Learning to Listen Actively

TAKE NOTE

Active listening is a framework for listening awareness that makes the experience of music richer, deeper, and more rewarding. Using a recurring repertory of core musical works as examples is a good way to reinforce one’s ability to listen for key elements found in all music.

Music is a rich and varied art form that seems capable of expressing the inexpressible. It cannot, however, speak for itself. That’s where the craft of listening comes in. An informed listener soon discovers that music is a powerful form
of communication on many levels from the emotional to the intellectual. The full enjoyment of music depends on an appreciation of the shared elements that make all music possible.

Learning to recognize, analyze, and interpret these elements is the basis for active listening, a framework for improving your listening experience. It enables you to pay attention to music at multiple levels of complexity, making it richer and more rewarding.

Active listening can unlock the secrets of any piece of music, from a short rock song to a jazz suite, a symphony, or even an opera lasting several hours. This is because all music originates from a combination of the same basic elements. These include melody, harmony, texture, rhythm, meter, timbre, and form. Music communicates most effectively if we have some deeper understanding of the way in which this communication takes place. Knowing how to listen for these elements and understanding their function as a tool of musical expression is the key to active listening.

By the time you finish this chapter, you will recognize how an active listener approaches the basic elements of music and see how they function in a diverse selection of musical works.

**Active Listening**

Music engages both the heart and the mind. It is no surprise that we associate music with some of life’s most deeply felt moments. The emotional content of a piece of music is often the first thing to which we respond. Music can communicate emotional content more directly, more immediately, than any other form of artistic expression.

An emotional response to music is an important part of the listening experience, but it is far from the whole picture. The ability to recognize, analyze, and interpret what you hear beyond the emotional response adds to your appreciation of music. That is what it means to be an active listener: You use your intellect as well as your emotions. Active listening does not preclude emotional listening, but incorporates it. Knowing more about the fundamental elements that make up a work, and learning how to listen for these elements, can add immeasurably to your musical IQ. A listener with an educated ear can gain an even stronger appreciation of music at the emotional level.

**The Listening Situation**

We hear music every day. One cannot escape it. It is part of the soundtrack to our lives. Yet we rarely make a special effort to listen to music with undivided attention. When we are given such an opportunity—e.g., going to a concert, attending a wedding, downloading a new recording from a favorite artist, happening upon a gifted street musician—it is often difficult to focus our thoughts solely on the musical content. One reason for this is that we are not accustomed to listening actively and overlook opportunities to do so. Once you know how to listen and what to listen for, active listening becomes easier.

We can become better listeners by using a few simple techniques:

1. **Tune out distractions.** Create a special time for the musical experience that allows you to listen intently. Do not try to listen closely to music while driving, walking, talking, or doing something else.
2. **Give your undivided attention.** No matter how short or long the piece of music, sustain your attention to the fullest. If you are using a listening guide from this book, follow along closely as you listen.

3. **Concentrate on the beginning.** You may want to listen to the first 15 or 20 seconds repeatedly because they frequently contain the key to the music that follows.

4. **Listen more than once.** Be prepared to listen to the entire piece several times; you will rarely, if ever, hear everything the first time.

5. **Move from emotional to active listening.** On first hearing, it’s OK to focus on the overall emotional impression created by the music: the mood, the atmosphere, the associations it evokes. Upon repeated listening, shift your attention to the fundamental musical elements at work in the piece.

### A Core Repertory of Works

Central to this book’s approach is the use of a recurring or **core repertory** of music examples that are revisited throughout the chapters. These are the same works included on the book’s online music site. These core works were selected because they serve as excellent examples of the development of music over the centuries as well as the individual elements of music and genres discussed in the book.

The value of the core repertory is that it helps those new to the study of music to isolate, identify, and appreciate the various aspects that constitute an individual composition. Each piece in this repertory merits, even requires, repeated listening. The core repertory of the book allows a work to become more than a passing acquaintance. Listeners can explore new dimensions of an increasingly familiar piece as they develop an awareness of its complexity and the relationships among the different elements that contribute to their enjoyment of it. Each work of the core repertory is accompanied by one or more *Learning to Listen* guides in the chapters. These guides provide a running examination of each work. In addition, many of these works are supported by interactive electronic listening guides on the book’s companion website. Each *Learning to Listen* guide in the text includes a “core repertory connection” indicating other places in the book where another element of the same piece is discussed, giving the listener a guide to examining many aspects of the same work.

The core repertory is at the heart of the book. By the end of this text, you should know these works intimately.

### Key Elements of Music

Knowing something about the inner workings of music improves active listening skills. All music is created using a combination of common elements for making and organizing sound materials. Understanding the fundamental elements of music provides a framework and a vocabulary for analyzing, comparing, and contrasting different works, regardless of who composed the music and when or how it is performed.

The fundamental elements of music—**form**, **timbre**, **rhythm**, **meter**, **melody**, **harmony**, and **texture**—connect all types of musical expression. Music may
also combine with text or with drama to create an even richer experience. These elements are the keys to unlocking the meaning and expressive content of music through active listening.

**Form**

Form is the way musical material is organized. It defines a work of music the way a blueprint defines a building or a map defines a city, state, or country. While the sounds themselves are made up of the other elements mentioned above, none of these elements alone normally constitutes a complete work of music. It is the arrangement of these elements that gives music its form. Form and structure define the way that a piece of music begins, continues, develops, and ends. Arranging musical materials is generally accomplished using principles of repetition (AA), contrast (AB, ABA, AABB, etc.), and variation (AA'A", AA'BB', etc.). You should listen for audible markers that signal important junctions in the form, such as changes in instrumentation, tempo, and beat structure.

**Active listening exercise:** Select a favorite recording. Are there patterns you can recognize? Does the music repeat itself? Is there much contrast? Do the answers to these questions change as the music progresses?

**Timbre** (pronounced TAM-burr) is the distinctive sound of a given instrument or voice. Also known as musical color or tone color, timbre is the quality that distinguishes the sound of one instrument from another. If we set aside the pitch (the highness or lowness) and volume of a sound, timbre is what is left. To put it another way, the melody may change and become louder, but we can still recognize the difference between the sound quality of a saxophone, a guitar, or a singer’s individual voice. All of this makes timbre one of the most interesting and flexible aspects of musical expression.

**Active listening exercise:** Select a recording you enjoy listening to. Use whatever words you want to describe what the music sounds like; recognizing the voices or instruments is less important than verbalizing what they sound like to you.

**Rhythm and Meter**

Rhythm is the organization of music in time. It groups longer and shorter notes and silences into patterns based on the beat, the regular pulse of the music. This pulse generally comprises a repeated pattern of stronger and weaker beats, called meter. The meter of a waltz, for example, is ONE-two-three/ONE-two-three. The meter of a march is ONE-two-THREE-four/ONE-two-THREE-four, which is known as common time. In musical notation, each instance of this repeated pattern of strong and weak beats is called a measure.

**Active listening exercise:** Try tapping your foot, clapping your hands, snapping your fingers, or even dancing to the beat as you listen to a piece of music you like. This will allow you to embody the metrical patterns, even if you can’t count or recognize them at first.
Melody

Melody is a succession of musical notes and rhythms arranged as a recognizable unit. Also called a tune, a melody conveys a sense of forward motion and has a shape in that it uses a succession of high and low notes to form a memorable pattern.

Active listening exercise: Select a favorite song or composition. Listen for the tune, and see if it’s one you think you can recognize when you hear it again. What about the melody makes it easy or difficult to remember?

Harmony

Harmony is a way of understanding notes that are played or sung together. To harmonize a melody is to play supporting notes that complement the melody. Harmony may transform the perception of a melody by adding depth that cannot be achieved with a single note at a time. Two or more notes played simultaneously are called chords. All notes and chords are heard in relationship to the key a piece of music is in. The key centers on a particular note (named by letter) and a major or minor sound depending on the series of eight notes—known as the scale—on which the work is based.

Active listening exercise

Select a favorite musical piece. Listen for the notes that play at the same time as the melody. Do they form blocks of accompanying sound that have a pattern of their own (e.g., chords)? Or do they form additional melodic lines that parallel the melody?

Melody: A succession of musical notes and rhythms arranged as a recognizable unit.

