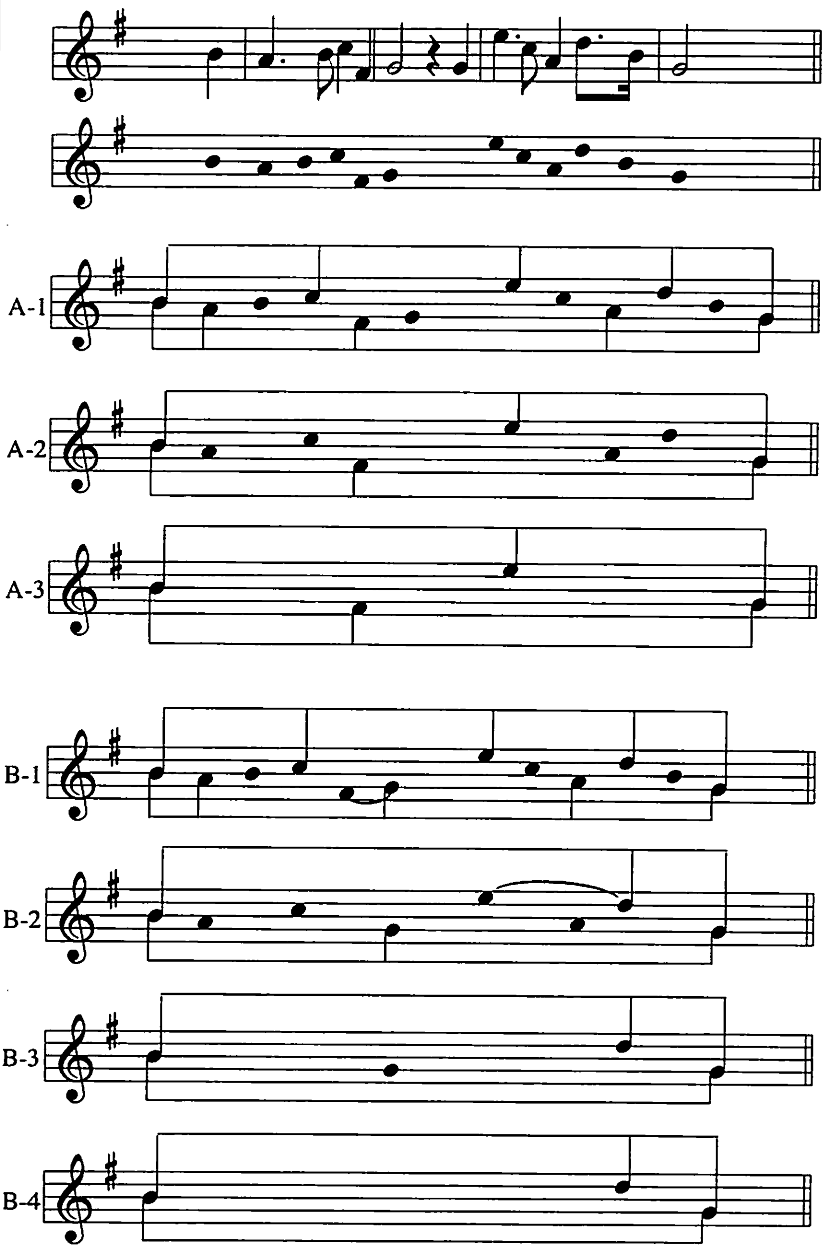
EXAMPLE 2:. Haydn, "She Never Told Her Love," mm. 1-4



pruned at depth A-3, leaving E_5 as the highest contour pitch.[7] In the min-list at depth A-2 both A4's are de-selected and pruned at depth A-3, leaving $F\#_4$ as the lowest contour pitch of the melody. The contour prime, depth A-3, combines the two lists: B_4-$F\#_4$-E_5-G_4. While the min-list of this final reduction (B_4-$F\#_4$-G_4) makes good tonal sense, the max-list (B_4-E_5-G_4) gives a stronger impression of e minor than of G major. The prime itself, therefore, is not the most convincing representation of this tonal melody, indicating that the correct tonal markers have not been selected.

With several adaptations to bring out the tonal strengths of the melody, we see that $F\#_4$ (the leading tone) at depth B-1, rather than being selected as a tonal marker within the min-list, is considered a lower neighbor note to the tonic and attached to it, obviously the stronger tonal pitch and marker. Likewise $F\#_4$ is eliminated at depth B-2, and G_4 in m. 2, as a repeated pitch within the min-list, is eliminated in favor of the final G_4 for the contour prime. The max-list at depth B-1 is the same as that in depth A-1, but at depth B-2, E_5 is treated as an incomplete upper neighbor note to the dominant pitch, D_5. D_5 is therefore the tonal marker. The tonal markers in the contour prime (B_4-D_5-G_4) form a tonic triad, revealing the strong tonal implications of this melody.

Neighbor notes (complete and incomplete) and appoggiaturas are the most common pitches attached to tonal markers that are not located at the actual turning points. These attached pitches are eliminated at the next depth, leaving the stronger tonal pitch as the appropriate tonal marker. Melodic sequences may also be eliminated in favor of the tonal markers to which they are associated. Example 3 shows a melody that opens with a sequence. This short surface-level sequence consists of an ascending third and descending second (E_5-G_5-F_5-A_5-G_5). Rather than choose each pitch as a tonal marker, even though each produces a change of direction on the surface, only the opening and closing pitches of the sequence are selected as the depth 1 tonal markers. These first three tonal markers reveal an opening ascending tonal triad (E_5-G_5-C_6) distributed between the max- and min-lists at depth 1.

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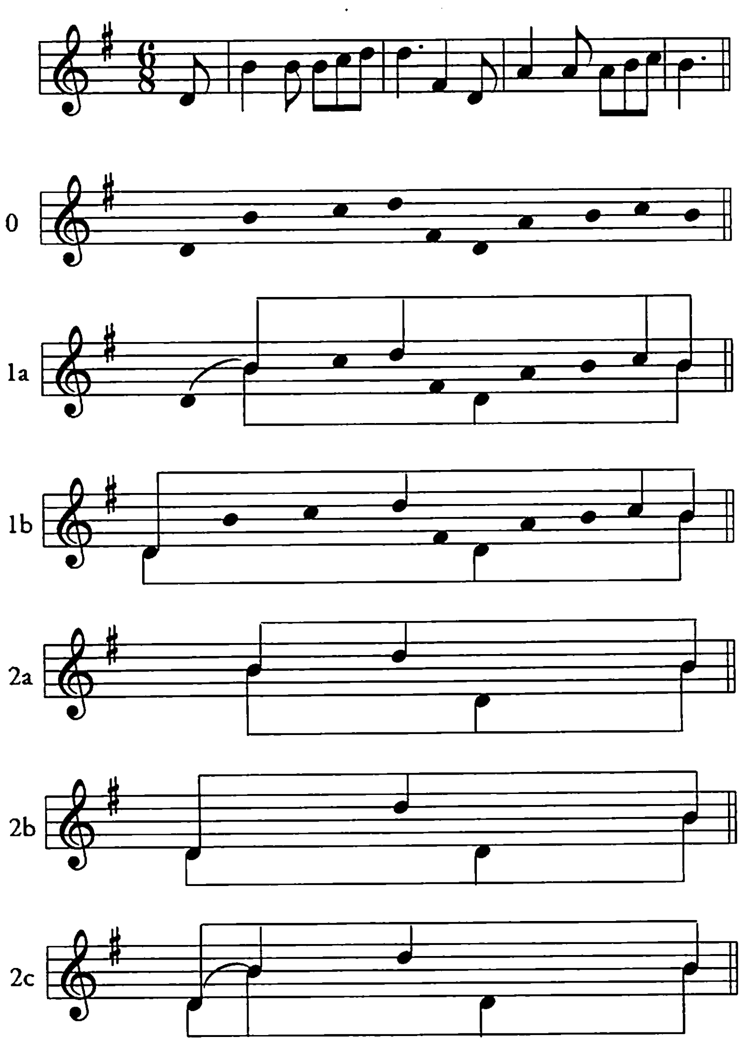
[7]Unlike Morris's graphs, mine contain pitches without a stem that are de-selected pitches eliminated at the following depth.

EXAMPLE 3: Mozart, *String Quintet in C*, K. 515, I, mm. 273-75

In addition to the elimination of pitches that are actual contour pitches in favor of associated tonal markers that occur at melodic turning points but are not the actual contour pitches, tonal music has several other features that distinguish it from atonal melody. One concerns repeated pitches and the other upbeats. Example 4, a melody by Mendelssohn, contains an example of each.

The immediate repetition of one or two pitches is much less common in atonal music than in tonal music, and Morris's algorithm

EXAMPLE 4: Mendelssohn, "Auf Flügelndes Gesanges," mm. 1-4



reflects this. But in tonal music repeated pitches frequently appear on the surface, requiring an adaptation to the algorithm. In tonal melody repeated pitches are eliminated at depth 0, before the first tonal markers are identified, as shown in Example 4.

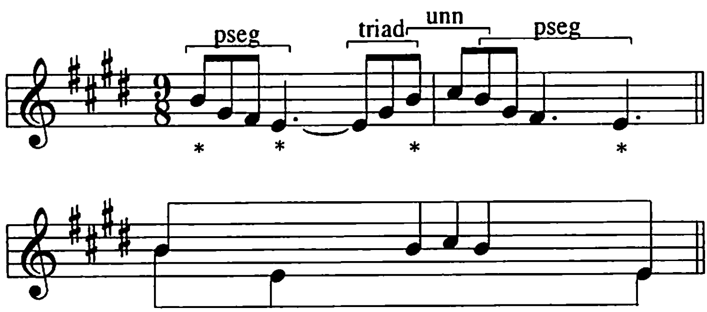
Upbeats in tonal music may be interpreted as emphasizing the second pitch, the metrically stronger pitch and a possible opening tonal marker. Depths 1a and 1b of Example 4 present different possibilities, the first with the goal of the upbeat (B_4) being chosen as the tonal marker and the second (depth 1b) with the upbeat itself (D_4) as the tonal marker. Depths 2a and 2b present their respective primes. Depending upon which solution appears to represent the melody better, the upbeat may or may not be eliminated. However, a third possiblity exists, namely to consider the first two pitches a *double* opening tonal marker (D_4-B_4), as shown in depth 2c. This interpretation is often helpful in musicianship training situations, as discussed below. The slur connecting the two notes is the visual representation for the two-pitch upbeat opening.

Another situation in which a multi-note tonal marker is sometimes appropriate is with a single neighbor note. The melody in Example 5 is a very simple one with a contour prime consisting of these tonal markers: B_4-E_4-B_4-E_4 with C#$_5$ being eliminated as less important than the dominant B_4.[8] Since the C#$_5$ in the complete upper neighbor note pattern occurs on the downbeat, emphasizing its prominence, a possibility for singing the tonal markers is to sing B_4-E_4-[B_4-C#$_5$-B_4]-E_4 to bring out this feature of this melody. While it may seem more viable theoretically to choose only a single tonal marker in upbeat and neighbor note situations, I have found that the multi-note selections work better for students in aural training situations. I will discuss this point further when considering training musicianship skills.

This introduction to tonal melody contour reduction has given us insights into the selection of tonal markers and some of the patterns they create at each level. It remains to notice the patterns that connect the tonal markers themselves. On the surface level of Example 5 there are several common tonal patterns. First is a pseg (B_4-G#$_4$-F#$_4$-E_4), followed by a tonic triad connecting E_4-B_4. That B_4 is prolonged by the complete upper neighbor note pattern men-

[8]Beginning with this example, asterisks mark tonal markers that are clearly seen without the use of a graph.

EXAMPLE 5: Tchaikovsky, "Whether Day Dawns," Op. 47, No. 3, mm. 1-2



tioned above (B_4-$C\#_5$-B_4), and the ending B_4-E_4 is connected by the same pseg which opens the melody (B_4-$G\#_4$-$F\#_4$-E_4).

