

The Structural Elements of Music

The study of the structure of music begins with the classification of all aspects of music into five basic categories: sound, harmony, melody, rhythm, and form—the *structural elements*.

The *sound* of the music is the result of the voices and/or instruments used, the texture of the music, and the effects of dynamics. In music, *texture* refers to the way the melodic, rhythmic, and harmonic materials of a composition are woven together.

The study of the *harmony* of a composition includes the harmonic patterns and progressions, the tonal implications of the harmony, and how the harmony is sustained and elaborated.

The study of the *melody* of a composition includes the prominent melodic lines and their repetition and variation, the range and contour of melodic material, the phrase structure of the melodic lines, the scale basis for melodic materials, and the relationship and relative prominence of the various melodic ideas that appear together in a work.

The study of the *rhythm* in a composition includes the nature of rhythmic activity, the tempo and tempo changes, the density of rhythmic activity, and the harmonic rhythm or rate of harmonic change throughout a composition.

Form refers to the larger shape of the composition. Form in music is the result of the interaction of the four structural elements previously described. Certain formal patterns recur often enough in Western music to be given names (see Chapters 16–17).

We will consider each of the basic structural elements in isolation so that you can focus your attention on each in turn. However, you must always bear in mind that these structural elements seldom function in isolation in a piece of music.

CHAPTER 5

Cadences and Nonharmonic Tones

TOPICS

Phrase	Unaccented	Suspension
Harmonic Cadence	Nonharmonic Tones	Retardation
Perfect Authentic Cadence	Unaccented Passing Tone	Appoggiatura
Imperfect Authentic Cadence	Unaccented Neighboring Tone	Successive Passing Tones
Half Cadence	Escape Tone	Changing Tones
Phrygian Half Cadence	Anticipation	Double Neighboring Tones
Plagal Cadence	Accented Nonharmonic Tones	Neighbor Group
Deceptive Cadence	Accented Passing Tone	Pedal Tone
Rhythmic Cadence	Accented Neighboring Tone	Inverted Pedal Tone
Nonharmonic Tones		

IMPORTANT CONCEPTS

Composers organize chords in specific combinations to signal the conclusion of musical passages. These points of repose are known as *cadences*. Furthermore, composers frequently embellish chords with nonchord pitches known as nonharmonic tones. This chapter is devoted to these two fundamental elements of musical composition.

Phrase

A *phrase* is a substantial musical thought, which ends with a musical punctuation called a cadence. Phrases are created in music through an interaction of melody, harmony, and rhythm. The first part of this chapter concentrates on the harmonic and rhythmic aspects of phrases; in Chapter 6 we will take up the melodic aspects.

Harmonic Cadence

A *harmonic cadence* is musical punctuation that closes a phrase or section of music. Cadences differ considerably in musical strength. Some signify the end of a complete musical thought and can be compared to the period (.). Others bring an incomplete idea to a close but suggest something else to come. These can be compared to a comma (,) or a semicolon (;). Most cadences conclude with either the V or I chord. The dominant frequently appears as a seventh chord (V^7).

Figure 5.1

A. Scarlatti: “O cessate di piagarmi,” from *Pompeo*, mm. 5–8.

The musical score for Figure 5.1 consists of a vocal line and a piano accompaniment. The vocal line is in a soprano register, starting on a G4 and ending on a G4. The piano accompaniment is in a bass register, starting on a G3 and ending on a G3. The key signature is one flat (B-flat major or D minor). The time signature is 3/8. The lyrics are: "O ces - sa - te di pia - gar - mi, O la - scia - te - mi mo - rir,". Below the piano part, there is a label "d:" and a bracketed label "V i Cadence" under the final two measures.

Perfect Authentic Cadence

The *perfect authentic cadence* is a progression from V to I in major keys and V to i in minor keys. Both chords must be in root position. In this cadence the tonic note must also be the highest sounding pitch in the tonic triad. From the standpoint of finality, the perfect authentic cadence is the strongest cadence of all.

Imperfect Authentic Cadence

The *imperfect authentic cadence* is slightly weaker than the perfect authentic cadence. A perfect authentic cadence becomes imperfect when:

1. The highest-sounding tone in the tonic triad is a tone other than the tonic note.
2. The vii° triad is substituted for the V, making the cadence vii°6 to I or vii°6 to i.
3. One or both of the chords (V or I) is inverted. Examples are: V6 to I or V to i6.

Figure 5.2 illustrates both perfect and imperfect authentic cadences.