Harmony: The combination of notes to produce chords, and a way of understanding the progression of chords throughout a piece.

Chords: Two or more notes sounding simultaneously; the foundation of harmony.

Key: The note (named by letter) and mode (major or minor) on which a piece of music is based.

Major: The sound of a melody based on the eight sung syllables “do-re-mi-fa-sol-la-ti-do,” or the notes sounded by playing only white keys on the piano between one C and the next. It is typically thought of as having a brighter, happier sound than minor.

Minor: The sound of a melody based on the eight sung syllables “la-ti-do-re-mi-fa-sol-la,” or the notes sounded by playing only white keys on the piano from one A to the next. It is typically thought of as having a darker, sadder sound than major.

Scale: The series of pitches, arranged from low to high or high to low, on which a melody is based. Major and minor, the most common scales, have eight.
**Texture**

Texture is the relationship between melodic and harmonic elements in a piece of music, especially how many layers of notes are happening at the same time. The texture may be sparse or dense, depending on the plan of the composer, and it may change repeatedly over the course of a piece or section. Conventional approaches to texture include single melodies (monophony), chords that accompany a single melody (homophony), and two or more simultaneous melodies (polyphony).

**Active listening exercise:** Choose a piece that you enjoy. Listen for the melody or melodies. Can you identify how many things are going on at once?

*Figure 1.3* illustrates textures using a pitch/time graph and consider adding chords to the same illustration.

---

**Music in Context**

In some musical genres, or categories, music stands alone. In other genres, it is combined with words or elements of drama.

**Music and Text**

Music can combine with words in a wide variety of ways. In music with text, it is fascinating to observe how the music and the words mutually support the communication of feelings and ideas.

**Active listening exercise:** After listening for the first time to an unfamiliar piece of music with text, read the lyrics separately without the music. Then listen to the music while following the text. In each case, how does your response to the music differ? How does your response to the text change when you hear it together with the music?

**Music and Drama**

A dramatic work may be accompanied by music, either in whole or in part. A dramatic story may be staged with live performers (e.g., opera and musical theater) or may be presented in an electronic medium with recorded music (e.g., motion pictures, television, video games). Music may be integrated in many ways into the telling of a story to provide atmosphere, express moods, influence tension, and communicate plot.
Active listening exercise: Watch a recorded scene from a TV show or movie with the sound turned off. Now watch the same scene again with the sound turned off but play some music at the same time. Do this several times with different musical selections. How does your reaction to the scene differ in each case?

Listening Practice

An excellent way to understand the musical elements is to explore how they work in selected pieces of music. Some elements, such as texture, are more difficult to identify than others. But even the simplest musical elements are sometimes difficult to hear because of the imaginative techniques composers use to organize their musical materials. Active listening involves concentrating on the many layers of a piece of music until we can follow its individual elements. The remainder of this chapter provides several examples to sharpen your skills as an active listener.

An Emotional Response to Music

Your first reaction to new music is typically emotional. Short and engaging, Dvořák’s *Slavonic Dances* are a good place to start exploring an emotional response. Listen now to the *Slavonic Dance* in E minor by Antonín Dvořák (1841–1904), op. 72, no. 10.

This piece has a haunting, unforgettable melody that bears frequent repetition, the kind of tune that you are likely to hum or whistle after hearing it.

About two minutes into the piece, the opening tune is followed by a group of more sprightly melodies. The first melody then returns. The piece concludes with a final reference to the more sprightly tunes and a “slow fade.” The contrasting melodies, and their repetition, suggest that the music tells a story. Perhaps it involves two or three characters and some simple action. This implied narrative helps hold our interest while we listen.

Another compelling element of this music is its strong dance-like rhythms. We can readily picture traditional Eastern European dancers moving to this music. It is interesting to note that, although it has a regular beat based on the styles and rhythms of Czech folk dances, the *Slavonic Dances* were not intended for dancing.

Finally, the brevity of this work contributes to the ease with which we make an emotional connection to it. It clocks in at about five and a half minutes, only a little longer than today’s most popular songs. While a short work may contain many details not evident on first hearing, a piece of music lasting five minutes or less may be understood quite clearly on an emotional level. With longer compositions, our minds may wander and we may lose our initial interest in the music. This is more rare with a short, easy-to-digest piece like this one.
LEARNING TO LISTEN

TAKE NOTE OF MELODY AND RHYTHM

What to Listen For: The lively melodies and rhythms and the contrast between the two main parts of the piece.

Dvořák: *Slavonic Dance* in E minor, op. 72, no. 10
Date: 1886
Instrumentation: Originally for piano four-hands, arranged for orchestra
Key: E minor
Meter: $\frac{3}{4}$ (three moderately slow beats per measure)
Form: Ternary Form (ABA)
Core Repertory Connection: This music will be discussed again in Chapters 7, 8, and 12.

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRESSION</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>0:00</td>
<td>Part I</td>
<td>The main melody is introduced and repeated.</td>
</tr>
<tr>
<td>1:51</td>
<td>Part II</td>
<td>The music becomes more upbeat, and a group of contrasting melodies is heard.</td>
</tr>
<tr>
<td>3:47</td>
<td>Reprise of Part I</td>
<td>The music of the opening section returns, in slightly different form.</td>
</tr>
<tr>
<td>4:53</td>
<td>Conclusion</td>
<td>There is a brief reference to the music of Part II, and then the piece is over.</td>
</tr>
</tbody>
</table>

Focus on

**Antonín Dvořák (1841–1904)**

Czech composer. With [Bedřich] Smetana [(1824–1884)], [Zdeněk] Fibich [(1850–1900)], and [Leoš] Janáček [(1854–1928)] he is regarded as one of the great nationalist Czech composers of the 19th century. Long neglected and dismissed by the German-speaking musical world as a naive Czech musician, he is now considered by both Czech and international musicologists Smetana’s true heir. He earned worldwide admiration and prestige for 19th-century Czech music with his symphonies, chamber music, oratorios, songs, and, to a lesser extent, his operas. (Klaus Döge, *Grove Music Online*)

Much of Dvořák’s music, like the *Slavonic Dance* in E minor, uses melodies, rhythms, and harmonies characteristic of his native country. From 1892 to 1895 he was director of the National Conservatory of Music in America in New York City. American composers were interested in learning how to write music with a distinctively American flavor. Dvořák obliged them with works like his Symphony no. 9 in E minor (“From the New World”), which remains one of the most popular symphonies ever written.
Chapter 1  Learning to Listen Actively

**In History**

Dvořák’s *Slavonic Dance* in E minor, op. 72, no. 10

In the 19th century, if you wanted to hear your favorite music at home, you had to play it yourself. In most middle-class European and American homes, this meant going to the piano. Although our recorded example of this *Slavonic Dance* is arranged for an orchestra, Dvořák first wrote it for piano four-hands, or two people playing the same piano. A great deal of music using this format was written in the 19th century, and even more music intended for other instruments was transcribed so it could be played this way. If you lacked confidence, it helped to have a second player to help out; both parts were easier that way. Playing and listening to the piano at home was also a popular social activity, and playing four-hand music created a special kind of intimacy between the two players.

Publishing sheet music for the home was a growing commercial enterprise in the late 19th century. A musically literate middle-class family could afford to own a piano and had free time to play it. In 1869 composer Johannes Brahms (1833–1897) published his first set of Hungarian Dances for piano four-hands. These works, with their perky rhythms and catchy tunes, sold in huge numbers and helped to make Brahms and his publisher wealthy. This was a turning point in the development of a large market for popular music—a market that came of age in the early 20th century.

By 1878, when the first of Dvořák’s *Slavonic Dances* were written, Dvořák was motivated to match Brahms’s success. So popular were the *Slavonic Dances* that the composer almost immediately arranged them for orchestra. Thus, Dvořák was able to appeal both to the amateur home musician and to the growing audience for symphonic music. This music filled a role that today is often associated with jazz, pop, and musical theater rather than with classical music; it was popular in tone, was broadly performed in public, and could easily be played and enjoyed at home as well.

---

**From Emotional to Active Listening**

While an emotional response is important to the listening experience, many other aspects of a work can also be explored. The longer a piece of music is, the more important it is to listen actively. Some musical works are so long that they are divided into movements, or self-contained parts. The term “movement” literally refers to the tempo (speed) and meter of a piece of music: the way it moves. Originally, a piece that contained sections in which the tempo and meter changed was said to have more than one movement. The term later came to be applied to longer pieces grouped together to form an even larger work.