If we return to Example 3, some interesting patterns emerge at depth 1. After the opening sequence connecting the first pitch E_5 to G_5, the two tonal markers G_5 and C_6 form a triadic leap. C6 is then connected to D_5 through a scale (C_6-B_5-A_5-G_5-F_5-E_5-D_5) that encompasses both passing and neighbor motion. In the middle of this motion there is an emphasis on G_5 (the dominant pitch) by way of a figure I call "passing/neighbor" (B_5-A_5-$F\#_5$-G_5) that elides into a "neighbor/passing" figure (G_5-A_5-F_5-E_5). In the first, the "passing/neighbor" configuration, A_5 acts as both a passing tone and part of a double neighbor-note pattern surrounding G_5, while $F\#_5$ is, of course, its lower neighbor. The reverse happens on the other side of G_5, with A_5 functioning as an upper neighbor and F_5 as both a passing tone and a member of a double neighbor-note pattern following the main pitch. With this emphasis on G_5, it might be appropriate to label it a tonal marker at depth 1, even though it is deselected at depth 2 and eliminated in the prime at depth 3.

Tonal melodies that are reduced using the contour reduction procedure described above reveal features that include tonal markers and common tonal patterns. The patterns are found as combinations of tonal markers and as the melodic configurations connecting individual markers.

Contour reduction procedures obviously focus on melodies that exploit melodic space, and sometimes the tonal markers that form the contour prime are at a great distance from one another. The prime found in Example 3 above consists of the pitches E_5-C_6-D_5-E_5. As ordered *pitch classes* (pcs = E-C-D-E) it is easy to see a close tonal and scalar relationship. If we *transform* this pseg so that all pitches are as close as possible, the result is: E_5-C_5-D_5-E_5, as shown in depth 3a. The collapsing or transforming of a contour prime allows for a stronger understanding of the underlying tonal pattern that generalizes the contour prime's tonal markers. A transformed pattern is not considered a new depth, since nothing more is eliminated, but an octave adjustment of one or more tonal markers is made within the prime. It therefore retains the same depth number as the prime, although at a subsidiary level.

When composers do not exploit the metric properties of a melody by placing tonal markers in important metrical positions, contour reduction, with appropriate tonal adjustments as presented above, is usually the procedure that brings out the strongest tonal features of a melody. The information presented below teaches students both to understand these properties of melodic contour and to develop stronger musical skills. These skills are the same as those addressed in Part I: musical memory, ear training, sight singing, improvisation, and dictation.

SKILL BUILDING ACTIVITIES: MEMORY

An important first goal in developing musical memory is to learn common patterns. The article on rhythm reduction presented exercises for learning common patterns found at all levels of structure in tonal music, based on specific rhythm patterns. The melodic patterns include scales and scale segments, neighbor-note patterns, triads, sequences, pedal points, and psegs. In that article each pattern reinforced a particular metric background and was related to a given rhythm pattern. When studying patterns in relationship to contour, the focus becomes the up-and-down relationship of pitches. Example 6 works with trichords in which the movement is up-down and the last pitch is lower than the first. As a contour class, the trichord is labeled CC <120>, where 0 represents the lowest pitch, 1 the next highest, and so on.[9] In Example 6a the pattern is an ascending second, descending third, in Example 6b, an ascending third, descending fourth, etc. Obviously the possibilities for different patterns are endless, and the goal is not for students to memorize each and every pattern, but rather to develop a fluency that allows them to reproduce any ascending-descending relationship with ease. The usual nmemonic devices of solfége syllables, numbers, and absolute pitch names are, in my opinion, essential to encode important relationships and strengthen the musical ear.