Figure 5.2

Figure 5.2 illustrates seven examples of authentic cadences in Eb major. The examples are labeled a through g. The chords are shown in root position or inversion. The labels below the chords are: a. Eb: V I; b. V I; c. V I; d. V I; e. V6 I; f. V I6; g. vii°6 I.

Half Cadence

If the second chord of a cadence is V, it is a *half cadence*. This permits a large number of possibilities, but composers actually employ only a few. I to V, IV to V, or ii to V account for the vast majority of half cadences. A half cadence from iv6 to V in a minor key is sometimes called a *Phrygian half cadence* (see Figure 5.3d).

Figure 5.3

Half Phrygian Half

a. b. c. d.

Eb: IV V ii V I V c: iv⁶ V

Plagal Cadence

The *plagal cadence* is nearly always one progression: IV to I in major keys, or its equivalent, iv to i in minor keys. Infrequently, the progression ii⁶ to I occurs as a plagal cadence.

Figure 5.4

Plagal

a. b. c.

Eb: IV I IV I IV I

Deceptive Cadence

If the first chord is V and the second is not I, the cadence is *deceptive*. Although there are a large number of possibilities, composers most often select vi (VI in minor). Figure 5.5 illustrates deceptive cadences.

Figure 5.5

Deceptive Deceptive (Rare)

a. b. c.

Eb: V vi c: V⁷ VI Eb: V IV⁶

Rhythmic Cadence

Phrase endings often contain characteristic rhythmic patterns that create a *rhythmic cadence*. Notice in Figure 5.6 that the phrase ending can be sensed by tapping the rhythm alone.

Figure 5.6

Bach: Brandenburg Concerto no. 3 in G Major, BWV 1048, I, mm. 1–2 (modified).

Rhythmic cadence: _____

Rhythmic cadences often end with a longer note than the prevailing note values or are followed by a rest, which, in effect, lengthens the final note. A rhythmic cadence pattern may recur several times throughout a given composition (see Figure 5.7).

Figure 5.7

Polish Folk Song.

Rhythmic cadence: _____ Rhythmic cadence: _____

Rhythmic cadence: _____ Rhythmic cadence: _____

Phrases can exist at the rhythmic level alone, independent of harmony and melody. Drum cadences, for example, are clear examples of rhythmic phrases.

History

The history of harmonic cadences is interesting because so many early cadence types now sound quaint and unfulfilling. Prior to the baroque period and the establishment of functional harmony, cadences were considered simply a manipulation of melodic lines that converged or diverged to a point of rest, usually the final (the first degree of a mode). The following are typical of early cadences.

Figure 5.8

Firenze (c. 1375)

Machaut (1300–77)

Binchois (1400–67)

Palestrina (1525–94)

Double Leading-tone
Cadence:

Landini Cadence:

Plagal Cadence:

The advent of the baroque period with its tonality and functional harmony brought about the familiar cadence types.

Figure 5.9

Pachelbel (1653–1706)	Purcell (1659–95)	Handel (1685–1759)	Bach (1685–1750)
Imperfect Authentic:	Half:	Perfect Authentic:	Deceptive:

d: vii^{o6} i g: iv i₄⁶ V g: i i₄⁶ V i C: ii V vi

The standard cadences (authentic, half, plagal, and deceptive) continued with little change from the baroque period throughout the classical period.

Figure 5.10

Beethoven (1770–1827)	Mozart (1756–91)	Haydn (1732–1809)	Salieri (1750–1824)
Imperfect Authentic:	Perfect Authentic:	Deceptive:	Half:

c: i V i f#: i₄⁶ V⁷ i G: I V⁷ vi g: V⁶ i ii^{o6} V

Cadence types remained virtually unchanged during the romantic period, but composers sometimes decorated their cadences in a more florid manner. In the post-romantic and impressionistic period, some cadences were simply highly decorated (and often camouflaged) traditional cadences. Others resembled a return to the linear cadences of the pre-baroque.

During the contemporary period, the idea of cadence formulae (distinct types such as authentic, half, etc.) became nearly extinct. Some composers of atonal (no tonal center) music employed interpretation markings (crescendo, loud dynamics, etc.) effectively to bring their compositions to a close. Others, in an effort to avoid stereotyped cadences, chose to allow their compositions to come to a halt without any hint of cadence.