**Mozart, Symphony no. 40 in G Minor Listen for Form:** Listen now to the first movement of the Symphony no. 40 in G minor, K. 550, by Wolfgang Amadeus Mozart.

Like the arrangement we heard of the Dvořák *Slavonic Dance*, Mozart’s symphony is written for orchestra, still the most familiar instrumental performing ensemble in classical music. There is no completely standard configuration for an orchestra, and the one Mozart used was much smaller than those used by Dvořák and many later composers. Whereas an orchestra consisting of 35 to 40 musicians is adequate to perform a Mozart symphony, an orchestra containing more than a hundred people is needed to perform a symphony by the late 19th–early 20th-century composer Gustav Mahler ([1860–1911]).

---

**Movement:** A self-contained section of a longer piece. The most common number of movements is four, although there may be only two, and in some cases as many seven, or even more, movements in a single work.

**Tempo:** The speed of a piece of music.

**Orchestra:** The most common instrumental performing ensemble in Western classical music. There is no completely standard orchestra, although all orchestras have things in common—a preponderance of string instruments, for example—that distinguish them from other large instrumental ensembles like the band.
This music may already be familiar to you through various popular arrangements of the work’s memorable melodies; the opening melody used to be a standard ringtone on many cell phones. The beginning of this work appeals to the emotional listener. From the first note, the orchestra throbs with a sense of urgency, and the melody that emerges is rhythmic and impassioned. The full orchestra enters with loud, fast-moving chords. The piece is off to an engaging start.

However, things start to get more complicated after this initial burst of energy. As in the Dvořák, there is a transition to a second, contrasting melody. But in this piece, several other transitions follow. Then the first two minutes of the work are repeated, and you get the feeling that Mozart is having fun with you but also helping you gain your footing again. Past the four-minute mark, the music becomes more dramatic yet unstable, adding to the sense of confusion. You may also begin to realize by now that you have heard the opening three notes of the piece more than a hundred times! The music then settles down, but a lot of what you heard in the first two minutes is repeated yet again. Why does the composer repeat himself so often?

One possible explanation for this work’s unusual organization is that Mozart is using the music to tell a story. Both the contrast and the repetition that we have noticed are essential elements of good storytelling: contrast to keep you interested and repetition to keep you from getting lost. Every good story has characters whose adventures and interactions with other characters may be described at great length. It is reasonable to assume that in this piece, Mozart was attempting to do something similar in musical terms.

There are some obvious problems, though, with comparing a piece of music to a story. When we hear a story, we are accustomed to identifying human characters and character types—Prince Charming, a villain, a damsel in distress, and so forth—and to paying attention to what happens to them. We do this because these characters interest us, and we may even identify with them and come to care about them. Their adventures speak to things that we may have experienced ourselves, or that we may wish to experience. However, most people are not accustomed to caring about what happens to a musical idea. A musical theme is not a character. Or is it?

Actually, much classical music can easily be heard as though the musical themes were participants in a story or drama. A melody is introduced and then repeated in a variety of ways, suggesting that it is changing and growing. Called thematic development, this process resembles the development of an idea in an essay or of a character in a story. It is an important part of what this course will train you to hear. One reason the Mozart symphony movement is so long, yet so repetitive, is that the first three notes undergo considerable development.

Why should we care about what happens to these three notes? It might help to think of this motive, or short collection of thematic notes, as a character who grows, ages, and accumulates a variety of life experiences. Everyone experiences tragedy and loss at some point, so this music, with its deeply serious tone, resonates with something in our inner being. At the same time, we are not forced to identify those notes with anything more specific—things such as age, sex, or profession—that might limit our ability to empathize. Because these notes are presented as music, rather than as a person with human characteristics, we are free to interpret them in very personal terms. Music gains access to our very souls in ways that other art forms often cannot reach.

**Motive:** A memorable melodic fragment significant to the structure of a piece of music.
After reading the preceding paragraphs, you may wish to listen to the Mozart example again. In fact, a complex piece such as this needs to be listened to several times before it can be fully grasped. This process is similar to that of reading or watching a performance of a Shakespeare play. You know that this is great drama, but many of the words—and the way Shakespeare used them—are unfamiliar. On the first pass, you may understand only some of what you have read or heard. By the second time through, you begin to notice things that went over your head before. You may have to read or watch the play three or four times, though, before it becomes completely clear. Then you can finally understand and enjoy what you are hearing fully.

One of the goals of this book is to make you more fluent in the multilayered way that music communicates, so that listening to any music becomes easier.

## LEARNING TO LISTEN

### TAKE NOTE OF MUSICAL FORM

**What to Listen For:** The careful construction that makes it possible to imagine that this music is telling a story.

**Mozart:** Symphony no. 40 in G minor, K. 550  
I: Molto Allegro  
**Date:** 1788  
**Instrumentation:** Small orchestra  
**Key:** G minor  
**Meter:** $\frac{4}{4}$, also known as common time (four rapid beats per measure)  
**Core Repertory Connection:** This music will be discussed again in Chapters 5 and 9.

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRESSION</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>0:00</td>
<td>Beginning</td>
<td>We “meet” the first character.</td>
</tr>
<tr>
<td>0:44</td>
<td>Contrast</td>
<td>A new character is introduced.</td>
</tr>
<tr>
<td>1:08</td>
<td>Arrival</td>
<td>An important point in the story seems to have been reached. The first character is reintroduced.</td>
</tr>
<tr>
<td>1:43</td>
<td>Repeat</td>
<td>Everything you have heard so far is played again, helping you remember the characters and the differences among them.</td>
</tr>
<tr>
<td>3:27</td>
<td>Continuation</td>
<td>The plot thickens as the music you have heard so far is stretched in new directions.</td>
</tr>
<tr>
<td>3:41</td>
<td>Dramatic high point</td>
<td>The action seems to have reached some kind of crisis.</td>
</tr>
<tr>
<td>4:05</td>
<td>Lessening of tension</td>
<td>The music becomes quieter, as though the crisis is past.</td>
</tr>
<tr>
<td>4:20</td>
<td>Sudden outburst</td>
<td>Things become more agitated again.</td>
</tr>
<tr>
<td>4:33</td>
<td>Resolution</td>
<td>The music of the opening returns, suggesting that the conflicts of the previous section have been worked out.</td>
</tr>
<tr>
<td>5:36</td>
<td>Contrast</td>
<td>The other major character reappears as well.</td>
</tr>
<tr>
<td>6:05</td>
<td>Arrival</td>
<td>Now it really sounds like the story is almost over.</td>
</tr>
<tr>
<td>6:37</td>
<td>Final flourish</td>
<td>This music underscores the finality of the ending.</td>
</tr>
</tbody>
</table>
Focus on

Wolfgang Amadeus Mozart (1756–1791)

Austrian composer, son of Leopold Mozart [(1719–1787)]. His style essentially represents a synthesis of many different elements, which coalesced in his Viennese years, from 1781 on, into an idiom now regarded as a peak of Viennese Classicism. The mature music, distinguished by its melodic beauty, its formal elegance, and its richness of harmony and texture, is deeply colored by Italian opera though also rooted in Austrian and south German instrumental traditions. Unlike Joseph Haydn [(1732–1809)], his senior by 24 years, and Ludwig van Beethoven [(1770–1827)], his junior by 15, he excelled in every medium current in his time. He may thus be regarded as the most universal composer in the history of Western music. (Cliff Eisen and Stanley Sadie, Grove Music Online)

Like all great cultural figures, Mozart has been portrayed in ways he could hardly have expected. The sublimely gifted genius, the eternal child, the epitome of classical poise and balance—these are just a few of the popular images of this famous musician. Mozart is still best known to many listeners through his fictional portrayal in the film Amadeus. When the movie appeared in 1984, yet another image was added—an obscene, immature prankster with an abrasive laugh who composed using a kind of divinely guided remote control.

Although this film stimulated interest in the composer and his music, it is important to understand that it did not attempt to portray Mozart realistically. Instead, it focused on a largely imaginary conflict between the divinely gifted genius and a self-confessed patron saint of mediocrity, his contemporary Antonio Salieri (1750–1825). In the film, Mozart can be seen tuning in to a kind of celestial radio, which tells him what to write. The clear implication is that Mozart's life and his music occupied different worlds, with little connection to each other.

The reality is much more complex. Mozart, we know, worked hard on his music. Furthermore, despite the music’s often placid surface, it shows an amazingly deep understanding of human psychology and character. Mozart’s feeling for shifting musical sonorities was uniquely his own; listen to the way he plays with the sounds of his relatively small orchestra in the Symphony no. 40.
Chapter 1  Learning to Listen Actively

If You Liked This Music...
Other Music of Interest

If you enjoyed these first two examples, here is some music that you may also want to hear.

• **Dvořák** wrote 16 Slavonic Dances in all, published as op. 46 and op. 72. Both sets were originally written for piano four-hands, but they are more widely available in the orchestral versions, also by the composer.

• **Johannes Brahms** wrote Hungarian Dances—21 in all—which are often heard in orchestral arrangements. Brahms and Dvořák were friends, and the popular success of these works by Brahms inspired Dvořák to write his own. All of these pieces feature catchy melodies and lively rhythms, and most are only a few minutes long.

• **Mozart’s** Symphony no. 40 is one of three symphonies that Mozart wrote in 1788, three years before his death. All three have been widely recorded. Symphony no. 39, in E-flat major, is lyrical, playful and dramatic by turns: an ideal classical symphony. Symphony no. 41 in C major, the so-called “Jupiter” symphony, ends with one of the most stunning final movements ever written, in which five different motives are combined in various ways and, at the end, played simultaneously. The last 12 symphonies of Joseph Haydn (1732–1809), known as the “London” symphonies, since they were written for public performance in that city, also epitomize the style of the late 18th-century symphony at its best.

**Bach, Concerto in D minor Listen for Timbre:** Listen now to the first movement of the Concerto in D minor, BWV 1052, for harpsichord and strings, by Johann Sebastian Bach (1685–1750). Though slightly shorter than the Mozart, this piece poses even greater challenges for a novice listener.

These begin with the choice of instrument. Bach wrote this piece for a harpsichord, widely used in his time but much less familiar today. Although it resembles a small piano, the harpsichord is actually a completely different kind of instrument. In a piano, the strings are struck by hammers and the amount of force applied to the keys determines how loud or soft the sound will be. A harpsichord plays a note by plucking a string when a key is depressed. The strings are plucked by a little wedge, or *plectrum*, made of quill or leather in older instruments. The sounds produced are not as loud as those of the piano and fade more quickly. Moreover, the force of the plucking action does not vary much, no matter how hard a key is pressed. The volume of the harpsichord is, therefore, relatively even. Thus, in writing for harpsichord, composers focus on other aspects of the harpsichord’s sound.

Bach’s Concerto in D minor is performed by a harpsichord and an ensemble of historical string instruments. Like most, but not all, pieces titled concerto, it is built on the contrast between a solo instrument (in this case, the harpsichord) and an orchestra (in this case, only strings). Sometimes only the orchestra is heard, sometimes only the harpsichord. Most often, though, they are heard together and play off of each other. Indeed, the opposition between the rich sound of the strings and the clear, brittle sound of the harpsichord is a large part of what makes this music interesting.
Compared to the Mozart, this piece presents little melodic variety; only one real melody is heard. The beat is extremely steady. The sounds of the instruments, though, are masterfully exploited by the composer. The entire range of the harpsichord is used, from its sonorous low notes to its relatively tinny upper register (this word refers to a specific range of low, medium, or high pitches on an instrument or in a voice). The harpsichordist’s part is also quite virtuosic: a flurry of rapid-fire notes grabs our attention, even when the harpsichord is nearly drowned out by the full orchestra. At times, the orchestra comes in briefly to punctuate a harpsichord solo, adding an extra rhythmic punch. The orchestra also serves repeatedly to reintroduce the theme with which the movement began; these restatements are an important features of the music’s form. Meanwhile, the harpsichord frequently takes off in its own direction.

Despite the limited means the composer has allowed himself, this is a rich and complex piece. Because musical contrast is so minimal, you are forced to concentrate and become hyper-aware of the contrasts that are present. Thus, listening to this music is a rewarding and challenging experience. For most listeners, the strong emotional impact of the beginning of this piece fades in less than a minute. After that, you are virtually forced to become an active listener.

Thus, when you first listen to this selection, you should plan to minimize any and all distractions. Listening to this music will consume your full attention, and you still may have to listen several times before you are fully aware of all that is going on. So be patient, and spread the listening out over several days if necessary. It will be worth it.
Focus on
Original Instruments

Bach’s harpsichord music is often played on the piano. In recent years, however, there has been an increasing tendency among classical performers to play older music on the actual instruments for which it was written, or at least on modern copies of such instruments. Performances and recordings made this way are often designated as being on “original,” “historical,” or “period” instruments. If you compare these performances to ones made on more traditional instruments, you are likely to be able to hear the difference. The sound of the instruments is generally lighter and less sustained. Performers often minimize the dynamic contrasts. These performances are rewarding, but they also pose challenges to listeners unaccustomed to their sounds. They may also help experienced listeners hear familiar music in new ways. Hearing the distinct sounds of the different instruments, called timbre, or tone color, is another important part of active listening, and we will study it more fully in Chapter 6.

Crumb, Black Angels Listen for Harmony and Texture: The pieces we have examined so far all come from times and places quite distant from our own—19th-century Bohemia (now the Czech Republic) and 18th-century Austria and Germany. The final example in this chapter originated much closer to home.

American composer George Crumb was born in West Virginia in 1929. Like many Americans during the 1960s, he had strong feelings about America’s involvement in the war in Vietnam. His string quartet Black Angels, subtitled 13 Images from the Dark Land, is a musical commentary on that controversial war. But it is also much more. It deals with the subjects of the fall and redemption of mankind, life and death, God and the devil. These images are conveyed on the surface of the music: The beginning, for example, is meant to
sound terrifying. The images are also conveyed symbolically in terms of numerical relationships pertaining to the numbers 13 and 7 that are embedded in the music but nearly impossible to hear. As we will see in Chapters 2 and 12, Crumb is not the only composer to have included this kind of symbolic meaning in his music.

*Black Angels* challenges the listener in some extraordinary ways. It is written for string quartet—an ensemble of two violins, viola, and cello—a standard small group used by classical composers since the 1700s. A string quartet is an example of chamber music, written for a small ensemble and intended for performance in a small, private space. When Crumb wrote this piece, there was a very large repertory of works for string quartet. People who came to hear a performance by a string quartet had certain definite expectations about how the music would sound. However, *Black Angels* was dramatically different from what they had learned to expect.

The difference is most evident in the timbres of this work, the most unusual and varied you have heard so far. For one thing, Crumb called for electronic amplification. While most contemporary audiences are accustomed to hearing amplified instruments, classical music performers do not usually employ amplification and often pride themselves on not requiring it. In this case, though, the explicit purpose of the amplification is to make the instruments sound strange, frightening, and unfamiliar.

This strangeness is augmented by a variety of unusual playing techniques. The players are often asked to play *sul ponticello* (close to the bridge, which holds the strings apart from the body of the instrument) and *glissando* (sliding their fingers up and down the strings). They may play their instruments using thimbles, paper clips, and glass rods. They are also asked to play maracas (a kind of rattle) and tam-tams (a kind of gong). They even click their tongues and whisper and shout numbers in Hungarian, Japanese, Russian, German, and Swahili. All players but the cellist are also asked to play on crystal glasses tuned to various pitches by being partially filled with water. Many of the sounds may strike you as abrasive and unpleasant. The harmony, unlike that in the previous pieces we listened to, is often highly dissonant, with notes that clash in a way you will easily hear. The texture is complicated by the wide variety of unusual sound effects.

The first section of the piece, titled "Departure," describes mankind’s fall from grace. It consists of five short sections, titled "Threnody I: Night of the Electric Insects," “Sounds of Bones and Flutes,” “Lost Bells,” “Devil-Music,” and “Danse Macabre.” The first of these was inspired by soldiers’ stories of swarms of insects they had encountered in the jungles and swamps of Vietnam. “Devil-Music” refers to the *Devil’s Trill*, an influential violin sonata by Giuseppe Tartini (1692–1770), while the title of “Danse Macabre” recalls a familiar piece by Camille Saint-Saëns (1835–1921). “Devil-Music” and “Danse Macabre” also quote the *Dies irae*, a medieval chant from the Requiem, or Mass for the Dead. Taken together, these references suggest that the work is about death and the human confrontation with evil, in Vietnam and perhaps in many other times and places as well.

---

**Chamber music**: Music written for a small ensemble. In modern usage, it usually refers only to instrumental music. Historically, it indicated music meant to be performed in chambers: i.e., in private homes.

**Glissando**: A series of very rapid notes sliding up or down. On a keyboard, it is produced by sliding the thumb or forefinger along the keys, and on a string instrument, it is produced by sliding the finger up or down the string on the fret board or fingerboard. Glissandos may also be played on the harp by sweeping across the strings.

**Dissonant/dissonance**: The result of a combination of notes with strongly clashing overtones, as when two adjacent notes on a keyboard are played simultaneously. (Contrast Consistent/consonance.)
In short, this piece is both deeply challenging and rich in meaningful associations. On an emotional level, it suggests feelings that are often extreme and may be disagreeable. *Black Angels* is also challenging because of the wide range of impressions it communicates, from the vividness of the insects at the beginning to the obscurity of the numbers and the foreign languages heard at the end. It goes without saying that a single hearing will not suffice for full comprehension of this music.

### LEARNING TO LISTEN

**TAKE NOTE OF HARMONY, TEXTURE, AND TIMBRE**

**What to Listen For:** The unusual sounds and harsh combinations produced by electronic amplification and unorthodox playing techniques.

| Crumb: Black Angels |
| Date: 1970 |
| Instrumentation: Electronically amplified string quartet |
| Key: Largely undefined |
| Meter: Irregular |

**Core Repertory Connection:** This music will be discussed again in Chapters 6 and 9.

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRESSION</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>0:00</td>
<td>1. “Threnody I: Night of the Electric Insects”</td>
<td>Amplified sounds from all the instruments evoke the image of buzzing insects in the swamps of Vietnam. Unusual timbral effects intensify the dissonant harmonies resulting from highly unusual combinations of notes.</td>
</tr>
<tr>
<td>1:22</td>
<td>2. “Sounds of Bones and Flutes”</td>
<td>Clucking sounds are introduced, produced both by the performers’ mouths and by plucking their instruments. Unusual playing techniques also produce the flute-like sounds heard in this section. The texture increases in complexity compared to the previous section; there is a great deal going on at once.</td>
</tr>
<tr>
<td>2:04</td>
<td>3. “Lost Bells”</td>
<td>The eerie, bell-like sounds here are also produced by unusual playing techniques. The harmonies are simpler and reinforce the impression of bells sounding in the distance.</td>
</tr>
<tr>
<td>2:56</td>
<td>4. “Devil-Music”</td>
<td>This section is an abrupt contrast that features percussion instruments as well as the strings. Some of the sounds here are quite uncomfortable to listen to.</td>
</tr>
<tr>
<td>4:34</td>
<td>5. “Danse Macabre”</td>
<td>The conclusion of the Departure section is much more audibly rhythmic than anything heard so far—indeed, a macabre take on the dance. Spoken syllables are included.</td>
</tr>
</tbody>
</table>
Focus on
George Crumb (b. 1929)

American composer. Born to accomplished musical parents, he participated in domestic music-making from an early age, an experience that instilled in him a lifelong empathy with the Classical and Romantic repertory. He studied at Mason College (1947–50), the University of Illinois, Urbana-Champaign (MM 1953), the Berlin Hochschule für Musik (Fulbright Fellow, 1955–6), where he was a student of Boris Blacher, and the University of Michigan, Ann Arbor (DMA 1959), where his teachers included Ross Lee Finney. In 1959 he accepted a teaching position at the University of Colorado, Boulder. After receiving a Rockefeller grant in 1964, he became composer-in-residence at the Buffalo Center for the Creative and Performing Arts. His first mature works, composed during these years, include Five Pieces for Piano (1962), Night Music I (1963), and Four Nocturnes (1964), in which delicate timbral effects combine with a Webersque pointillism and echoes of a Virginian folk heritage to create the atmospheric chiaroscuro that became a trademark of his style. (Richard Steinitz, Grove Music Online)

Though his is hardly a household name, Crumb has attracted almost a cult following among devotees of contemporary American art music. His fame is based largely on his imaginative use of novel sound effects, often derived from traditional instruments. Crumb’s piano works, for example, frequently call for the performer to pluck or strum the strings, and even to sing into the instrument. Black Angels is probably his best-known work.

Active Listening

We will return to this piece and to the other examples discussed in this chapter at various points in this book, each time looking at them from a different perspective.

Being an active listener means being as aware as possible of what is going on in the music on different levels. How is the music put together? What kinds of sound are used? How does a work draw upon the basic elements of music discussed in this chapter: form, timbre, rhythm, meter, melody, harmony, texture, and the combination of music with text or drama?

Being an active listener also means paying attention to the meaning or meanings that may be embodied in the music: how it plays on your emotions, how it elicits certain kinds of responses, how it provides unique perspectives on poems, dramas, and even pictures. Being aware of these things will deepen and enrich your experience of music in surprising ways, often allowing you to respond to it in very personal terms. Whatever your reaction to Black Angels, for example, you are probably not indifferent to it, even after a single hearing.
SUMMARY

- Active listening is a framework for improving your awareness of the listening experience.
- Active listening enables you to pay attention to music at multiple levels of complexity by examining the common elements that comprise music: form, timbre, rhythm, meter, melody, harmony, texture, and the combination of music with text or drama.
- Active listening does not preclude emotional listening. An emotional response to music is an important part of the listening experience, but it is far from the whole picture.
- The ability to recognize, analyze, and interpret what you hear adds further dimensions to your appreciation of music.
- The first step in learning to listen actively is to provide a situation in which to listen intently by tuning out distractions, giving the music your undivided attention, listening carefully to the beginning of a work, and listening repeatedly to the entire work.
- An excellent way to understand the musical elements described above is to explore how they work in selected pieces of music.

KEY TERMS

<table>
<thead>
<tr>
<th>Term</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active listening</td>
<td>xx</td>
</tr>
<tr>
<td>Beat</td>
<td>xx</td>
</tr>
<tr>
<td>Chamber music</td>
<td>xx</td>
</tr>
<tr>
<td>Chords</td>
<td>xx</td>
</tr>
<tr>
<td>Common time</td>
<td>xx</td>
</tr>
<tr>
<td>Concerto</td>
<td>xx</td>
</tr>
<tr>
<td>Dissonant</td>
<td>xx</td>
</tr>
<tr>
<td>Emotional listening</td>
<td>xx</td>
</tr>
<tr>
<td>Form</td>
<td>xx</td>
</tr>
<tr>
<td>Genre</td>
<td>xx</td>
</tr>
<tr>
<td>Glissando</td>
<td>xx</td>
</tr>
<tr>
<td>Harmony</td>
<td>xx</td>
</tr>
<tr>
<td>Key</td>
<td>xx</td>
</tr>
<tr>
<td>Measure</td>
<td>xx</td>
</tr>
<tr>
<td>Melody</td>
<td>xx</td>
</tr>
<tr>
<td>Meter</td>
<td>xx</td>
</tr>
<tr>
<td>Minor</td>
<td>xx</td>
</tr>
<tr>
<td>Motive</td>
<td>xx</td>
</tr>
<tr>
<td>Movement</td>
<td>xx</td>
</tr>
<tr>
<td>Orchestra</td>
<td>xx</td>
</tr>
<tr>
<td>Pitch</td>
<td>xx</td>
</tr>
<tr>
<td>Register</td>
<td>xx</td>
</tr>
<tr>
<td>Rhythm</td>
<td>xx</td>
</tr>
<tr>
<td>Scale</td>
<td>xx</td>
</tr>
<tr>
<td>Tempo</td>
<td>xx</td>
</tr>
<tr>
<td>Texture</td>
<td>xx</td>
</tr>
<tr>
<td>Timbre</td>
<td>xx</td>
</tr>
</tbody>
</table>

REVIEW QUESTIONS

1. What is the difference between emotional listening and active listening? Do you listen differently at different times?
2. Why is the Dvořák Slavonic Dance easy to listen to? What are its most memorable features?
3. Why are the Mozart symphony and the Bach harpsichord concerto more challenging to listen to than the previous two examples?
4. Why is Crumb’s Black Angels the most challenging example in this chapter?

REVIEW CONCEPTS

1. In what way(s) could the main thematic motive of Mozart’s Symphony no. 40 be said to resemble a character in a story? How does a musical theme differ from a human character?
2. What features of Bach’s concerto for harpsichord help to maintain your interest, compensating for the small amount of thematic material?
3. What are some of the ways in which George Crumb challenges his listener’s expectations about what music for a string quartet should sound like?
LISTENING EXERCISES

1. Listen to some of the other Dvořák Slavonic Dances or to the Brahms Hungarian Dances, either in the original piano four-hand version or in the later orchestral version. Do these pieces also lend themselves to emotional listening? Why or why not?

2. Listen to Mozart’s Symphony no. 40 in its entirety. Is it clear why Mozart joined these four movements together as a single composition? Why or why not?

3. Listen to one or more of the Brandenburg Concertos by Bach, which are among the most popular works in the classical repertory. Does this music appeal to emotional or active listening skills, or both? Give some reasons for your answer.

4. Listen to the first movement of Haydn’s String Quartet in B-flat major, op. 64, no. 3, from your listening list. How does the sound of the string quartet in Crumb’s Black Angels differ from the more traditional sonorities used by Haydn? What means does Crumb use to produce these unusual sounds?
Guide to the Instruments of the Orchestra

The major vehicle for the performance of classical music is the modern symphony orchestra. This guide introduces you to the major instruments of the orchestra and others that you’ll be hearing throughout this book.

<table>
<thead>
<tr>
<th>TABLE 1.1: Instruments of the Orchestra</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stringed Instruments</strong></td>
</tr>
<tr>
<td>Bowed Stringed Instruments</td>
</tr>
<tr>
<td>Violin</td>
</tr>
<tr>
<td>Viola</td>
</tr>
<tr>
<td>Cello</td>
</tr>
<tr>
<td>Double-bass</td>
</tr>
<tr>
<td><strong>Plucked Stringed Instruments</strong></td>
</tr>
<tr>
<td>Harp</td>
</tr>
<tr>
<td>Guitar</td>
</tr>
<tr>
<td><strong>Woodwinds</strong></td>
</tr>
<tr>
<td>Flute</td>
</tr>
<tr>
<td>Single-reed</td>
</tr>
<tr>
<td>Clarinet</td>
</tr>
<tr>
<td>Saxophone</td>
</tr>
<tr>
<td><strong>Double-reed</strong></td>
</tr>
<tr>
<td>Oboe</td>
</tr>
<tr>
<td>Bassoon</td>
</tr>
<tr>
<td><strong>Brass</strong></td>
</tr>
<tr>
<td>Cornet</td>
</tr>
<tr>
<td>Trumpet</td>
</tr>
<tr>
<td>Piccolo trumpet</td>
</tr>
<tr>
<td>Horn</td>
</tr>
<tr>
<td><strong>Percussion</strong></td>
</tr>
<tr>
<td>Non-pitched</td>
</tr>
<tr>
<td>Snare drum</td>
</tr>
<tr>
<td>Bass drum</td>
</tr>
<tr>
<td>Torn-torn</td>
</tr>
<tr>
<td>Cymbals</td>
</tr>
<tr>
<td>Triangle</td>
</tr>
<tr>
<td>Gong (tam-tam)</td>
</tr>
<tr>
<td>Pitched</td>
</tr>
<tr>
<td>Timpani</td>
</tr>
<tr>
<td>Xylophone</td>
</tr>
<tr>
<td>Marimba</td>
</tr>
<tr>
<td>Vibraphone</td>
</tr>
<tr>
<td>Glockenspiel</td>
</tr>
<tr>
<td>Chimes</td>
</tr>
</tbody>
</table>

Stringed Instruments

Instruments that create their sound through the vibration of a string (such as a metal wire or a stretched piece of gut) are classified as *stringed instruments*. The very simplest such instrument is called a *monochord*; it consists literally of a stretched piece of twine, animal material, or metal that is attached at either end to a stick. If you pluck a full length of a string, you will hear one tone; if you cut that string exactly in half, the pitch produced will be an octave higher.
The Violin and Other Bowed Stringed Instruments

The violin is one of the key melody instruments in the Western classical orchestra. It is part of a family of related instruments, from violin (soprano) to viola (alto), cello (tenor), and double bass (bass). Note that the division of these instruments mirrors the division of vocal ranges commonly found in choirs. One of the most popular of all classical music forms, the string quartet, is performed by a group of two violins, a viola, and a cello.

CORE LISTENING: Haydn’s Quartet in B-flat, Op. 64, no. 3, is a great example of a classical string quartet. Listen to how the violins, viola, and cello interact in this piece. You’ll hear how the melody is divided between the violins, with the viola and cello providing harmonic support. Contrast this with George Crumb’s Black Angels, a modern string quartet. Here the division of melody and accompaniment is less clear as Crumb is not tied to the classical division of instrumental roles that Haydn and others had perfected. (See Video xx)

Violins developed from earlier stringed instruments that were played with a bow, such as the Renaissance viol. The modern violin is a favorite solo instrument, whether played alone, in a string
Chapter 1 Learning to Listen Actively

In the 19th century, great performers such as Nicolo Paganini (1782–1840) were the rock stars of their day; they toured Europe drawing standing-room only crowds who were in awe of their instrumental skills. In the 1990s, violinists like Nigel Kennedy (b. 1956) revived the crowd-pleasing performance style of pop performers, dressing more like a punk rocker than a concert hall star.

CORE LISTENING: Charles Ives’s (1874–1954) Violin Sonata no. 4, 2nd movement, is just one example of how the violin is used as an expressive melodic instrument in classical music. Mozart’s Symphony no. 40, 1st movement, and Beethoven’s Symphony no. 5 give examples of how the great classical composers employed a full string section in the orchestra to create complex musical textures. (See Video xx)

The Harp and Other Plucked Stringed Instruments

Like the violin, the concert harp (or “double-action” harp) is the latest development in a long line of instruments that feature strings stretched across a wooden or metal frame. Folk harps are known all around the world and form the basis for the modern instrument. These harps have a C-shaped body, with the strings anchored to the top and bottom branches, which are separated by a hollow, resonating chamber. The modern harp features a strong metal frame to support its range of strings, and also adds pedals that can be used to change the pitch of individual strings. Traditionally, harpists played either with their fingers or more typically with their finger nails, plucking individual or groups of notes to play melodies and harmonies. Composers of orchestral music sometimes call for as many as six harps for special effects. The harp also has a large solo repertory.

CORE LISTENING: The sound of the harp can be heard clearly in Claude Debussy’s (1862–1918) Sonata for flute, viola, and harp. This piece offers us the opportunity to distinguish between a bowed string (the viola) and a plucked one (the harp), and contrast both with a woodwind (the flute; see below). (See Video xx)

The guitar is familiar to listeners of classical and popular music. The traditional acoustic guitar has a hollow wooden body, fretted fingerboard, and six nylon or metal strings. Electric guitars replace the hollow body with a solid one and magnetic pickups for amplifying the sound of the resonating strings. The guitar, in its acoustic (non-electric) form, has a distinguished history, but has only come to be regarded as a medium for classical performers during the past hundred years, largely due to the influence of the guitar virtuoso Andrés Segovia (1893–1987). Classical guitarists often play transcriptions of music originally written for other instruments.
The sitar is an Indian long-necked plucked stringed instrument that has become familiar to listeners outside of India since the 1950s. The sitar is related to an ancient three-stringed instrument found in India and Persia. The modern sitar took shape in the 18th century typically includes 18 to 20 strings, six or seven of which are plucked for melody. The remaining strings, called sympathetic strings, resonate to produce the droning effect that is characteristic of the instrument. The neck of the sitar has 18 moveable frets and its resonating body is made of a gourd. It is played with a plectrum or with the fingernails. The sitar is used primarily in Indian classical music, although it has sometimes been adapted by Western musicians playing classical and popular music.