An exercise that helps students understand transformed contour primes and how melodies exploit melodic space is based on octave prolongations of pitches. Example 7 contains several ex-

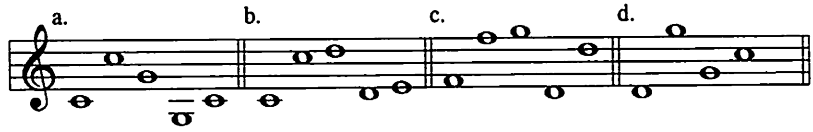
EXAMPLE 6

[9]Two definitions of contour classes are presented by Michael Friedmann, "A Methodology for the Discussion of Contour: Its Application to Schoenberg's Music," *Journal of Music Theory* 29/2 (1985): 227-30 and Robert Morris, *Composition with Pitch-Classes* (1987): 28-29.

amples that play with contour space, although they do not always represent the contour prime. Example 7a plays with tonic and dominant pitches, using ordered pcs C-G-C, while Example 7b uses a scale segment (pcs C-D-E), and Examples 7c and 7d use psegs (F-G-D and D-G-C respectively). The teacher may want to design other such exercises that contain no stepwise motion. Using C-D-E (as in Example 7b) a harder exercise would be: C_4-C_5-D_4-E_5-E_4. Again, the goal is for students to gain a basic level of fluency with these types of patterns and to learn to use the voice when there are quick register changes, but not to memorize them all. The teacher must decide how many the students memorize to attain fluency.

In addition to memorizing patterns, contour reduction can facilitate memory of melodies. In the following melody, students first establish the tonality, perhaps by singing this chord progression in G with absolute pitch names: I-ii^6-V-I. Students first sing the tonal markers that constitute the contour prime, in this case G_4-D_4-D_5-B_4 (marked with asterisks). The prolonged upper dominant (D_5-E_5-D_5) could be sung as a multi-pitched marker (G_4-D_4-[D_5-E_5-D_5]-B_4). At this point the rhythmic and metric aspects of the melody are included as the students sing the markers with the appropriate connecting patterns. For example, the opening tonal marker (G_4) is followed by an incomplete upper neighbor note (A_4) that, along with D_4, is a member of the dominant. These patterns are so clear and obvious that, if the students have previously memorized them as common tonal patterns, they will recognize them quickly, making the singing and memory of this melody an easier task. If this activity is done during class, the quicker and more experienced students should be required to transpose the melody D to other major keys with absolute pitch names. While this memory work is a pre-dictation skill, this type of exercise in which students are not expected to notate is valuable for developing quicker memory skills and at the same time reinforcing melodic patterns and the relevance of contour studies to tonal melody.

EXAMPLE 7



EXAMPLE 8: Mussorgsky, *The Fair at Sorochinsk,* Act II
"Song of Khivria," mm. 1-4

EAR-TRAINING ACTIVITIES

Ear-training activities are designed to reinforce the principles of contour reduction. To prepare students for an understanding of a contour prime, they must be able to sing members of the tonic and dominant triads in an extended vocal range. An early activity is to "explore the space" of a tonic triad, emphasizing these wide ranges, as shown in Example 9. The pcs of the triad are F-A-C, as shown in Example 9. They are written on the staff in a range extending from A_3 to A_5 in Example 9b. The teacher points to them in a random order as, for example, in Example 9c, while the students sing the appropriate solfége syllables or numbers. Next, an echo procedure is used. The teacher plays or sings a group of pitches on a neutral syllable and the students answer with the correct solfége syllables, numbers, or absolute pitch names. The order of pitches in Example 9c can be used for echoing single pitches, while echoes of 3-4 pitches are illustrated in Example 9d.

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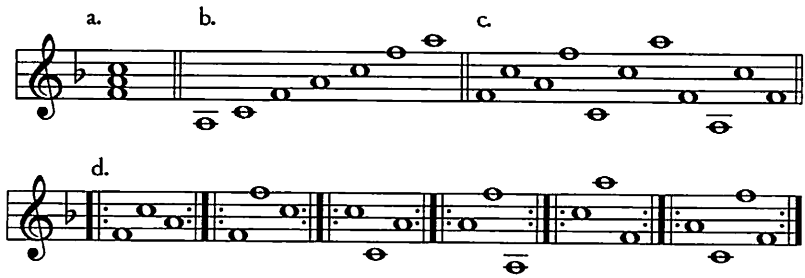
EXAMPLE 9



The next exercise contains examples for practicing tonal markers with upper or lower neighbor notes attached to them. Example 10 focuses on the members of a C major triad ranging from G_3-E_5. These procedures to "explore the space" and echo sing use open noteheads for the triad members and closed noteheads representing the neighbor notes. Example 10a begins with complete neighbor note configurations and Example 10b with incomplete ones. It is clear that the leading tone is connected to the tonic, the subdominant to the mediant, and the submediant to the dominant. Once the exercises in Example 10a and b are mastered, "exploring" takes place. This simply means that those patterns are performed in a random order, as illustrated in Example 10c. The teacher points to various portions of Examples 10a and 10b, resulting in Example 10c as one possible manifestation of the exercise. The next step is an echo procedure, as discussed before and shown in Example 10d. The teacher either sings or plays one of the selected patterns. Individual students repeat the pattern, using either solfége, numbers, or absolute pitch names.

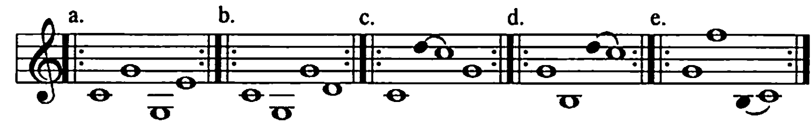
Another ear training exercise based on contour patterns that helps prepare the students for sight singing and dictation of contour primes works with four-note primes in an echo procedure. In Example 11 they consist of members of the tonic and dominant seventh chords, some with neighbor notes. The students repeat the four pitches with the correct solfége, numbers, or absolute pitch names, after the teacher sings or plays a complete pattern. Example

EXAMPLE 10

11a works with a C major triad with the middle pitch, G, prolonged by octave. In Example 11b the final pitch, D_4, is a member of the dominant chord, and in Example 11c an incomplete upper neighbor note is attached to the tonic pitch which is prolonged by octave repetition. The final two examples (Examples 11d and 11e) show other incomplete neighbor notes with closed noteheads.

Another ear training activity includes the identification of specific contour pitches and patterns in melodies that the teacher plays or sings on a neutral syllable. This is clearly a pre-dictation activity whose purpose is to teach students to focus on specific contour pitches. After an initial preparation to establish the tonality of a melody, the students must identify the first and last pitches. The teacher can decide whether or not to do more—for example, to identify all the markers in the contour prime—or to concentrate only on the first and last pitches in several melodies. The teacher may also assign harder tasks for the quicker students. Everyone may be required to get at least the first and last pitches after a specified number of playings, while those who are able also identify the contour

EXAMPLE 11



prime and, if the melody is not overly difficult, learn the complete melody. Since notation is not the goal here, the quicker students should be required to memorize the complete melody. Rather than notate the melody, the teacher may play it again the following day, so that students can commit it to memory again, but hopefully more quickly this time. The melodies in Example 12 contain examples of simple contour primes addressing the problems of tonal markers (labeled with asterisks), such as the pruning of neighbor notes (Example 12b) and upbeats (Example 12d). The teacher may decide whether or not to allow the use of multiple-pitch tonal markers in these cases. It is important that there be pre-dictation activities that do not require notation, but which direct the students' attention to important aspects of a melody, in these cases tonal markers derived from contour reduction procedures.

SIGHT-SINGING ACTIVITIES

The role of contour reduction in developing sight-singing skills is a fairly simple one. First, students establish the tonality by singing the tonic and dominant chords. Next, they sing the tonal markers that constitute the contour prime of each phrase. Depending upon the difficulty of the melody, this may only be the first, highest, and last pitches (as in Example 13a), or first, last and several high and/ or low pitches (as in Example 13b). In Example 13a the prime itself (marked with asterisks) consists of the pitches B_2-$D\#_4$-B_3, while the depth closer to the surface adds 2 pitches (marked with plus (+) signs), resulting in a more wave-like contour: B_2-$F\#_3$-$D\#_3$-$D\#_4$-B_3. Having sung those pitches, the students next conduct and sing the melody as notated. Even with such a simple melody, this contour

