

PART I

Methodological orientation: harmonic
analysis through listening

1 | Foundational diatonic processes

Though any of the twelve pitch classes may sound during a tonal composition, certain pitches will be more prominently featured since in all cases a key will be established. For example, in A Major (the key of our first example, below) the pitches A, C \sharp , and E are especially prominent, as members of the tonic triad. Their most frequent interactions will be with their diatonic cohorts B, D, F \sharp , and G \sharp . The other five pitch classes (whose spellings will vary according to usage) may be deployed to add greater emphasis or variety (topics explored beginning in chapter 2), or instead to fulfill subordinate embellishing or connective roles. During a harmonic progression different pitches in turn come to the fore. For example, in the succession from V to I, the dominant's E, G \sharp , and B at first will supersede even the tonic pitch A in prominence. With the resolution to I, A and C \sharp take over from G \sharp and B as highlighted pitches.

Our first example lacks even that level of harmonic variety. Because of its unique location at the end of a ninety-measure composition, the tonic harmony is prolonged throughout. In that context the listener will focus especially on the deployment of the tonic triad's three pitches (A, C \sharp , and E) and on how Mendelssohn connects those pitches. Of course the pitch A, as the key's tonic, will sound – either in the melody or in the bass, or in both – when the greatest level of stability is desired. Though Mendelssohn here limits himself to one harmony, he projects the tonic triad's pitches in multiple registers.

1.1 Mendelssohn: Song without Words in A Major (op. 62, no. 6), mm. 83–90

As preparation for your exploration of audio example 1.1, sing arpeggiations of A, C \sharp , and E in all of its inversions, outlined below. Use a pitch pipe, an online pitch pipe, or a piano to establish the pitch A in your mind.

Start by singing

A < C# < E

high in your vocal range. (Use any solfege system you are comfortable with; or sing the letter names, substituting the single-syllable German “Cis” for the multi-syllable “C-sharp.”) Then, starting lower, sing

E < A < C#

followed by

C# < E < A

and finally

A < C# < E

low in your vocal range. You might also sing these pitches according to their scale degrees numbers:

$\hat{1} < \hat{3} < \hat{5}$
 $\hat{5} < \hat{1} < \hat{3}$
 $\hat{3} < \hat{5} < \hat{1}$

For future reference, here are syllables for sharp and flat pitches (departing from standard German practice for B since Germans instead use H) for readers who prefer to sing using note names:

Cis	Dis	Eis	Fis	Gis	Ais	Bis	(raised)
Ces	Des	Es	Fes	Ges	As	Bes	(lowered)

Example 1.1 The work’s concluding A Major tonic harmony, enlivened by arpeggiations and local chromaticism.

- 1. Indicate the scale degrees that sound at the five spots marked R.¹
- 2. Indicate the scale degrees that sound at the top of the three chords marked Z.²
- 3. Though three distinct intervals occur at the spots marked W, they are all related. Building upon your response to question 1, indicate which two scale degrees sound in each instance, as well as what intervals those pitches form in each case. Briefly explain how these intervals relate.³
- 4. Among the eight pitches marked X or Y, three are chromatic. Which three?⁴

1.2 Mendelssohn: Song without Words in A Minor (op. 53, no. 5), mm. 0|1–6₂

Over the past several centuries a large number of musicians have helped in establishing procedures for analyzing tonal music. Not surprisingly, there remain many areas of disagreement. Most analytical observations depend upon some foundational premises (developed, one might hope, through careful study of compositions that share specific stylistic traits). When practitioners who uphold contrasting premises study the same composition, alternative interpretations will likely emerge – sometimes even in coming to terms with the most elementary of musical utterances. Consider the tonic triad in A Minor: A-C-E. It may happen that the prolongation of the tonic is temporarily called into question through stepwise upward motion in two voices, resulting in the chord A-D-F. What if, immediately thereafter, A-C-E is restored? Though figured bass numbers may provide a neutral accounting of this motion, as $\begin{smallmatrix} 5-6-5 \\ 3-4-3 \end{smallmatrix}$, a consideration of the internal chord's genesis and role would lead to considerable controversy among analysts. Some would interpret the pitch D as a harmonic *chordal root*, generator of the concurrently sounding F and A. From that perspective, the passage might be analyzed as I IV I. Others would interpret the pitch D instead as a *melodic embellishment* of the tonic's third: D as neighbor to C (and concurrently F as neighbor to E). From that perspective the tonic root A does *not* yield to any other harmony during A-D-F but instead perseveres despite the concurrent embellishment of both the chordal third and fifth. A single analytical label might be displayed:

I—————

perhaps fortified by Arabic numerals that provide a visual representation of the embellishment

$\begin{array}{c} 5 \text{ ————— } 6 \text{ ————— } 5 \text{ ————— } \\ I \\ 3 \text{ ————— } 4 \text{ ————— } 3 \text{ ————— } \end{array}$

In this case the symbol $\begin{smallmatrix} 6 \\ 4 \end{smallmatrix}$ emerges through a *linear* initiative, not through chordal inversion.