**CORE LISTENING:** The sound of the sitar is featured in the work *Raga Bhankar*, played by virtuoso Ustad Vilayat Khan (1928–2004). Notice the way in which the pitches of the melody are dramatically bent and sustained to produce a mesmerizing flow to the music. (See Video xx)

**Woodwinds**

Woodwinds are instruments that produce their distinctive sound through the vibration of a column of air. In the simplest woodwind instrument—such as a whistle—the player blows through the end of a hollow tube, setting the air into motion, which produces a sound. By shortening the overall length of the tube—through adding holes that can be “stopped” (covered up) by the player’s fingers but also uncovered selectively—the pitch can be raised. Through the addition of specialized mouthpieces and/or reeds, woodwinds have evolved into a variety of expressive instruments.

The *wind*, or woodwind, section of the orchestra includes at least three different types of instruments: flutes; single-reed; and double-reed instruments. The flute features an oval mouthpiece that has a sharp edge; when the player blows across it, the column of air is broken into jagged bursts, creating the unique breathy flute sound. On reed instruments, the mouthpiece is covered by a thin piece of cane that is set into motion by the player’s breath. These reeds are attached to the top of the instrument either singly, as on the clarinet, or doubled over, as on the oboe and bassoon.

The basic design of the flute is so simple that versions of it are found in cultures from around the world. Western flutes are blown from a mouthpiece on the side of one end of the instrument. Blowing the flute requires finding exactly the right angle from which to blow, the right intensity, and also the right spacing between your lips. Wind players call this finding an embouchure (OM-boo-shur). The flute player can also raise the pitch by overblowing—blowing harder in order to produce a higher pitch.
CORE LISTENING: As mentioned above, the Debussy sonata for flute, viola, and harp prominently features a flute, heard in contrast with the two stringed instruments. The opening of the second movement of Igor Stravinsky’s (1882–1971) Symphony of Psalms prominently features both the flute and the oboe. (See Video xx)

The clarinet is the most common single-reed instrument in modern orchestras, and also the one with the shortest history; it originated in the 18th century, and its only real predecessor appeared less than a century earlier. There is a family of clarinets just like the family of violins, although the standard soprano is most often heard. The bass clarinet is occasionally used in the orchestra for special effects.

The orchestral woodwind section is completed by the oboe and the bassoon, which are double-reed instruments in the soprano and bass ranges, respectively. They are both blown from the end. Instead of the clarinet mouthpiece, these instruments feature a double reed that is attached to a tube leading into the body of the instrument.

Unlike the clarinet, the oboe descends from an ancient design that is present in many cultures throughout the world. In Medieval/Renaissance Europe, this instrument was known as a shawm. Most shawms, though, are very loud instruments intended for outdoor performance. 17th-century French musicians redesigned the instrument to make it more supple and expressive, and the result was the direct ancestor of the modern oboe. The oboe is regarded as particularly eloquent and lyrical, and this has influenced the ways that composers have written for it.

The bassoon has a somewhat different ancestry than the oboe. This instrument is distinguished from the oboe family by its double-bore construction; it consists not of a single tube in which an air column vibrates, but of two separate tubes connected at the bottom. This gives the instrument a richer but less penetrating sound than that of the oboe. The contrabassoon, or double bassoon, is a larger version of the instrument that extends to an even lower range. Like the bass clarinet, it is used primarily in this low register.

CORE LISTENING: Mozart’s Gran Partita, K. 361 gives us the opportunity to hear a number of these woodwind instruments in action. The piece is scored for two oboes, two clarinets, two basset horns (a single-reed instrument that is similar to the clarinet but instead of having a long, straight body it is bent at the mouthpiece), four horns, two bassoons, and bass. The primary melody instrument are the clarinets and oboes, which frequently trade off melodic statements to produce contrasts of timbre. (See Video xx)

The saxophone, well known to band musicians and to fans of jazz, is also classified as a woodwind. Its body is made of metal and it has a single-reed mouthpiece and holes covered by keys.
It was invented by Antoine-Joseph (Adolphe) Sax (1814–1894) in the early 1840s. As with the clarinet, Sax introduced various instruments in different ranges, with the tenor and alto being the most often played today.

**CORE LISTENING:** The saxophone can be heard in orchestral settings, but is most commonly heard in jazz. We’ll be studying a classic jazz composition, “Lester Leaps In,” named for one of the greatest saxophonists of the 20th century, Lester Young (1909–1959). (See Video xx)

### Brass Instruments

Brass instruments are played by blowing air through a cup-shaped mouthpiece connected to a length of metal tubing with a bell-like flare at the end. The action of the lips is important for vibrating the air inside the instrument and also for modulating its tone. In a simple horn, the player blows through a mouthpiece at one end of the instrument; the basic pitch is determined by the horn’s length. A modern bugle is played in this way.

A major change in horn design came in the late 18th-early 19th century with the invention of valves that allowed brass instruments to play all notes in the musical scale. Valves played by the fingers can either open or close additional lengths of tubing built into the instrument, enabling the player to access a wider range of notes.

The modern *trumpet* has three valves, which, used either separately or in combination, can yield a surprisingly large variety of pitches. The *piccolo trumpet* is a small, high-pitched trumpet often used to play baroque music, although it is actually a recent invention. The tone of the trumpet may be modified by placing an object called a *mute* in its bell. A variant of the trumpet played in the 19th and early 20th centuries in bands was the *cornet*, featuring a slightly mellower tone due to differences in the shape and construction of its body. Louis Armstrong and other early jazz musicians began their careers playing the cornet before switching to the louder trumpet.

**CORE LISTENING:** Instruments from the trumpet family of brass instruments can be heard in several of our core listening selections. The trumpet can be heard in a lively jazz setting both as an accompanying and solo instrument in *Lester Leaps In* by Count Basie (1904–1984). The cornet can be heard prominently in Morton Gould’s (1913–1996) *An American Salute*. Gould selected the instrument because of its widespread use in American town bands at the turn of the twentieth century. The piccolo trumpet can be heard in Igor Stravinsky’s *Symphony of Psalms*. (See Video xx)

The *horn* (often called the *French horn*) is descended from outdoor instruments used in hunting; the resonant tone of the
natural horn could be heard up to five miles away. The French horn has three rotary valves to change notes. It is played with the right hand in the bell, and can be muted with the hand to change the tone of the sound.

**CORE LISTENING:** The French horn is a popular instrument used in the orchestra to add color and a unique melodic voice. Mozart prominently featured it about 16 seconds into his Symphony No. 40, when he abruptly switched from a very soft overall sound (piano) to a loud one (forte). Berlioz also used French horns prominently in his score for *Romeo et Juliet* in the opening measures of the *Scène d’amour.* (See Video xx)

The trombone uses a slide instead of valves to change notes, allowing the player more flexibility of pitch. Trombones used in today’s orchestras are most commonly in the tenor range, although the bass and alto trombone are occasionally heard as well. Thus, the trombone essentially occupies the high end of what is often called the “low brass” section of the orchestra.

The very lowest brass instrument is the **tuba.** In its most common form, it provides the bass component of the brass section. There is also a tenor version of the tuba commonly called the **euphonium.** The tuba is a relatively recent instrument; its earliest predecessors are less than two hundred years old. One familiar variation of the tuba is the **sousaphone,** a curled version of the instrument frequently used in marching bands and developed by famed band leader John Philip Sousa. The tuba is played using valves.
**CORE LISTENING:** The trombone and tuba can be clearly heard at the ending of Smetana’s Sarka, from Má Vlast, beginning at about 8:58. Their deep voices are used to portray the desperate efforts of the men as they struggle to ward off their attackers. (See Video xx)

### Keyboard Instruments

Keyboard instruments fulfill many functions in music, from playing melodies and solos to providing rhythm or chords to accompany other players. Keyboards are played by both hands using a set of mechanical keys covering several octaves of pitches of a fixed scale. The most common keyboard instruments are the organ, harpsichord, piano and celesta. Electronic keyboards and synthesizers are also widely used to imitate traditional keyboard sounds or to play unique electronic sounds.