EXAMPLE 12: A. Sullivan

a. *The Gondoliers,* Act I, No. 1, "Thank you, gallant gondolieri," mm. 563-70
b. *The Sorcerer,* Act I, No. 14, Finale, "Eat, drink, and be gay," mm. 1-4
c. *H.M.S. Pinafore,* Act I, No. 5, "Sorry her lot," mm. 18-21
d. *The Sorcerer,* Act I, No. 1, "Ring forth, ye bells," mm. 1-6

introduction prepares for a successful and flawless singing of the complete melody.

The melody in Example 13b is a more difficult one which can be introduced using contour information. The tonal markers forming the contour prime are C_5-E_4-G_5-G_4 (marked with asterisks). The melodic line connecting G_5-G_4 consists of a sequence of contour pitches (marked with plus signs): G_5-D_5-F_5-C_5-E_5-B_4-D_5, then a leap down a fifth to the final pitch, G_4. After singing this contour introduction students can recognize the opening tonic prolongation, triad, and scale segment that connect the first three tonal markers of the

EXAMPLE 13

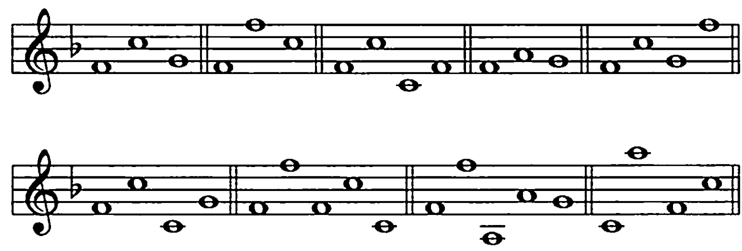
a. Berlioz, "Serenade de Mephistopheles," mm. 1-5
b. Beethoven, *Violin Sonata in C minor*, Op. 30, No. 1, III, Trio, mm. 1-9

prime. With this knowledge they are prepared for a singing experience in which they can pay attention to the flow of the melodic line and proper phrasing.

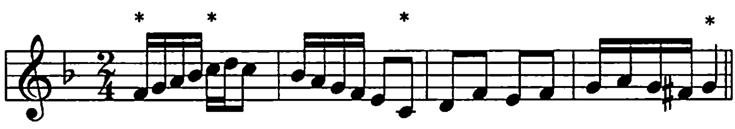
IMPROVISATION ACTIVITIES

Improvisation can begin with students making up short contour primes, such as those presented in Example 14. Example 14a demonstrates primes with tonal markers that consist of various patterns (psegs, triads, and scale segments), while Example 14b adds more octave doublings and wider spaces between pitches. The next step would be to improvise patterns to connect the tonal markers in a prime. Example 15 gives a short example, based on a prime of F_4-C_5-C_4-G_4. This improvisation exercise is made more complicated when more tonal markers are added to the prime, producing a melodic line with more waves in it. Students need to be encouraged to sing large intervals between tonal markers to allow space for the melody to go. Of course, rhythm and meter must be incorporated so that students do not just sing at random with no temporal sense. Therefore, they need to be encouraged to sing simple melodies that allow them to incorporate all of those dimensions at the same time.

EXAMPLE 14

a.
b.


EXAMPLE 15



DICTATION ACTIVITIES

The memorizing of common tonal patterns, contour primes, and melodies using contour reduction procedures are essential preparatory steps to dictation. Several other steps can be taken before complete dictation is required. One such activity is for students to notate without rhythm the tonal markers that constitute the contour prime and other depths closer to the surface. In Example 16 the contour prime consists of these tonal markers Ab$_3$-Db$_4$-Db$_3$-F$_3$ (marked with asterisks), as the first, highest, lowest, and last pitches. The next level closer to the surface adds contour tonal markers (with plus signs) that connect Db$_4$-Db$_3$ (F$_3$-Ab$_3$-Eb$_3$-Bb$_3$), as well as the Ab$_3$ connecting Db$_3$-F$_3$ at the end of the phrase. While all students should complete this information, some may be able to go ahead and notate the correct rhythm and pitches for the entire melody. However, the goal of this activity is to concentrate on the tonal markers that serve as contour pitches.

EXAMPLE 16: Donizetti, *Don Pasquale*, Act I, "Bella siccome un angelo," mm. 1-4

Another form of dictation is to give the contour prime and have the students first pay attention to certain tonal features, such as upbeats and neighbor notes. The melody by Schubert in Example 17 offers ample opportunities. The given prime is C_5-Eb_5-Eb_4. Students first identify the upper neighbor note (Db_5) at the beginning and the incomplete upper neighbor note (F_5) attached to Eb_5. Alternatively, they may be given the tonal markers on a level closer to the surface of the melody and asked to fill in the connecting pitches. Last, they add the correct rhythms. Example 18 shows a depth containing tonal markers G_4-E_5-G_4-G_5-E_5 (marked with asterisks). Students fill in the correct rhythms and pitches to connect those markers. This activity allows them to reinforce their knowledge of common tonal patterns within the context of a melody by a master composer.

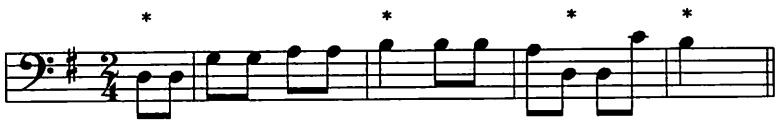
Eventually students must be required to notate complete melodies, such as the one presented in Example 19. After the tonality is established, the students notate the pitches of the contour prime (D_3-B_3-D_3-B_3) before "filling in the gaps" and correctly notating the entire melody.

One final and more challenging dictation activity is to give the students the ordered pitch classes of a transformed contour prime. Their first goal, after the tonality is established, is to notate those pitch classes as pitches. In Example 20 the ordered pcs which are given the students are C, Bb, A. Once the actual pitches of the contour prime are known (C_3-Bb_3-A_2), the students can work on an orientation to the meter and rhythm patterns and the surface-level pitches. Working backwards is often helpful, since students usu-

EXAMPLE 17: Schubert, "Gemeines," Op. 14, No. 2, mm. 1-4

EXAMPLE 18: Bach, Cantata No. 135, *Ach Herr, mich armen Sünder,* "Tröste mir, Jesu," mm. 1-4

EXAMPLE 19: Smetana, *The Bartered Bride,* Act II "Komm, mein Söhnchen," mm. 1-4



ally remember best what they heard last. In this case it means notating the final three pitches (C_3-Bb_2-A_2), a surface-level rendering of the contour prime. The opening three measures are another clear focus with a C_3 pedal supporting an ascending scale segment (F_3-G_3-A_3). The double neighbor-note pattern following that A_3 (Bb_3-G_3) takes the melody down to the tonic F_3. This pitch is prolonged

EXAMPLE 20: Mozart: *Die Zauberflöte,* Act II "O Isis und Osiris," mm. 1-8a

by its double neighbor notes (E3-G_3) before the arrival of the highest pitch of the melody, Bb_3. The descending third motion away from this pitch is an arpeggiation of the V7 chord (Bb_3-G_3-E_3-C_3) and the connection to the final scale segment mentioned above. In addition to playing the melody many times, the job of the teacher is to help the students focus on various parts of the dictation process: the tonal markers, the patterns connecting them, and the rhythm patterns on the surface.

CONCLUSION

These two articles on "Tonal Markers and Musicianship Training" introduce several features of tonal melody that are useful in developing and training musical skills such as memory, ear training, sight singing, improvisation, and dictation in an undergraduate aural skills curriculum. The two reduction techniques are predicated on a hierarchical understanding of tonal melody, although I make no claim that they are the only procedures for attaining higher levels. Teaching students to understand tonal hierarchy and the prevalence of common patterns can greatly facilitate the musicianship training of our talented students, whose abilities deserve to be developed to their highest potential.