Likewise the A-C-E triad might be embellished by lower neighbors, as in G \sharp -B-E, or by more complex combinations of neighbors, as in G \sharp -B-D-E or G \sharp -B-D-F. Though it may not always be possible to

draw a precise line between melodic embellishment and harmonic progression, in the perspective advocated in this study many local chordal interactions of this sort will not be interpreted harmonically.

Audio example 1.2 offers opportunities to come to terms with local embellishing chords that are not harmonically motivated. None of the questions posed ask for a Roman numeral analysis, because that analysis would amount to no more than a prolonged I. Though this excerpt offers more chordal variety than does audio example 1.1, ultimately both in their own ways project a single harmony, the tonic. (Whereas audio example 1.1 occurs at the end of a composition, audio example 1.2 serves as an introduction.) To prepare for what you will hear, sing in turn two models of neighboring-note embellishment, beginning on a tonic A low in your vocal range:

A < C < E
 A < D < F
 A < C < E
 A < C < E
 A < B < D
 A < C < E

Then sing a combination of both neighboring-note embellishments:

A < C < E
 A < D < F
 A < B < D
 A < C < E

Finally sing a model in which three neighboring notes emerge concurrently:

A < C < E < A
 A < B < D < G#
 A < C < E < A

Example 1.2 The composition's introduction, bounded by A Minor tonic chords.

- 1. An A Minor tonic chord sounds during seven of the fourteen R segments. Which seven?⁵
- 2. Downward stems are attached to fourteen of the noteheads in the grid above. Exactly how many of them correspond to the bass pitch A?⁶
- 3. Inner-voice quarter notes C and E (both members of the tonic triad) sound with bass A at the downward-stem location within R₁. In the span from R₂ through R₁₃, only two other three-note combinations sound at downward-stem locations. Name those two combinations and indicate which locations correspond to each. Describe how those combinations relate to the tonic triad.⁷
- 4. Throughout most of the excerpt, the upper-voice melody (corresponding to the notes with upward stems in the grid) follows the contour of the inner-voice pitches explored in question 3. Yet at three locations, upward motion among the inner voices coordinates with downward motion above. Name those locations, and describe the chord (the same in each instance) formed by the five sounding pitches above the bass.⁸

1.3 Schumann: “Die alten bösen Lieder” from *Dichterliebe* (op. 48, no. 16), mm. 15|16–19₃

Analyzing the individual chords that constitute a progression warrants a careful consideration of their interactions with the chords that both precede and follow them. Many – perhaps all – chords commonly used in tonal compositions are susceptible to a range of deployments. There may be a tension between or among competing interpretations, leaving the listener in a state of uncertainty until further progress through the work provides, *ex post facto*, the context that helps clarify the roles the individual chords play. A chord in $\frac{6}{4}$ position offers special challenges for listeners, as well as special opportunities for composers. When, for example, a B-E-G \sharp chord sounds in an E Major context, the B^{E} fourth formed with the bass may in fact represent the inversion of the tonic triad's E^{B} fifth, in which case

1.4 Mendelssohn: Song without Words in F# Minor (op. 30, no. 6), mm. 0|1–22₂

During a parallel period (one of music's most straightforward organizational schemes), two phrases sound in succession, with only the latter reaching the full closure generated by a perfect authentic cadence. In this scenario the first phrase (the antecedent) will come across as an incomplete musical utterance, thereby motivating the second try that will occur during the phrase that commences immediately thereafter (the consequent). Often the harmonic trajectory will be I–V followed by I–V–I (half cadence, then perfect authentic cadence). (Though usually at least one other harmony comes between I and V, in audio example 1.4 that is not the case. Also, because the example is in the key of F# Minor and leading tone E# is incorporated within the dominant, that chord's analytical symbol will appear as V#.) The broad melodic trajectory supported by the period's harmonic progression often will take the form of $\hat{3} > \hat{2}$, $\hat{3} > \hat{2} > \hat{1}$. Because a single harmony sometimes will span multiple measures, the melodic presentation of $\hat{3}$ or $\hat{2}$ might not coincide with the onset of its supporting chord. For example, a gradual arpeggiation up to $\hat{3}$ might be a salient feature of an initial tonic harmony's presentation.

Though a parallel period may serve as an independent musical entity, such a construction often serves as a component of a broader musical composition. The parallel period featured in audio example 1.4 constitutes the first part of a song, here preceded by a six-measure introduction.