Historically, the earliest keyboard is the organ, often called a pipe organ because it features a group of pipes or tubes, each tuned to a single note, that are controlled by a keyboard, also called a *manual*. Organs give players a great range of sounds and can be combined in inventive ways. Pressing a key triggers a mechanism that blows air through the selected pipes. Pipes are often identified by their length, such as 2', 4', and 8', the shorter pipes being for higher pitch ranges. Modern organs have from two to seven manuals, plus pedals that are operated by the player’s feet. Organs also come in modern, fully electronic versions, some emulating the sounds of the pipe organ, even using pipe length designations to identify preset pitch ranges.

Various instrument makers experimented over the centuries with ways to create a versatile keyboard-controlled stringed instrument. The *clavichord* was an early design popular in the 17th-18th centuries that featured metal picks or *tangents* that plucked the strings. Unfortunately, it was a very quiet instrument, making it most suitable for being played on its own rather than with other instruments.

More successful was the *harpsichord*, on which a lever connected to a *jack* plucks the string with a quill (recent harpsichords generally use plastic) when a key is depressed. Many harpsichords have two manuals, allowing performers to execute complex hand crossings or to change registrations quickly.

**CORE LISTENING:** The harpsichord player often served as the informal conductor of larger ensembles in the Baroque era, setting the beat and indicating when the instruments were to play. A great example from this period is Bach’s Harpsichord Concerto in D minor. (See Video xx)

Unlike the harpsichord, the piano (originally named the *piano-forte*) can play both softly (*piano*) and loudly (*forte*). The piano is technically a percussion instrument, since its notes are produced by...
hammers striking a set of tuned strings. When the player releases a key, a felt damper descends on the string, stopping the vibration. Modern pianos have 88 keys giving them a wide range.

**CORE LISTENING:** The piano can be heard in many of our core listening examples as an accompanying instrument for vocal music. Dallapiccola (1904–1975) uses two pianos in inventive ways in his *Canti di Prigionia*. Janika Vandervelde’s (b. 1955) Genesis II also features the piano played in an unusual manner; towards the end of the piece, the pianist is instructed to percussively play blocks of notes by using his or her forearm to press down on several keys at once. (See Video xx)

The *celesta* is a specialty keyboard instrument that has a sound reminiscent of a toy piano. It looks like a small upright piano. The sound of the *celesta* is made by pressing a key that in turn hammers a metal plate suspended over a wooden resonator. Its distinct, bell-like sounds are familiar to many listeners from its use in the *Dance of the Sugarplum Fairy* from Pyotr Il’ych Tchaikovsky’s (1840–1893) ballet *The Nutcracker*.

A key development in the evolution of modern instruments was the invention of the electronic music **synthesizer**. Its versatility lies in the ability to use many preset instrumental sounds, to program patterns of sounds, and even create new sounds that will be unique to a given composition or performance. A synthesizer may also be programmed for different scales, other than the standard chromatic scale built-into pianos and organs.

### Percussion Instruments

The **percussion** section includes instruments from all around the world. Every percussion instrument contains something that is struck or hit, either by the player’s hand or by sticks or mallets. Some percussion instruments produce a sound that is not perceived as having a specific pitch. Others can produce a wide range of pitches, and are thus capable of performing melodic as well as rhythmic music. Some are made of metal, some of wood, and some use sheets of animal hide, plastic, or other materials as the main resonating surface. Percussion players are versatile musicians because they must know how to play not just one but several instruments, often moving between them in the course of a performance.

#### Indefinitely-Pitched Percussion Instruments

Percussion instruments with indefinite pitch are used to add rhythm, a variety of textures, and effects ranging from the explosive roar of artificial thunder to the knocking of a wood block. Most members of the drum family are classified as indefinitely-pitched
percussion. They are joined by several metallic instruments that are also played by striking them.

Common types of percussion instruments in this category include:
- **Snare drum (or side drum):** A drum with two heads, or resonating surfaces. The top head is played with two drumsticks or brushes. The bottom surface is fitted with taut metal snares (wires) that vibrate and rattle slightly to add to the complexity of the sound.
- **Bass drum:** A large, two-sided drum with a deep, bellowing sound. This is also the kind of drum that a player in a marching band wears across their stomach.
- **Tom-toms:** Two-sided drums that are not fitted with snares, available in many sizes and played with sticks, mallets and brushes.
- **Cymbals:** Two metal discs that are clapped together to make a variety of crashing sounds.
- **Triangle:** A metal rod bent into the shape of a triangle, which rings brightly when struck with a metal beater.
- **Gong (or tam-tam):** A large metal disc suspended from its rim and struck with a heavy wool- or felt-padded mallet.

**Pitched Percussion Instruments**

There are several varieties of percussion instruments that play a definite pitch, each with its own role in a musical ensemble.

The timpani, or kettledrum, are a kind of drum that can play identifiable pitches. There are always at least two timpani, and often three, four, or more, each tuned to a definite pitch. Timpani are tuned by pedals and played with soft or hard mallets. Timpani parts can be quite challenging, because the players are frequently required to retune their instruments while the rest of the orchestra is playing.

Some tuned percussion instruments are designed to play melodies and chords. The most familiar are the **xylophone** and the **marimba**. Antecedents of these mallet instruments are known from Asia, Africa, and South America. The xylophone and marimba each use tuned wooden bars arranged roughly in the format of the black and white keys on a piano. The marimba, in addition to having tuned wooden bars, includes hollow metal tubes suspended beneath the bars to amplify the tone. Both instruments may be played with up to four mallets, two in each hand. *(See Video xx)*

The **vibraphone** uses tuned aluminum bars and is built in the same configuration as the xylophone and marimba. The instrument has pedals for adding vibrato to the tone or sustaining its notes, features that are enhanced by motors and electronic amplification, adding remarkable nuances to the tonalities of the instrument.
CORE LISTENING: The vibraphone, or “vibes,” is a popular instrument in jazz ensembles. Our selection from Count Basie’s *Lester Leaps In* features an extended vibraphone solo. (See Video xx)

The *glockenspiel* might be likened to a laptop version of the xylophone. It has two rows of metal tone bars. Its bell-like sounds are produced by striking it with hard mallets.

CORE LISTENING: The xylophone and marimba have prominent roles in *Canti di Prigonia* by Luigi Dallapiccola. A variety of other indefinitely-pitched and pitched percussive instruments—including bells, tam-tams, triangle, snare drum, bass drum, and timpani—can be heard used in creative ways throughout the piece. (See Video xx)

*Chimes* consists of a set of tuned, metal tubes suspended in a frame and played with mallets. They produce a strikingly bell-like tone and are often used to create the effect of church bells.

Indonesia is known for its small chamber ensemble of the type collectively known as gamelan. The gamelan ensemble uses a variety of instruments such as tuned gongs, drums, flutes, and single- and multi-octave *metallophones* (metal-keyed vibraphones). The latter are mallet-struck instruments tuned to specific pitches, in principle like the vibraphone, but using non-Western scales. Metallophones are often paired with one instrument being tuned slightly higher than the other to produce the distinctive reverberating sound of this music.

CORE LISTENING: *Sukawati*, performed by a *gender wayang* ensemble, is a classic example of a gamelan performance. Listen to how the various percussive instruments blend to form an overall sonic atmosphere. (See Video xx)

**The Orchestra**

Just as musical instruments developed over time, the modern orchestra grew out of many earlier experiments in forming larger musical ensembles. In Bach’s time, for example, a group would be formed based on whatever musicians were available, either through employment by a member of the aristocracy or by the church. The 18th century, as newer instruments became available—such as the clarinet in Mozart’s time—composers began experimenting with adding them to their larger works. The modern orchestra grew out of the 19th-century interest in composing symphonic works to be performed by increasingly large ensembles. Beethoven’s Ninth Symphony featured a large orchestra and choir became a model for many that followed, with composers like Mahler famous for composing for ensembles larger than army brigades!
Figure 1.4 illustrates the standard layout of the modern orchestra and its instrumental groupings. The placement of instrumental groups is functional in that it arranges the quieter instruments in the front and the loudest instruments on the perimeter. The arrangement also emphasizes the instruments of priority in Western music, notably with the string section front and center. The first violin player is called the concertmaster, and usually receives a separate round of applause before the concert begins. Note that when the piece being performed features an instrument other than a member of the string family—the piano, for instance—this instrument is usually given a place at the center of the stage in close proximity to the conductor.