Jazz and popular music frequently include traditional cadences similar to those studied in this text, but often disguised with substitutions and decorations. During the third quarter of the twentieth century, some creative jazz artists adapted free-tonal and atonal techniques to suit their improvisational styles. Free-tonal style permits free use of all 12 tones of the octave but maintains a tonal center. Atonal music contains no tonal center whatsoever. Figure 5.11 shows some traditional cadences that have been decorated.

Rhythmic Placement

The most important distinction among the various nonharmonic tones is whether the dissonance occurs on the beat (accented) or off the beat (unaccented). Dissonances placed on the beat are much stronger and often create a powerful emotional impact, whereas those placed off the beat generally pass almost unnoticed smoothing out melodic lines. Some nonharmonic tones occur in both accented and unaccented contexts; others appear only as accented or as unaccented dissonances.

Unaccented Nonharmonic Tones

The common *unaccented nonharmonic tones* are the unaccented passing tone, unaccented neighboring tone, escape tone, and anticipation.

Unaccented Passing Tone

Figure 5.13 shows various *unaccented passing tones* in a four-voice texture. Figures 5.13a and 5.13b show single unaccented passing tones in descending and ascending patterns. Figures 5.13c–e show double unaccented passing tones in a variety of patterns.

Figure 5.13

Figure 5.13 consists of five examples (a-e) of unaccented passing tones in a four-voice texture. Each example is shown in a grand staff with treble and bass clefs. Example a shows a single descending passing tone in the treble voice, labeled 'PT'. Example b shows a single ascending passing tone in the treble voice, labeled 'PT'. Example c shows two descending passing tones, one in the treble and one in the bass, both labeled 'PT'. Example d shows two ascending passing tones, one in the treble and one in the bass, both labeled 'PT'. Example e shows two descending passing tones, one in the treble and one in the bass, both labeled 'PT'. Below the notation, the chord symbols are given as: e: i i i i i i i i i⁶ i.

Unaccented Neighboring Tones

Figure 5.14 shows various *unaccented neighboring tones* in a four-voice texture. Figures 5.14a and 5.14b show single unaccented neighboring tones. Figures 5.14c and 5.14d show double unaccented neighboring tones.

Figure 5.14

Figure 5.14 consists of four examples (a-d) of unaccented neighboring tones in a four-voice texture. Each example is shown in a grand staff with treble and bass clefs. Example a shows a single neighboring tone in the treble voice, labeled 'NT'. Example b shows a single neighboring tone in the treble voice, labeled 'NT'. Example c shows two neighboring tones, one in the treble and one in the bass, both labeled 'NT'. Example d shows two neighboring tones, one in the treble and one in the bass, both labeled 'NT'. Below the notation, the chord symbols are given as: e: i i i i i i i i.

Escape Tones

Escape tones occur only as unaccented nonharmonic tones. Figure 5.15 shows the most common pattern, in which a step upward is followed by a skip downward by a third.

Figure 5.15

e: i iv

Anticipation

Anticipations occur only as unaccented nonharmonic tones. Figure 5.16 shows two common patterns.

Figure 5.16

e: i V V i

All four of the unaccented nonharmonic tones (passing tone, neighboring tone, escape tone, and anticipation) appear in the Handel minuet excerpt shown in Figure 5.17.

Figure 5.17

Handel: Minuet in G Minor, G. 242, mm. 13–16.

g: iv⁶ V⁷ i V i

Accented Nonharmonic Tones

Accented Passing Tone

The common *accented nonharmonic tones* are the accented passing tone, accented neighboring tone, suspension, retardation, and appoggiatura.

Figure 5.18 shows some *accented passing tones* in a four-voice texture. Compare the musical effect of these accented passing tones with the unaccented passing tones shown in Figure 5.13.

Figure 5.18

Figure 5.18 shows five examples (a-e) of accented passing tones (PT) in a two-voice texture. The notation includes treble and bass staves with notes and accidentals. Below the staves are labels: 'e: i i', 'i i', 'i i', 'i i', and 'i⁶ i'.

**Accented
Neighboring Tone**

Figure 5.19 shows some *accented neighboring tones* in a four-voice texture. Compare them with the unaccented neighboring tones shown in Figure 5.14.

Figure 5.19

Figure 5.19 shows four examples (a-d) of accented neighboring tones (NT) in a four-voice texture. The notation includes treble and bass staves with notes and accidentals. Below the staves are labels: 'e: i i', 'i i', 'i i', and 'i i'.

The excerpt by Verdi in Figure 5.20 includes both accented passing tones and accented neighboring tones.

Figure 5.20

Verdi: “Tu vedrai che amore” from *Il Trovatore*, mm. 1–5.

Figure 5.20 shows a vocal line and piano accompaniment. The vocal line has lyrics: "Tu ve - drai che_a-mo - re_in ter - a mai del mio non fu più for - te;". The piano accompaniment is marked *pp*. Labels above the vocal line indicate NT, NT, PT, NT, NT, PT. Labels below the piano part indicate F: I, I, I, I, I.

Suspension

The *suspension* occurs only as an accented nonharmonic tone. The melodic pattern of the suspension figure is always as follows: the preparation, the suspension, and the resolution (Figure 5.21).

Figure 5.21

Preparation Suspension Resolution

m6 m7 m6

Consonant Dissonant Consonant

The suspended tone (the middle tone of the figure) is always dissonant. Suspensions are designated by the interval forming the suspended tone and resolution with the lowest sounding voice. Three common suspension types are shown in Figure 5.22.

Figure 5.22

a. Prep. Sus. Res. b. Prep. Sus. Res. c. Prep. Sus. Res.

9 - 8 7 - 6 4 - 3

e: i iv i ii^{o6} iv i

In determining the interval of suspension, the octave is usually removed. Thus 4–3 is used instead of 11–10. The exception is the 9–8 suspension.

Another common suspension is the 2–3 suspension. Whereas the suspension figure is in one of the upper voices in the three suspensions shown in Figure 5.22, in the 2–3 suspension the suspended tone is in the lower voice.

Figure 5.23

2–3 suspension showing suspension figure in lower voice.

M3 M2 m3

Preparation Suspension Resolution

The other voice (not containing the suspension figure) may move in almost any way as long as it provides the necessary preparation, suspension, and resolution phases for the suspension figure.

Figure 5.24

Suspending Voice:

Other Voice:

M3 M7 M6

Preparation Suspension Resolution

Remember that suspensions occur only between two voices—even in four-voice writing. You may ignore the other voices when considering the preparation, suspension, and resolution. The following are suspensions found in a four-voice setting.

Figure 5.25

a. Bach: “Freu’ dich sehr, o meine Seele” (“Rejoice Greatly, O My Soul”), BWV 25, mm. 12–13.

b. Bach: “Was Gott tut, das ist wohlgetan” (“What God Does Is Well Done”), BWV 69a, mm. 3–4 (modified).

Prep. Sus. Res.

4 – 3

C: I⁶ I V I

G: I IV V I

Consonance-Dissonance: Con. Diss. Con.

Interval: P8 P4 M3

Consonance-Dissonance: Con. Diss. Con.

Interval: P5 P4 M3

Suspensions can occur simultaneously in pairs, have decorated resolutions, occur in chains, or be accompanied by a changing bass line.

Figure 5.26

a. In pairs:

b. Decorated resolutions:

SUS

SUS

SUS

SUS

9 – 8 4 – 2 – 3 4 – 3 – 2 – 3

4 – 3

e: ii^{o6} i iv i iv i

c. In chains: d. With changing bass line:

4 – 3 9 – 8 4 – 3 9 – 8
9 – 6

F: IV I ii vi
I⁶ IV IV⁶ I

Retardation

A *retardation* is a nonharmonic tone similar to a suspension, except that the resolution is upward instead of downward.

Figure 5.27

a. RET b. RET

7 – 8
7 – 8

e: V i
i iv

Appoggiatura

The *appoggiatura* is a nonharmonic tone that is approached by skip and resolved by step in the opposite direction. It generally occurs as an accented nonharmonic tone.

Figure 5.28

a. APP b. APP APP

skip step
skip step skip step

e: V i
i iv i ii^{o6}

The Haydn piano sonata excerpt that follows includes a suspension, an appoggiatura, and a retardation. Although the retardation in Figure 5.29 looks similar to a grace note, performance practice dictates that the retardation be performed on beat one—not before the beat.

Figure 5.29

Haydn: Sonata in A Major, Hob. XVI:30, II: Var. 1, mm. 14–16.

4-3
SUS APP tr RET

A: I ii⁶ I₄ V I

Accented versus Unaccented Nonharmonic Tones

Compare the two phrases from Bach chorales shown in Figure 5.30. Figure 5.30a contains only unaccented nonharmonic tones, whereas 5.30b has three accented nonharmonic tones. The nonharmonic tones in 5.30a add rhythmic interest and make the voice leading smoother, but the dissonances in 5.30b are much more dramatic in effect and add considerable tension to the musical setting.

Figure 5.30

a. Bach: “Valet will ich dir geben” (“Farewell I Gladly Bid Thee”), BWV 415, mm. 1–2.

NT PT PT NT

D: I I I IV vii⁶ IV⁶ I I

b. Bach: “Liebster Jesu, wir sind hier” (“Blessed Jesu, At Thy Word”), BWV 373, mm. 1–2.

>PT PT 2-3 SUS >PT PT PT

G: I I V⁶ V I I V

Nonharmonic Tones Involving More Than Three Pitches

A few nonharmonic tones occur in patterns of four or more pitches. The most common are *successive passing tones*, *changing tones*, and the *pedal tone*.

Successive Passing Tones

Two passing tones occasionally fill an interval of a fourth. In such cases both the passing tones may be unaccented (Figure 5.31a) or they may be a combination of accented and unaccented passing tones (Figure 5.31b).

Figure 5.31

Figure 5.31 consists of two musical examples, a and b, in G major. Example a shows a G major chord (G-B-D) with two unaccented passing tones (A and C) between the G and B. Example b shows a G major chord (G-B-D) with an accented passing tone (A) followed by an unaccented passing tone (C) between the G and B. The notes are labeled with 'PT' (Passing Tone) and 'G: I' (G major, first inversion).

e: i i G: I V

Changing Tones

Changing tones consist of two successive nonharmonic tones. The first leads by step from a chord tone, skips to another nonharmonic tone, and then leads by step to a chord tone (often the same chord tone). Other terms often used instead of changing tones are *double neighboring tones* or *neighbor group*. In many ways the two changing tones resemble neighboring tones with a missing (or perhaps implied) middle tone.

Figure 5.32

Figure 5.32 consists of three musical examples, a, b, and c, in G major. Example a shows a G major chord (G-B-D) with a changing tone (A) between G and B. Example b shows a G major chord (G-B-D) with a changing tone (C) between G and B. Example c shows a G major chord (G-B-D) with a changing tone (A) between G and B, with a 'missing' middle tone indicated by a dashed line. The notes are labeled with 'CT' (Changing Tone) and 'e: III' (E minor, third inversion).

e: III i III i III i

Pedal Tone

A *pedal tone* (also called a pedal point) is a held or repeated note, usually in the lowest voice, that alternates between consonance and dissonance with the chord structures above it. Thus, the dissonances are created by the moving chords above rather than the pedal tone itself. When a pedal tone occurs above other voices, it is called an *inverted pedal tone*.

Figure 5.33

Figure 5.33 shows a sequence of chords in G major with a pedal tone (G) in the bass line. The chords are: G major (Consonant), F# minor (Dissonant), G major (Consonant), F# minor (Dissonant), E minor (Dissonant), D minor (Dissonant), G major (Consonant), F# minor (Dissonant), G major (Consonant), G major (Consonant), G major (Consonant). The notes are labeled with 'Con.' (Consonant) and 'Diss.' (Dissonant).

Con. Diss. Con. Diss. Diss. Diss. Diss. Con. Diss. Con. Con. Con.

Observe the successive passing tones, changing tones, and pedal tone in the concluding measures of an organ chorale prelude by Walther.

Figure 5.34

Walther: Chorale Prelude on “Lobt Gott, ihr Christen, allzugleich” (“Praise God, Ye Christians, All Together”), mm. 10–13.

Harmonic analysis: F: I⁶ IV I⁶ ii vii^{o6} I IV⁶ vii^{o6} I

Summary of Nonharmonic Tones

The following chart is a summary of nonharmonic tones studied in this chapter.

- PT = Passing Tone
- ANT = Anticipation
- APP = Appoggiatura
- NT = Neighboring Tone
- SUS = Suspension
- CT = Changing Tones
- ET = Escape Tone
- RE = Retardation
- PED = Pedal Tone

Type	Approach	Departure	Voice	Accented or Unaccented
PT	Step	Step	Any	May be either
NT	Step	Step	Any	May be either
ET	Step	Skip	Soprano	Unaccented
ANT	Prefer step	Same tone	Usually soprano	Unaccented
SUS	Same pitch	Step down	Any	Accented
RE	Same pitch	Step up	Usually soprano	Accented
APP	Skip	Step	Usually soprano	Accented
CT	NA		Any	Usually neither note accented
PED	NA		Usually bass	Both