The dominant's dissonant impact is here heightened through the incorporation of the chordal seventh and ninth. As preparation for your listening, sing the following alternation between tonic and dominant chordal arpeggiations:

			F#	<	A		
C#	<	E#		<	G#		
			F#	<	A		
C#	<	E#		<	G#	<	B
			F#	<	A		
C#	<	E#		<	G#	<	B < D
C#	<	E#		<	G#	<	B
			F#	<	A		

Example 1.4 An introduction followed by a parallel period in F# Minor.

- 1. The downbeat eighth note during R introduces the root of the F# Minor tonic harmony. How are the three members of that harmony deployed during the remainder of R?¹⁴
- 2. As your answer to question 1 should indicate, the tonic harmony's F# and A are stated prominently during R. They are then repeated during the beats that follow. What two pitches emerge during X₁ (both in the melody and in the accompaniment) to serve as their immediate successors?¹⁵
- 3. Though the two passages are very similar, the bass note during X₂ (within the period's antecedent phrase) is not the same as that during X₁ (within the introduction). Name the bass pitch deployed in each instance, and indicate the term that often is used to describe how that of X₁ functions.¹⁶
- 4. The harmony introduced during X₁ is intensified through the introduction of a dissonant pitch at Y₁ (repeated at Y₂) and another at Z. Name, in order, these two dissonant pitches and indicate what intervals they form against dominant root C#.¹⁷
- 5. Provide a detailed account of how the melody during W₁ relates to R.¹⁸
- 6. Has the harmony changed at S, or instead has the preceding chord's inversion changed? Indicate both what harmony is projected at S (using a Roman numeral) and that chord's inversion (using conventional figured bass numbers).¹⁹
- 7. The two measures that intervene between X₁ and the onset of W₁ do not have counterparts between X₂ and the onset of W₂. Explain what Mendelssohn does instead in the latter case.²⁰
- 8. Whereas W₁ spans four measures, W₂ spans five. Which one of W₂'s measures most deserves to be regarded as an addition to what was presented in W₁? What is the highest-sounding pitch during that measure, and what chromatic pitch is deployed?²¹
- 9. A suspension occurs at T, with resolution during X₃. Using conventional figured bass numbers (e.g., 9–8, 7–6, etc.), indicate the type of suspension that Mendelssohn deploys. Which of X₃'s three pitches serves as the resolution?²²
- 10. A I–V#–I harmonic progression often supports the descending melodic line $\hat{3} > \hat{2} > \hat{1}$. Precisely where do that line's A and G# sound during the antecedent phrase? (Indicate locations within W₁ and X₂, respectively.) Likewise, where do those pitches sound during the consequent phrase, preceding the tonic arrival (supporting $\hat{1}$) at U? (Indicate locations within W₂ and X₃, respectively, noting that in this instance a descending registral shift occurs.) Given this state of affairs, what cadence type concludes each phrase?²³

1.5 Mendelssohn: Song without Words in E Minor (op. 62, no. 3), mm. 0|1–8₂

From acoustics one learns that a sounding pitch C generates a range of partials: C<C<G<C<E<G<. . . . That natural phenomenon helps explain why our musical forebears latched onto C-E-G as a foundational triadic entity. Once harmony became a sophisticated component of musical thinking, the trajectory from the tonic to the dominant and back (C<G>C in C Major) became ubiquitous, confirming the dominant root's prominence among the tonic's partials. That root ($\hat{5}$), which of course generates its own set of partials (G<G<D<G<B<D<. . .), typically will be enhanced by $\hat{2}$ and $\hat{7}$. The leading tone's upward resolvent tendency (often strengthened by a concurrent 8–7 motion, G to F, resulting in the sounding of dissonant F_B or B_F) helps explain why the trajectory from V to I usually transpires directly, without intervening harmonies. In contrast, the path from the tonic to the dominant often engages at least one other harmony – II and IV being the most common choices, especially in a major key.

This intervening chord may assist in harmonizing one of the foundational melodic pitches. For example, the ubiquitous melodic descent from $\hat{3}$ to $\hat{2}$ during I to V might be supported in part by IV⁷ emerging against prolonged soprano E, or by II supporting the onset of D. When the melody unfolds pitches of the tonic and the dominant – for example, C<E followed by D>B – II may be deployed as support for the melody's D, with V delayed until the B. Though soprano D and bass G do not actually sound together in that context, one may regard the D of the D>B third as still in force once bass G and the melody's B arrive.

Recognizing basic pitch patterns that recur again and again in tonal music is an important component of informed listening. In the case just described the foundational E_C to D_G expands to become E_C (I) through D_F (II in first inversion) to B_G (dominant). Reinforce this conception by singing the following arpeggiations first in C Major and then in other major keys:

		C	<	E
G			<	D
		C	<	E
F			<	D
G	<	B		

Then shift into minor, lowering the tonic's third by a half step but retaining the leading tone: