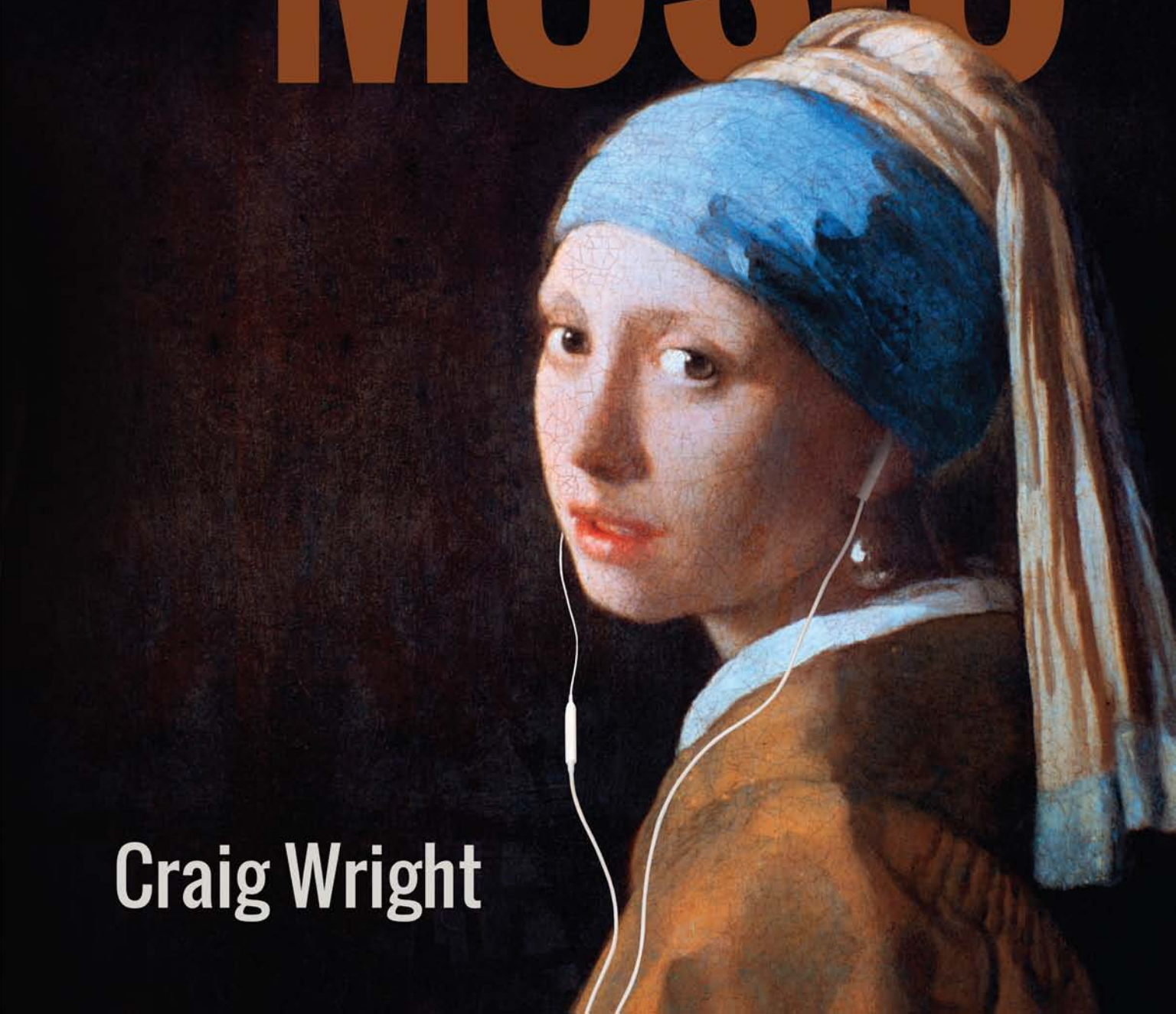
The Essential Listening to MUSIC

Second Edition



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The Essential Listening to Music 2e

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The Essential Listening to Music, Second Edition
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For Clark Baxter—innovator, publisher, and valued friend

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About the Author

Craig Wright

Craig M. Wright received his Bachelor of Music degree at the Eastman School of Music in 1966 and his Ph.D. in musicology from Harvard University in 1972. He began his teaching career at the University of Kentucky and for the past forty years has been teaching at Yale University, where he is currently the Henry L. and Lucy G. Moses Professor of Music. At Yale, Wright's courses include his perennially popular introductory course, Listening to Music (also part of the offerings of Open Yale Courses, which can be viewed on YouTube), and his large lecture course Exploring the Nature of Genius. He is the author of numerous scholarly books and articles on composers ranging from Leoninus to Bach. Wright has also been the recipient of many awards, including a Guggenheim Fellowship, the Einstein and Kinkeldey Awards of the American Musicological Society, and the Dent Medal of the International Musicological Society. In 2004, he was awarded the honorary degree Doctor of Humane Letters from the University of Chicago. And in 2010 he was elected a member of the American Academy of Arts and Sciences, joining fellow inductee banjo player Steve Martin.

Wright is currently serving at Yale as Academic Director of Online Education.

In addition to *The Essential Listening to Music,* Wright has also published *Listening to Music* and *Listening to Western Music, Seventh Edition* (Schirmer Cengage Learning, 2014); *Listening to Music, Chinese Edition* (Schirmer Cengage Learning/Three Union Press, 2012), translated and simplified by Profs. Li Xiujung (China Conservatory, Beijing) and Yu Zhigang (Central Conservatory, Beijing), both of whom worked with Wright at Yale; and *Music in Western Civilization, Media Update* (Schirmer Cengage Learning, 2010), with coauthor Bryan Simms. He is currently at work on a volume titled *Mozart's Brain: Exploring the Nature of Genius.*

Preface

Why a New Edition? Technology!

People lucky enough to teach music appreciation have a number of textbooks from which to choose. So why do we need another?

The Essential Listening to Music, Second Edition, is for the instructor who wants to spend a bit more time teaching somewhat fewer major pieces. A book that discusses, say, seventy to one hundred pieces may seem at least twice as valuable as a book that covers only about fifty. But some instructors do not have the time, and some students have not acquired the ability, to devote careful attention to more than five masterworks per week over a fourteen-week semester. With fewer pieces at hand, each teacher will also have more time to personalize the course by adding his or her own preferred media to the classroom experience. Thus,this book might be seen as a classic example of "less is more": fewer written words, more opportunity for online media. Indeed, this is the perfect book for an online music appreciation course.

But whether your music education occurs in a traditional classroom or online, technology drives the need for newer editions, including this one. Today instructors are not as "textbook dependent" as they were five to ten years ago. The Internet has made possible instant access to a wealth of media that can enhance students' interest by making the musical experience immediate and relevant to their world. Textbooks themselves are increasingly becoming hybrids—a combination book and media center. The book can also be experienced entirely online, with links to a wealth of electronic resources embedded therein. The job of the textbook today is to assure not only that students have access to these resources, but also that the almost limitless number of audio and video tracks and clips available globally have been reduced to a manageable number of the very best. Finally, the textbook of today must not only inform as well as link to the outside world—it must also be educationally creative.

Videos, animations, and exercises of all sorts are the newest modes of educational engagement in the twenty-first century. Instead of viewing these electronic experiences as unwanted distractions, *The Essential Listening to Music, Second Edition,* has embraced them. Many new drills, videos, and animations are built into the MindTap platform that accompanies the book. In every way, this new edition of *The Essential Listening to Music* is written for the digital age. Its aim is to take what is essentially a past culture (Western classical music) and present it in the mode of delivery of today and tomorrow. Only in this way will students come to see that this past culture is relevant to their current existence; only in this way will students be engaged, indeed inspired, to learn.

MindTap: An Online Companion

When *Listening to Music* was first under development some thirty years ago, the publisher considered issuing the recordings on vinyl, but instead dared move to a revolutionary new development: magnetic tape. Thereafter came CDs, now streaming music and downloads. Similarly, some dozen years ago I and the publisher created an online platform as a necessary companion to the book. Now entitled MindTap, it has grown into an engaging, personalized online environment, accessible on laptops, tablets, and handheld devices. With relevant assignments that guide students to analyze, apply, and improve thinking, MindTap also allows instructors to measure skills and outcomes with ease.

A Core Repertoire

What pieces of music are essential for students studying Western music? While we may all debate what should comprise the "canon" of Western music, *The Essential Listening to Music* presents a cohort of pieces that many instructors would eagerly adopt. In fact, it is built on the opinions of many appreciation instructors and on what is now my own nearly forty-five years of teaching music appreciation at the college level. Thus, the compositions presented and discussed here are not only the staples of the concert hall today, but also pieces that work in the classroom. Through them the instructor can present virtually all of the elements, forms, processes, and historical changes that have appeared in Western art music during the last millennium.

For instructors who also wish to cover popular or world music, relevant text material from *Listening to Music, Seventh Edition*—and the audio that accompanies it—is available through the Cengage custom publishing group at a small additional cost.

Writing Style

A briefer book would seem to require a more basic mode of presentation. With *The Essential Listening to Music,* I have simplified my prose and chosen a vocabulary that speaks directly to the college student of today. The book is still challenging, but it is accessible.

New to This Edition

Although its goals have not changed, this edition of *The Essential Listening to Music* incorporates several improvements.

MindTap

Text pedagogy is fully integrated with MindTap, to provide high-value gradable activities (Listening Exercises, Chapter Quizzes by Timothy J. Roden of Ohio Wesleyan University, and Critical Thinking Quizzes by James D. Siddons of Liberty University), as well as opportunities to engage with content and to practice.

The points on the MindTap Learning Path are, wherever appropriate, cued in the text with a MindTap logo MindTap to remind users to take advantage of its rich resources. The Learning Path for *The Essential Listening to Music* is organized according to the following sections, all cued in the print text:

MindTap **START . . .** signals a new animation for most chapters by Stephen Malinowski, of Music Animation Machine, incorporated in an engagement activity introduced by the author and accompanied by questions geared for class discussion.

MindTap **READ . . .** Text reading begins, including a new set of learning objectives to preview each chapter's core concepts.

In the MindTap reader, embedded streaming audio, an Active Listening Guide for every work discussed, YouTube videos, and streaming instant audio of most notated musical examples, in place where they are needed, are cued in the print text with MindTap **WATCH . . .** and MindTap **LISTEN TO . . .** reminders. Full Listening Guides are also available in MindTap, with a print-PDF option.

Twelve new or reworked Listening Exercises provide in-depth quizzing on even more individual selections. The user make take these live, in place in the eBook, but they also appear separately, for students who want to take them without scrolling through the chapter.

MindTap **PRACTICE . . .** reminds students to review their Active Listening Guides again in MindTap after finishing the chapter.

MindTap **DO . . .** reminds students to demonstrate understanding and apply concepts by taking a Chapter Quiz and a new Critical Thinking Quiz at chapter end. These quizzes may be used for student review and practice. However, they also can be graded, and grades submitted to the instructor, if the instructor so chooses.

Text-related Improvements

Six musical works are new to the Second Edition, spanning eras from Classical to Postmodernist, and including a John Williams theme from the *Harry Potter* films.

- Chapter 8 now includes a discussion of Haydn's Trumpet Concerto, accompanied by a recording by Wynton Marsalis.
- Chapter 9 discusses the famous *Elvira Madigan* Piano Concerto by Mozart, accompanied by a Murray Perahia recording.

- A different Chopin nocturne, that in E♭ major recorded by Arthur Rubinstein, appears in Chapter 11.
- Chapter 12 now includes a different movement from Berlioz's *Symphonie fantastique:* "March to the Scaffold."
- Chapter 13 has new coverage of Wagner's *Die Walküre* and its rousing favorite —"Ride of the Valkyries."
- Chapter 16 concludes with a rewarding "dessert": John Williams's Hedwig's Theme from *Harry Potter.*

Craig Wright is now hosting a Facebook page—**Listening to Music with Craig Wright**—where readers will find discussions and blogs about what's happening with music today, and a mechanism for communicating directly with the author.

Pedagogical Aids

Listening Exercises

The Essential Listening to Music, like *Listening to Music,* was the first music appreciation text on the market to include Listening Exercises, now online in MindTap, where they may be graded electronically. By means of these, students will embrace hundreds of specific passages of music and make critical decisions about them. The exercises begin by developing basic listening skills—recognizing rhythmic patterns, distinguishing major keys from minor, and differentiating various kinds of textures. The exercises then move on to entire pieces in which students are required to become participants in an artistic exchange—the composer communicating with the listener and the listener reacting over a span of time. Ultimately, equipped with these newly developed listening skills, students will move comfortably to the concert hall, listening to classical and popular music with greater confidence and enjoyment. To be sure, this book is for the present course, but its aim—like any good educational experience—is to prepare students for a lifetime of learning, in this case, one of music listening and enjoyment. Text cues, which are "live" in the eBook, highlight the availability of online Listening Exercises.

Listening Guides

In order to keep this edition as brief as possible, full-text Listening Guides have been replaced with Listening Cues, which contain such key information as download references, genre and form, a concise suggestion of "What to Listen

For," and cues to MindTap interactive streaming music, Active Listening Guides, often a video, and Listening Exercises. In addition, full Listening Guides appear in MindTap, from which users may also print out PDFs for offline review.

The Active Listening Guides in MindTap feature full-color interactive and streaming listening guides for every selection, along with listening quizzes and background information.

Ancillaries for Students

Streaming and Downloads

All the musical content discussed in the book is available streaming in MindTap and as free downloads, accessible via the Music Download Card packaged with each copy of the textbook.

Other MindTap Features

MindTap offers several distinctive features, including highlighting, flashcards, ReadSpeaker, and opportunities for instructors to change and add their own teaching materials to the Learning Path.

In addition, MindTap contains numerous YouTube videos; video demonstrations of keyboard instruments; eighteen iAudio podcasts on difficult musical concepts; a checklist of musical styles with integrated musical style quizzes; musical elements tutorials; an appendix on writing concert reports; and grade management for instructors.

Students may access MindTap using a passcode either bundled with their text or purchased online at www.cengagebrain.com.

For Instructors

Instructor's Companion Site

Accompanying *The Essential Listening to Music* is an Instructor Companion Website where you will find an Instructor's Resource Manual, Cengage Learning Testing Powered by Cognero®, and PowerPoint presentations.

The extensive **Instructor's Resource Manual**, written by Timothy J. Roden of Ohio Wesleyan University, supplements the textbook.

Cengage Learning Testing Powered by Cognero® is a flexible, cloud-based system that allows you to

- Author, edit, and manage test bank content from multiple Cengage Learning products.
- Create multiple test versions in an instant.
- Deliver tests from your LMS, your classroom, or wherever you prefer.

This edition's test bank also includes embedded music clips, allowing you to seamlessly integrate "drop the needle" listening items with other test material. (Music clips are also available separately on the Instructor's Companion Site.)

The **Microsoft**® **PowerPoint**® **presentations,** created for this edition by Vicki Curry of James Madison University, are predesigned for use with the book; include full-color images, music clips, and YouTube and other web links; and are fully customizable.

Custom Options

The following enrichment chapters from *Listening to Music* are available for customization:

Ch. 37 American Popular Music to World War II
Ch. 38 Postwar Jazz
Ch. 39 Broadway, Film, and Video Game Music
Ch. 40 Rock: Music of Rebellion
Ch. 41 The Far East
Ch. 42 The Near East and Africa
Ch. 43 The Caribbean and Latin America

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Craig Wright
Yale University

chapter ONE

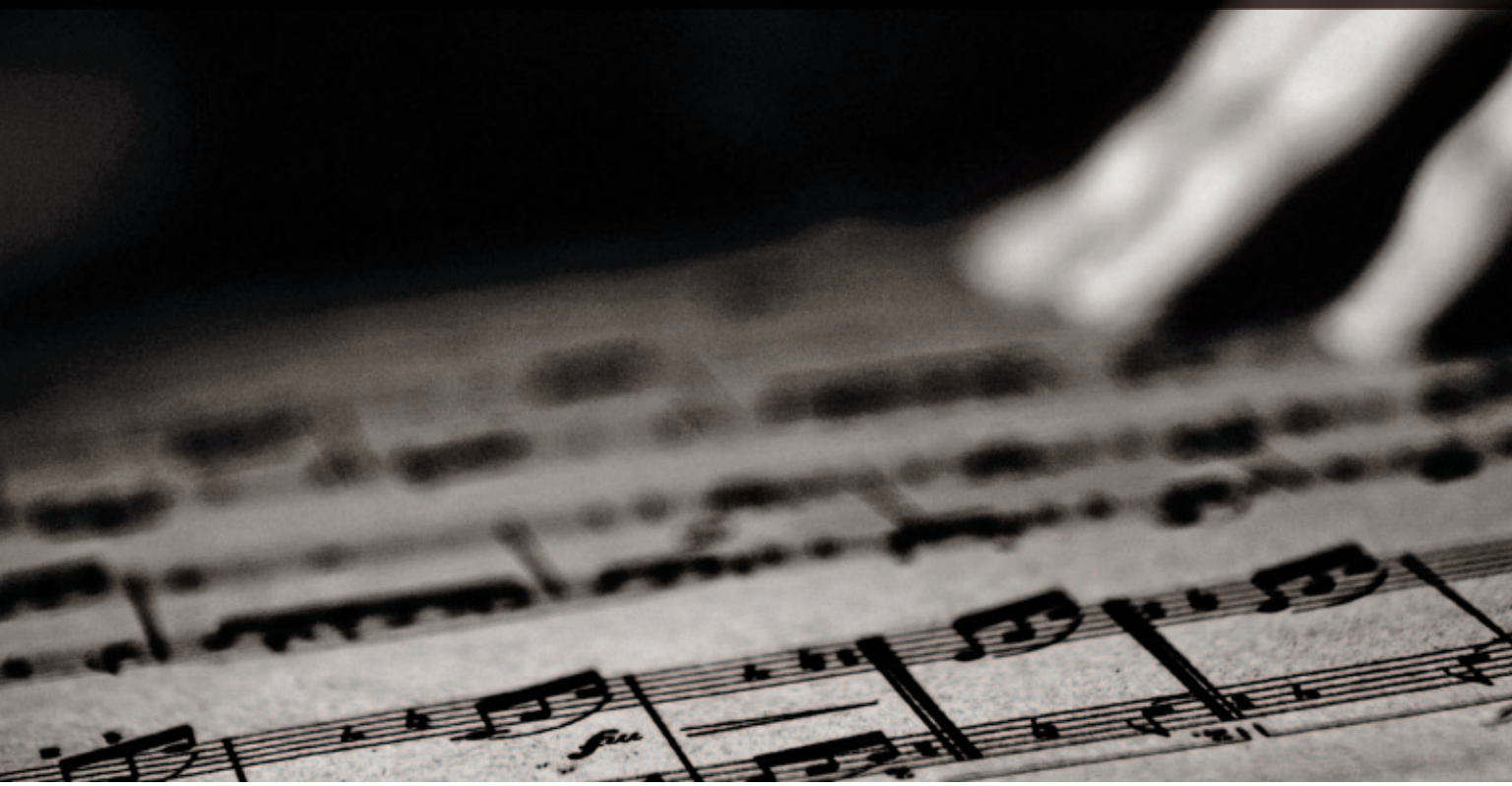
The Power of Music

MindTap™ **START** ... experiencing this chapter's topics with an online video activity.

Learning Objectives

After studying the material in this chapter, you should be able to:

1. Describe how we perceive music.
2. Compare popular and classical music.
3. Know the primary genres and styles of classical music, as well as the "language" of its communication.
4. Recognize where and how to listen to music.
5. Test the capacity of classical music to move you, by exploring two of its most famous examples.



Why do we listen to music? Does it keep us in touch with the latest musical trends, help get us through our morning exercise, or relax us in the evening? Each day almost everyone in the industrialized world listens to music, whether intentionally or not. The global expenditure for commercial music is about $40 billion annually, more than the gross domestic product of half of the 192 countries identified by the World Bank. Whereas in earlier centuries a music lover needed to seek out a concert or other live performance, now almost everyone can listen to music from a smartphone. Do you have an "app" for ballet or painting? Likely not. But probably you have one or more for music—iTunes, Spotify, Shazam, and Pandora, among them. Turn on the radio, and what do we hear: drama or poetry? No, usually just music; the radio is basically a transmission tool for music.

But why is music so appealing? What is its attraction? Does it perpetuate the human species? Does it shelter us from the elements? No. Does it keep us warm? Not unless we dance. Is music some sort of drug or aphrodisiac?

Oddly, yes. Neuroscientists at Harvard University have done studies that show that when we listen to music, we engage processes in the brain that are "active in other euphoria inducing stimuli such as food, sex, and drugs of abuse."[1] These same researchers have explained the neural processes through which listening to particular pieces of music can give us goose bumps. There is a chemical change in the human brain, as blood flow increases in some parts and decreases in others. In this way, music can lower the heart rate and reduce levels of stress. Although listening to music today may or may not be necessary for survival, it does alter our chemical composition and our mental state. It is pleasurable and rewarding, as well as therapeutic.

It is also powerful—yet mysterious. Here's a riddle: "You can't see it; you can't touch it. But it can touch you; it can make you cry or lift you up and out of your seat." What is it? Music, of course! Indeed, music has an inspirational power. Think of a religious service, or a wedding or funeral, or a parade or commencement, without music. Think of the four-note "rally" motive played at profession sports events to get the crowd energized. Think of the refined sounds of Mozart in a commercial intended to convince us to buy an expensive watch. Plato (*The Republic*) once said what advertisers practice today: "To control the people, control the music."

Sound perception is, in fact, the most powerful sense we possess, likely because it *was* once essential to our survival—who is coming and from where? Friend or foe? Flight or fight? We get frightened at horror films, not when the images on the screen become vivid, but when the music starts to turn ominous. In short, sounds rationally organized in a pleasing or frightening way—music—profoundly affect how we feel and behave.

[1]Anne Blood and Robert Zatorre, "Intensely Pleasurable Responses to Music Correlate with Activity in Brain Regions Implicated in Reward and Emotion," *Proceedings of the National Academy of Sciences*, Vol. 98, No. 20 (Sept. 25, 2001), pp. 11818–11823.

Music, the Ear, and the Brain

Briefly defined, **music** is the rational organization of sounds and silences passing through time. Tones must be arranged in some consistent, logical, and (usually) pleasing way before we can call these sounds "music" instead of noise.

Like all sound, music is a disturbance of the atmosphere, one that creates **sound waves**, vibrations that reflect differences in air pressure. But music is special: its sound waves come in regular patterns. Air molecules are compressed and expanded—compression and rarefaction is the official term—in consistently recurring cycles (Figure 1.1). And they repeat with shocking speed. When we play the pitch called middle C on the piano, the cycle repeats (vibrates) 256 times per second; for the A above it, this happens 440 times per second. The speed of the vibration determines what we perceive as high and low pitches. The faster the vibration, the higher the pitch.

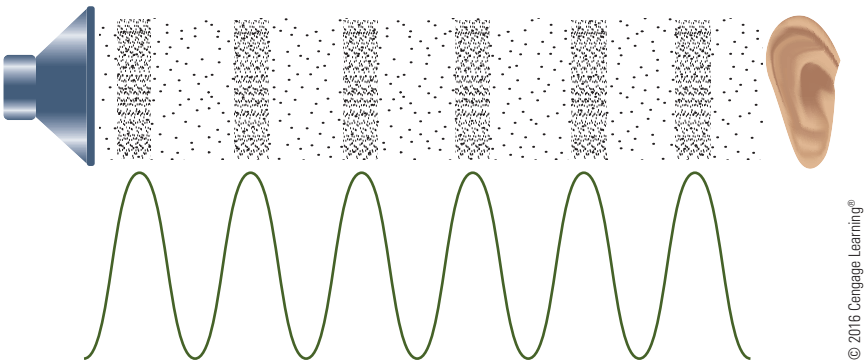


FIGURE 1.1
A representation of air molecules showing six vibrations of a single cycle of a sound wave. The more dots, the more compact the molecules. For the musical pitch middle C on the piano, such a cycle repeats 256 times per second—the strings on the piano are vibrating that quickly!

When we hear music, sound waves make their way to our inner ear and are transformed into electro-chemical impulses. Here the "central processor" is a small organ called the **basilar membrane**, which recognizes and sorts the sound patterns, and then sends the information, via the auditory nerve, to the brain.

Given all the love songs in the world, we might think that music is an affair of the heart. But both love and music are domains of a far more complex vital organ: the brain (Figure 1.2). When sound-stimulated impulses reach the brain, neurons go to work analyzing them for pitch, color, loudness, duration, and direction of source, among other things. Most processing of sound (music as well as language) takes place in the temporal lobe. If we are imagining how the next line of a song will go, that decision is usually reached in the frontal lobe. If we are playing an instrument, we engage the motor cortex (parietal lobe) to move our fingers, and the visual center (occipital lobe) to read the notes. How do we feel about the music? Emotions are generated mostly in the limbic system, especially in an area called the amygdala. As the music proceeds, our brain constantly updates the information it receives, hundreds of times per second. At a speed of more than 250 miles

MindTap

WATCH . . . a YouTube video on music and the brain, online.

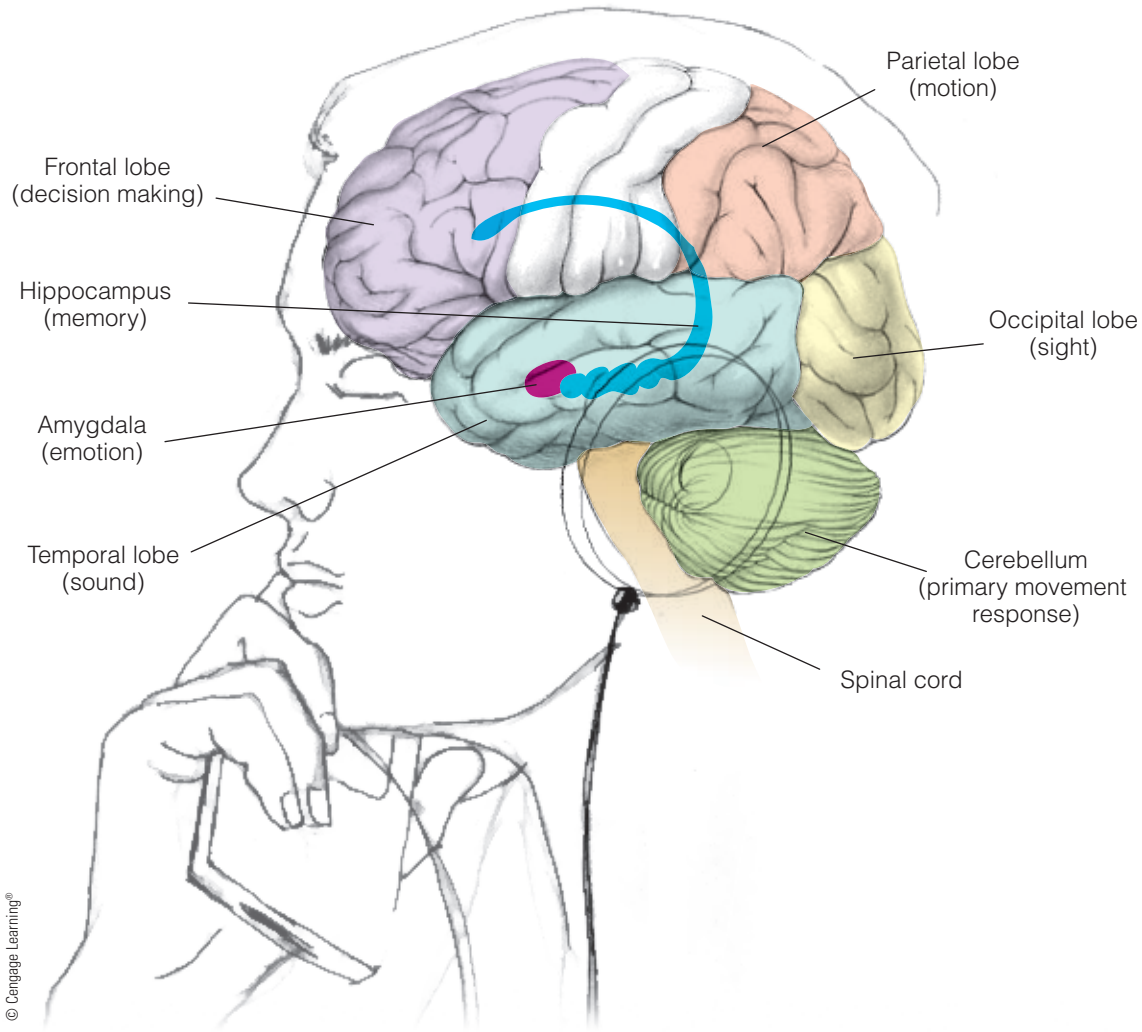


FIGURE 1.2
The processing of music in our brain is a hugely complex activity involving many areas and associated links. The first cerebral recognition and sorting of sounds, both musical and linguistic, occurs largely in the primary auditory cortex in both the left and right temporal lobes. ∧

per hour, associative neurons integrate all the data into a single perception of the sound. The chemical composition of our brain is altered, causing us to relax, or, if the impulses come strongly at regular intervals, to get up and dance.

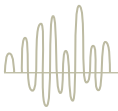
Our Musical Template: Why We Like What We Like

What's your favorite piece of music—your favorite song or symphony? What types of music do you like? That depends on who you are, and on the kind of musical template you have in your head. A **musical template** is simply a set of

musical expectations that each of us engages as we listen to a piece; it reminds us how we think the music ought to go, what sounds good and what bad. But how do we come by our musical template? Like most aspects of our personality, we derive it partly through nature and partly through nurture.

Natural components in our musical template include an awareness of consonant and dissonant sounds, created by the overtone series—the physical properties of sound in the natural world, the specifics of which we need not go into here. Our sensitivity to a strong beat is another natural element, for it results from the evolution of the human brain. All people around the world have more or less the same response to consonance and dissonance, and all people respond to a regular beat.

Not all people, however, have the same expectations as to how a melody should go or how a harmony should sound. These preferences are determined by where we are born and live; we gradually assimilate the musical environment around us. A person reared in Beijing, China, likely will expect melody-focused music with pitches bending through a five-note scale; someone from Mumbai, Indian, likely is more comfortable listening to the sounds of the sitar playing a six-pitch scale; while someone from Nashville, Tennessee, in the United States, would expect a guitar to accompany a voice singing a seven-pitch major or minor scale. Thus, the nurturing element in music is a gradual process of musical acculturation, and it happens most intensely during the adolescent years. One of the aims of this book is to alter your musical template, so that you are familiar and comfortable with the sounds of classical music and eager to embrace more.



Listening to Whose Music?

Today most of the music that we hear isn't "live" music but recorded sound. Sound recording began in the 1870s with Thomas Edison's phonograph machine, which first played metal cylinders and then vinyl disks, or "records." During the 1930s, magnetic tape recorders appeared and grew in popularity until the early 1990s, when they were superseded by a new technology, digital recording. In digital recording, all the components of musical sound—pitch, tone color, duration, volume, and more—are analyzed thousands of times per second, and that information is stored on compact discs (CDs) or in computers as sequences of binary numbers. When it is time to play the music, these digital data are reconverted to electrical impulses that are amplified and pushed through speakers, headphones, or earbuds as sound waves.

Today most music is no longer sold as a commodity you can hold—as sheet music, a vinyl recording, or a CD, but rather is streamed or downloaded as MP3 or M4A files. While the audio quality is not as good as "live" acoustical sound, surely the tradeoff has been worth it. What had been an expensive experience for a lucky few (listening to live music at a concert) can now be enjoyed by almost anyone, anywhere, any time. This holds true for popular and classical music alike.

Popular or Classical?

Most people prefer **popular music**, music designed to please a large portion of the general public. Downloads and streams of pop outsell those of classical by more than twenty to one. But why are so many people, and young people in particular, attracted to popular music? Often it has to do with the power of the beat (see below and Chapter 2) and the lyrics.

Classical music, too, can be a powerful force. Hearing the huge, majestic sound of a mass of acoustical instruments—a symphony orchestra—can be an overwhelming experience. Classical music is often regarded as "old" music, written by "dead white men." But this isn't entirely true: No small amount of it has been written by women, and many composers, of both sexes, are very much alive and well today. In truth, however, much of the classical music that we hear—the music of Bach, Beethoven, and Brahms, for example—*is* old. That is why, in part, it is called "classical." In the same vein, we refer to clothes, furniture, and cars as "classics" because they have timeless qualities of expression, proportion, and balance. Broadly defined, **classical music** is the traditional music of any culture, usually requiring long years of training; it is "high art" or "learned," timeless music that is enjoyed generation after generation.

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FIGURE 1.3
Classical music requires years of technical training on an instrument and knowledge of often-complicated music theory. Some musicians are equally at home in the worlds of classical and popular music. Juilliard School of Music–trained Wynton Marsalis can record a Baroque trumpet concerto one week and an album of New Orleans–style jazz the next. He has won nine Grammy awards—seven for various jazz categories and two for classical albums. ^

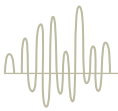
Popular and Classical Music Compared

Today Western classical music is taught in conservatories around the world, from Paris to Beijing to Singapore. Western pop music enjoys even greater favor; in many places Western pop has replaced local pop traditions, so that all that remains are the local lyrics sung in the native tongue. But what are the essential differences between the music we call popular and the music we call classical (Figure 1.3)? Cutting to the quick, here are five ways in which they differ:

- Popular music often uses electric enhancements (via electric guitars, synthesizers, and so on) to amplify and transform vocal and instrumental sounds. Much of classical music uses **acoustic instruments** that produce sounds naturally.
- Popular music is primarily vocal, involving **lyrics** (accompanying text that tells listeners what the music is about and suggests how they should feel). Classical music is more often purely instrumental, performed on a piano or by a symphony orchestra, for example, and it employs its own language of pure sound to express meaning to the listener.
- Popular songs tend to be short and involve exact repetition. Classical compositions can be long, sometimes thirty to forty minutes in duration, and most repetitions are somehow varied.

- Popular music is performed by memory, not from a written score (have you ever seen music stands at a rock concert?), and each performer can interpret the work as he or she sees fit (hence the proliferation of "cover songs"). Classical music, even if played by memory, is initially generated from a written score, and there is typically one commonly accepted mode of interpretation—the piece exists, almost frozen in time, as a work of art.
- Finally, popular music has a strong beat that makes us want to move in sync with it. Classical music often subordinates the beat in favor of melody and harmony.

This last point is important: Music with a regularly recurring beat has a powerful effect on our psyches, causing us to dance or motivating us to exercise. Cognitive neuroscientists have yet to explain fully the power of the beat. They suggest, however, that sounds with forcefully recurring patterns are processed in the "time-measuring" neurons of the cerebellum, one of the earliest parts of the brain to develop during human evolution. These neurons connect with motor neurons causing us to move, a physical response to isochronous stimulation—the beat. That explains how much pop music, especially dance music, "works." But what about classical music?



How Does Classical Music Work?

Explaining how classical music works requires an entire book—this one. But some preliminary observations are in order.

Genres and Venues of Classical Music

Genre in musical terminology is simply a word for "type of music." Needless to say, there are almost endless types of popular music: rap, hip-hop, blues, R&B, country, EDM (electronic dance music), and Broadway show tunes among them. **Venue** is merely a fancy word for place. Genre and venue are interrelated. The place where we go to hear music determines the type of music we hear. If we go to a bar, likely we will hear a blues or rock band, and there will be room for dancing, or at least swaying. If we go to a chamber music hall, we may hear a string quartet, and no one will move.

The acoustical conditions of the venue also affect the kind of music we hear. A rock band in a large, acoustically open stadium will need great electrical amplification to add volume and richness to the sound. No one would ask that same electrifying band to play in an acoustically reverberant cathedral because auditory mush would result. That reverberant cathedral, temple, or mosque requires the simplest sort of sound, and that is why chant is preferred there.

The venues for classical music are of three main types: opera houses and theaters for opera and ballet; concert halls for symphony orchestras; and chamber halls for smaller, solo ensembles. Concert halls, such as the Disney Center in

FIGURE 1.4
Some concerts require a large hall seating two to three thousand listeners (such as the Schermerhorn Symphony Center, Nashville, Tennessee, shown in Figure 1.5). For other performances a smaller venue with two to seven hundred seats is more appropriate, as we see here at the chamber music hall of the Royal Conservatory of Music in Brussels, Belgium. >

Landov

Los Angeles, the Schermerhorn Symphony Center in Nashville (see Figure 1.5), or Carnegie Hall in New York, are large, accommodating two to three thousand listeners. Chamber halls, for solo performing groups, are smaller, accommodating perhaps two to seven hundred lovers of classical music (Figure 1.4).

Finally, genre and venue determine how we dress and behave—social convention has made it so. A fan goes to hear Kanye West at the River Rock Casino in Las Vegas dressed casually, ready to dance and make a lot of noise. Yet that same person would likely attend a concert of the Boston Symphony Orchestra in Symphony Hall attired in suit and tie; any "fan" noise would only distract the orchestra. In sum, venue (Table 1.1) dictates genre and comportment: where we go determines what we hear, what we wear, and how we behave.

TABLE 1.1 Venues for Classical Music with Typical Genres Listed Below

Opera Houses and Theaters	Concert Halls	Chamber Halls
Opera	Symphony	Art song
Ballet	Concerto	String quartet
	Oratorio	Piano sonata

Styles of Classical Music

Style in music is generally the distinctive sound created by an artist, composer, or performing group. Internet radio services such as Pandora use algorithms to recommend songs that match the musical styles we prefer. Style is also the sum of the musical commonalities that typify the music of an age. Historians generally label as "eras" lengthy periods possessing common attributes and give them names such as "the Renaissance" or "the Enlightenment"—this helps simplify complex developments and makes comprehension easier. To this same end, music historians identify eight style periods, extending from the Middle Ages to the Postmodern era (Table 1.2).

TABLE 1.2 Musical Style Periods

	Middle Ages: 476–1450	Romantic: 1820–1900
	Renaissance: 1450–1600	Impressionist: 1880–1920
	Baroque: 1600–1750	Modern: 1900–1985
	Classical: 1750–1820	Postmodern: 1945–present

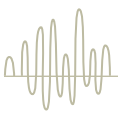
Sometimes the structure of the music alerts us to its style period; the music of the Classical period, for example, typically unfolds with melodies that are short and symmetrical. But most often we recognize the style period by obvious surface details, such as the colorful sounds of the instruments or the swings in the volume; the music of the Romantic era, for instance, is marked by a huge orchestral sound pushed forward by lush, sweeping strings—perhaps that is why it is popular with almost all listeners. Yet whatever the style and genre of the classical music we prefer—be it Romantic symphony or Classical opera—we don't always know *why* we like it. The aim of this book, in part, is to explain the "why."

The Language of Classical Music

Communication involves sending a message that generates a response. If a friend rushed up to you and said, "Your dog was just run over by a beer truck," you'd probably react with shock and profound sadness. In this case, a verbal language conveys meaning and elicits an emotional reaction.

But music, too, is a means of communication, one older than spoken language; spoken language, many evolutionary biologists tell us, is simply a specialized subset of music. Over the centuries, composers of classical music have created a language that also can convey shock and sadness. This language of music is a collection of audible gestures that express the world of feelings and sensations in ways that words cannot. The Romantic composer Gustav Mahler drove home the point when he said: "If a composer could say what he had to say in words, he would not bother trying to say it in music."

On a basic level, music lessons are not required to understand the language of music; we have been passively assimilating it since birth, each of us forming our musical template. We intuit, for example, that music that gets faster and rises in pitch communicates growing excitement, because we have heard these gestures frequently, as in "chase scenes" in films and on TV. Another piece might sound like a funeral march. But why? Because the composer is communicating this to us by using a slow *tempo*, low *range,* regular *beat*, and *minor key*. Understanding musical terms such as these will allow us to simplify complex issues of perception and emotion, and thereby penetrate to the heart of the seemingly mysterious nature of music.



Where and How to Listen

All of the music discussed in this book is available streaming in MindTap and for downloading via a special access card packaged with each new book. For each piece an Active Listening Guide can be found in MindTap that will lead

you second by second, minute by minute through the work. Finally, a Listening Exercise there will test and reinforce what you have learned. You can play all this music—more than seventy pieces—on your computer or tablet, taking it with you wherever you go.

That's the good news. The bad news is that with ease of accessibility and mobility comes a decline in audio quality. The quality of sound available from MP3 and M4A formats is not as good as when the digital information was placed on and played from a CD; it has been compressed and many small details eliminated. Similarly, the means of projection is less good on a computer than back in the day when quality audio was heard on large, stereophonic speakers. Consequently, when listening from a device such as a computer or tablet, separate plug-in speakers or quality headphones are a necessity. They will greatly enhance your enjoyment—and improve your performance on the Listening Exercises.

Ironically, having much great music at our fingertips has created a problem: organization. With hundreds of pop and classical pieces on a device, separate categories are a necessity. Create playlists by musical genre, and be sure to have at least one for classical music, arranging the music by composer. But be careful! Most of the classical pieces that you will buy, despite what iTunes says, will not be "songs." Songs have lyrics, and a great deal of classical music, as mentioned, is purely instrumental: instrumental symphonies, sonatas, concertos, and the like.

Finally, performances of all the pieces discussed in this book can be found on YouTube. Watching the performers of a symphony orchestra offers an advantage: the listener gains familiarity with the sounds of the various instruments by associating a particular sound with a visual image. Visual listening also humanizes the experience; the viewer can witness the performer struggle with and (usually) overcome seemingly impossible technical challenges. The skill of the performers on YouTube varies enormously, from rank amateur to gifted professional. For the classical repertoire, search out big-name artists (Luciano Pavarotti and Renée Fleming among them) and top-of-the-line orchestras (the New York Philharmonic or the Chicago Symphony Orchestra, for example).

Live in Concert

Pop megastars now make more money from live concerts than they do from recording royalties, and so, too, with classical musicians. Indeed, for classical musicians and listeners alike, there is nothing better than a live performance. First, there is the joy of witnessing an artist at work, delivering his or her craft with expression and stunning precision. Second and more important, the sound will be magnificent because it is pure, usually acoustical music.

Compared to pop or rock concerts, however, performances of classical music (Figures 1.4 and 1.5) can be rather staid affairs. For one thing, people dress "up," not "down." For another, throughout the event the classical audience sits quietly, saying nothing to friends or to the performers on stage. No one sways, dances, or sings along to the music. Only at the end of each composition does the audience express itself, clapping respectfully.

AP Photo/Mark Humphrey

FIGURE 1.5
Schermerhorn Symphony Center, Nashville, Tennessee. Constructed between 2003 and 2006 at a cost of $123 million, the 2,000-seat auditorium is home to the Nashville Symphony as well as concerts of pop, cabaret, choral, jazz, and blues music. If that isn't enough for music lovers visiting Nashville, right across the street is the Country Music Hall of Fame. <

But classical concerts weren't always so formal. In fact, they were at one time more like professional wrestling matches. In the eighteenth century, for example, the audience talked during performances and yelled words of encouragement to the players. People clapped at the end of each movement of a symphony and often in the middle of the movement as well. After an exceptionally pleasing performance, listeners would demand that the piece be repeated immediately in an **encore.** If, on the other hand, the audience didn't like what it heard, it might express its displeasure by throwing fruit and other debris at the stage. Our modern, more dignified classical concert was a creation of the nineteenth century, when musical compositions came to be considered works of high art worthy of reverential silence.

Writing a Concert Report

Many instructors using this book in for-credit courses will require students to attend and report on one or more live concerts, be it of classical music, pop, jazz, or world music. To help students with this assignment, your author has prepared "Insider's Guide to Writing a Concert Report." In this guide, you will learn how to prepare for the concert (by listening in advance at YouTube or Spotify and reading online at Oxford Music Online, to which most colleges have a subscription). You will also learn what to write about and what not to write about. Whatever type of concert you attend, focus on the music, not on the life of the composer or the dress and hairdo of the performer. Perhaps most important, show your instructor that you have learned something; incorporate in your report the musical vocabulary and concepts that he or she has developed in class, and to which you have been exposed in this book.

MindTap

READ . . . "Insider's Guide to Writing a Concert Report" online.

Getty—$75 swap rate wanted

FIGURE 1.6
Rihanna at the 2013 American Music Awards at the Nokia Theatre in Los Angeles, November 24, 2013.∧

Getting Started: No Previous Experience Required

"I'm tone deaf, I can't sing, and I'm no good at dancing." Most likely this isn't true of you. What *is* true is that some people have remarkable memories for sounds, whether musical or linguistic. Mozart, who had perfect pitch, could hear a piece just once and reconstruct several minutes of it verbatim. But you don't need to be a Mozart to enjoy classical music. In fact, you likely know and enjoy a great deal of classical music already. A Puccini aria ("O, mio babbino caro") sounds prominently in the best-selling video game *Grand Theft Auto*, no doubt for ironic effect. The seductive "Habanera" from Bizet's opera *Carmen* (see Chapter 13) underscores the characters' secret intentions in an early episode of *Gossip Girl*. And Mozart is used to promote Nike basketball shoes and Bookings.com, just as Bach is used to advertise Grey Poupon mustard. Resting beneath the surface, classical music quietly plays on our psyche.

MindTap

LISTEN TO . . . a podcast about learning how to listen, online.

MindTap

WATCH . . . a YouTube video of Rihanna singing "Take a Bow" online. Compare with Renée Fleming singing "O, mio babbino caro."

Take the Classical Music Challenge

To test the capacity of classical music to move you, try a simple comparison: Rihanna or Renée. Watch a YouTube video of Rihanna (Figure 1.6) singing "Take a Bow," from her album *Girl Gone Bad* (2008), followed by a recent clip of soprano Renée Fleming (Figure 1.7) singing Puccini's aria "O, mio babbino caro." How much of the effect of these performances is due to beat, electronic enhancements, orchestral sound, visual effects, vocal training, and lyrics? Which composer and which singer most deserves to "take a bow"? Or listen to Coldplay's latest hit next to a rendition of Richard Wagner's "Ride of the Valkyries" (see Chapter 13), comparing the sound of a rock band with that of a symphony orchestra. Which piece gives you chills, and which one just leaves you cold? Were you moved by the classical clips?

Two Classical Favorites

If you weren't moved by the preceding experiment, try listening to two other famous moments in the history of classical music. The first is the beginning of Ludwig van Beethoven's Symphony No. 5 (see Listening Cue), perhaps the best-known moment in all of classical music. Its "short-short-short-long" (SSSL) gesture (duh-duh-duh-DUHHH) is as much an icon of Western culture as the "To be, or not to be" soliloquy in Shakespeare's *Hamlet*. Beethoven (see Chapter 10 for his biography) wrote this symphony in 1808 when he was thirty-seven and had become almost totally deaf. (Like most great musicians, the nearly deaf Beethoven could hear with an "inner ear"—he could create and rework melodies in his head without relying on external sound.) Beethoven's **symphony**—an instrumental genre for orchestra—is actually a composite of four separate instrumental pieces, each called a **movement**. He began the

Landov

FIGURE 1.7
Renée Fleming arrives for opening night at The Metropolitan Opera House at Lincoln Center in New York on September 21, 2009. More recently, she led the singing of "The Star-Spangled Banner" at 2014's Super Bowl XLVIII. Needless to say, she hit the high notes with ease.<

first with a musical **motive,** a short, distinctive musical figure that can stand by itself. Indeed, his now-famous SSSL motive is the musical equivalent of a sucker punch. It comes out of nowhere and hits hard. Thereafter we regain our equilibrium, as Beethoven takes us on an emotionally wrenching, thirty-minute, four-movement symphonic journey dominated by this four-note motive.

Listening Cue

Ludwig van Beethoven, Symphony No. 5 in C minor (1808) Download 1

First movement, *Allegro con brio* (fast with gusto)

WHAT TO LISTEN FOR: The ever-changing appearance of the four-note motive as the force of the music waxes and wanes

MindTap **READ . . .** a detailed Listening Guide of this selection online.

MindTap **LISTEN TO . . .** this selection streaming online.

MindTap **WATCH . . .** an Active Listening Guide of this selection online.

Finally, for the grandest of all sounds, popular or classical, we turn to the beginning of an orchestral work by Richard Strauss, *Also sprach Zarathustra* (*Thus Spoke Zarathustra*). The German title sounds intimidating, but the idea is very simple. Here Strauss attempts to re-create in music the power of the rising sun by using all the instruments of a huge symphony orchestra. So impressive is this passage that it has been borrowed for use in countless radio and TV commercials (to sell digital TV and phone delivery services, insurance, and storm windows, among other things) where the aim is to astound you, the consumer, with the power, durability, and brilliance of the product. In contrast to Beethoven's composition, Strauss's piece isn't a symphony in four movements, but rather a one-movement work for orchestra called a **tone poem** (see Chapter 12). If you think classical music is for wimps, think again!

Listening Cue

Richard Strauss, *Also sprach Zarathustra* (1896) Download 2

One-movement tone poem

WHAT TO LISTEN FOR: A gradual transition from the nothingness of murky darkness, to shafts of light (trumpets), and finally to the incandescent power of the full symphony orchestra

(continued)

MindTap **READ . . .** a detailed Listening Guide of this selection online.

MindTap **LISTEN TO . . .** this selection streaming online.

MindTap **WATCH . . .** an Active Listening Guide of this selection online.

MindTap **DO . . .** Listening Exercise 1.1, Musical Beginnings, online.

Join us on Facebook at **Listening to Music with Craig Wright**

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PRACTICE . . .

your understanding of this chapter's concepts by working once more with the chapter's Active Listening Guides online.

DO . . .

online multiple-choice and critical thinking quizzes that your instructor may assign for a grade.

chapter TWO

Rhythm, Melody, and Harmony

MindTap **START** ... experiencing this chapter's topics with an online video activity.

LEARNING OBJECTIVES

After studying the material in this chapter, you should be able to:

1. Outline the basics of the first of the fundamental elements of music: rhythm.
2. Distinguish different levels of rhythmic activity in different pieces of music.
3. Recognize the contour of different melodies.
4. Differentiate major from minor.
5. Identify consonance, dissonance, and cadences in general.
6. Recognize chord changes in harmony.

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READ . . . the complete chapter text in a rich interactive eBook.

Music is an unusual art. You can't see it or touch it. But it has matter—compressed air molecules yielding sounding pitches—and these pitches are organized in three ways: as rhythms, as melodies, and as harmonies. Rhythm, melody, and harmony, then, are the three primary elements—the *what*—of music.

Rhythm

MindTap

WATCH . . . Michael Jackson respond to and redefine the beat in a YouTube video online. Compare with screen actor Christopher Walken in action.

Humans are rhythmic beings. Our heartbeat, brain waves, and breathing are all rhythmic. How fundamental is rhythm? Remember that recognition of the beat, as mentioned in Chapter 1, is mainly a function of the cerebellum, that part of the brain to develop first in human evolution. Consider, too, that we heard the beat of our mother's heart before we were aware of any sort of melody or tune. Consequently, our brain reacts powerfully and intuitively to a regularly recurring, strongly articulated "beat" and a catchy, repeating rhythmic pattern. We have a direct, even physical, response to rhythm, especially as expressed in pop music. We move, exercise, and dance to its pulse (Figure 2.1).

The basic pulse of music is the **beat**, a regularly recurring sound that divides the passing of time into equal units. **Tempo** is the speed at which the beat sounds. Some tempos are fast (*allegro)* or very fast (*presto*) and some slow (*lento*) or very slow (*grave*). Sometimes the tempo speeds up, producing an accelerando, and sometimes it slows down, creating a **ritard**. But oddly, whether they proceed rapidly or slowly, undifferentiated streams of anything aren't appealing to us humans. We organize passing time into seconds, minutes, hours, days, years, and centuries. We subconsciously group the clicking of a seatbelt warning chime into units of two or three "dings." So, too, with the undifferentiated stream of musical beats: our psyche demands that we organize them into groups, each containing two, three, four, or more pulses. The first beat in each unit is called the **downbeat**, and it gets the greatest **accent**, or stress. Organizing beats into groups produces **meter** in music, just as arranging words in a consistent pattern of emphasis produces meter in poetry. In music, each group of beats is called a **measure** (or bar). Although there are several different kinds of meter in music, about 90 percent of the music we hear falls into either a duple or a triple pattern. We mentally count "ONE-two" or "ONE-two-three."

Getty

FIGURE 2.1
When we listen to a song with a strong beat, auditory neurons stimulate motor neurons, causing us to dance. In the realm of pop song and dance, perhaps no one was better at this immediate connection between the auditory and the motor than Michael Jackson. Although he died in 2009, the estate of the "King of Pop" still generates about $150 million annually from the sale of music and merchandise. <

There's a quadruple pattern as well, but in most ways our ear perceives this as simply a double duple.

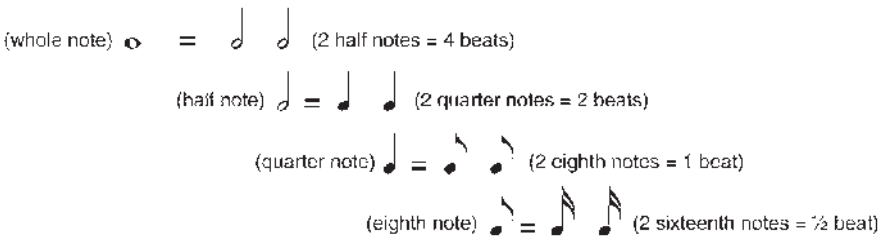
Rhythmic Notation

About eight hundred years ago—in thirteenth-century Paris to be precise—musicians began to devise a system to notate the beats, meters, and rhythms of their music. They created symbols that stood for long or longer, and short or shorter, durations. Over the centuries these signs developed into the notational symbols that we use today, as seen in Example 2.1.

MindTap

LISTEN TO . . . a podcast about the basics of hearing meter, online.

Example 2.1 > NOTATIONAL SYMBOLS FOR RHYTHMIC DURATIONS



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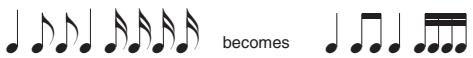
LISTEN TO . . . a podcast about tempo online.

To help the performer keep the beat when playing, the smaller note values—specifically, those with flags on the vertical stem—are beamed, or joined together, in groups of two or four (Example 2.2).

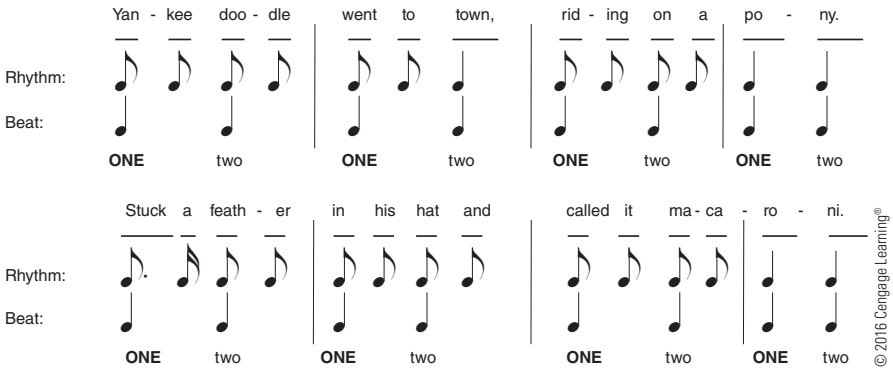
Example 2.2 > SHORT DURATIONS GROUPED



Today the symbol that usually represents, or "carries," one beat in music is the quarter note (♩). Normally, it moves along roughly at the rate of the average person's heartbeat. As you might suspect from its name, the quarter note is shorter in length than the half and the whole notes, but longer than the eighth and the sixteenth notes. There are also signs, called **rests**, to indicate the absence of sound for different lengths of time.

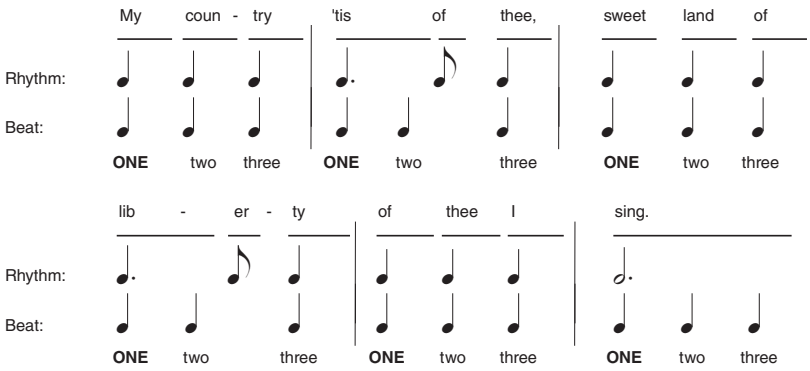
If music proceeded only with beats organized into meter, it would be dull indeed—like the endless sound of a bass drum (ONE-two, ONE-two, or ONE-two-three, ONE-two-three). In fact, what we hear in music by way of duration is **rhythm**, the division of time into compelling patterns of long and short sounds. Rhythm emerges from, and rests upon, the durational grid set by the beat and the meter. In fact, no one actually plays just the beat, except perhaps a drummer; rather, we hear a mass of musical rhythms, and our brain extracts the beat and the meter from them. To see how this works, let's look at a patriotic song from the time of the American Revolution in duple ($\frac{2}{4}$) meter (Example 2.3).

Example 2.3 > BEAT AND RHYTHM IN DUPLE METER



Example 2.4 shows another patriotic song, "America" (first known in England and Canada as "God Save the King"—or "Queen") arranged the same way. It is in triple ($\frac{3}{4}$) meter.

Example 2.4 > BEAT AND RHYTHM IN TRIPLE METER



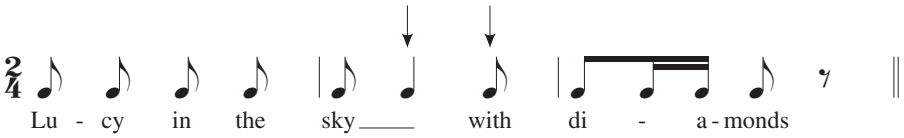
The numbers $\frac{2}{4}$ and $\frac{3}{4}$ aren't fractions, but rather **meter signatures** (also called **time signatures**). A meter signature tells the performer how the beats of the music are grouped to form a meter. The bottom number of the signature (usually a 4 representing the quarter note) indicates what note value receives the beat, and the top number tells how many beats there are in each measure. The small vertical lines in the preceding examples are called **bar lines**; they help performers keep the music of one measure, or bar, separate from the next and thus how to keep the beat. Although all this terminology of music theory might seem intimidating, the important question is this: Can you hear the downbeat and then recognize a duple meter (as in a ONE-two, ONE-two march) contrasted with a triple meter (as in a ONE-two-three, ONE-two-three waltz)? If so, you're well on your way to grasping the rhythmic element of music.

Surprisingly, much Western classical music *doesn't* have a strong rhythmic component; rather, the beauty of the music rests in the melody and harmony. Popular music, on the other hand, is often irresistible, not only because of a strong beat, but also because of a catchy rhythm, one created by syncopation.

In most music, the accent, or musical emphasis, falls directly on the beat, with the downbeat getting the greatest emphasis of all. **Syncopation**, however, places the accent either on a weak beat or between beats—literally, it's "off beat." This unexpected, offbeat moment in the music creates the catchy "hook" of the tune, the part that pops up when you least expect it and sticks in your head.

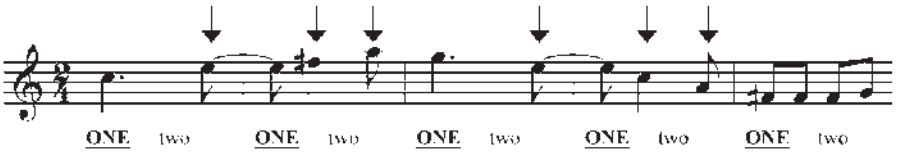
A short example of syncopation can be heard in bar 2 of the chorus of The Beatles' song "Lucy in the Sky with Diamonds." The arrows in Example 2.5 show the moments of syncopation.

Example 2.5 > **SIMPLE SYNCOPATION**



A far more complex example of syncopation can be found in the popular theme song to *The Simpsons.*

Example 2.6 > **COMPLEX SYNCOPATION**



If you're a fan of jazz, Afro-Cuban music, or Latin music, you may be responding to the syncopation that gives these styles their bounce or lift.

Listening Cue

The Basics of Rhythm

WHAT TO LISTEN FOR: Practice recognizing different levels of rhythmic activity in different pieces of music

MindTap™ **WATCH . . .** an Active Listening Guide of this demonstration online.

MindTap™ **DO . . .** Listening Exercise 2.1, Hearing Meters, online.

Melody

A **melody**, simply put, is the tune. It's the part we sing along with, the part we like, the part we're willing to listen to again and again. Amazon and iTunes offer album downloads of "Fifty All-Time Favorite Melodies"—yet there are no similar collections

devoted to rhythms or harmonies. Needless to say, Beyoncé, Adele, Taylor Swift, Andrea Bocelli, and Renée Fleming sing the melody. They, and it, are the stars.

Every melody is composed of a succession of pitches, usually energized by a rhythm. **Pitch** is the relative position, high or low, of a musical sound. We traditionally assign letter names (A, B, C, and so on) to identify specific pitches. When an instrument produces a musical tone, it sets into motion vibrating sound waves that travel through the air to reach the listener's ears. A faster vibration will produce a higher pitch, and a slower one a lower pitch. Pressing the lowest key on the piano sets a string vibrating back and forth 27 cycles (times) per second, while the highest key does the same at a dizzying 4,186 times per second. Low pitches lumber along and sound "fuzzy," whereas high ones are clear but fleeting. A low note can convey sadness, a high one excitement (we don't usually hear a high-pitched piccolo as sad, for example). In Western music, melodies move along from one discrete pitch to another. In other musical cultures—Chinese, for example—melody often "slides," and much of its beauty resides *between* the pitches.

Have you ever noticed, when singing a succession of tones up or down, that the melody reaches a tone that sounds like a duplication of an earlier pitch, but higher or lower? That duplicating pitch is called an **octave**, for reasons that will become clear shortly, and it's usually the largest distance between notes that we encounter in a melody. When a melody leaps up an octave, our spirits soar.

Pitches an octave apart sound similar because the frequency of vibration of the higher pitch is precisely twice that of the lower. The ancient Greeks, from whom much of our Western civilization derives, knew of the octave and its 2:1 ratio, and they divided it into seven pitches using other ratios. Their seven pitches plus the eighth (the octave) yield the white keys of the modern keyboard. When early musicians reached the repeating pitch, the octave, they began to repeat the A, B, C letter names for the pitches. Eventually, five additional notes were inserted. Notated with symbols called **flats** (♭) and **sharps** (♯), they correspond to the black keys of the keyboard (Figure 2.2).

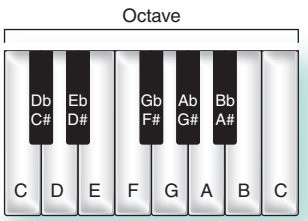


FIGURE 2.2
An octave∧

When a tune moves from one pitch to another, it moves across a melodic **interval**. Some of these distances are small; others, such as the octave, are large. Melodies with large leaps are usually difficult to sing, whereas those with repeated or neighboring pitches are easier. Example 2.7 shows the beginning of a well-known melody based on a large interval; both phrases of the tune begin with an ascending leap of an octave. To hear the octave, try singing "Take me . . ." to yourself.

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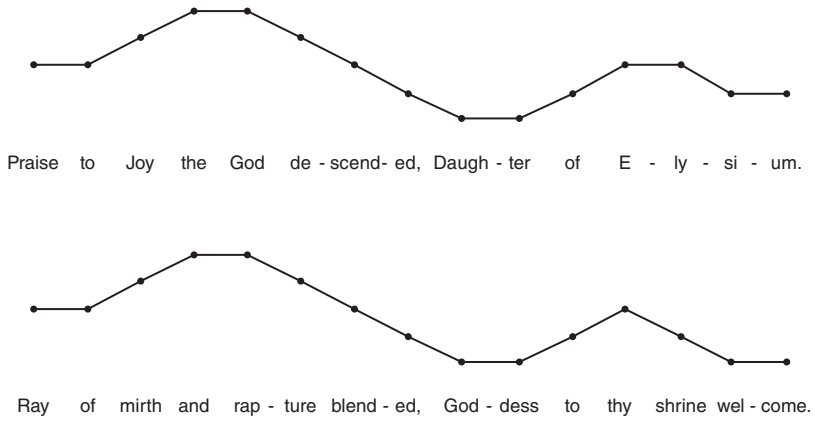
LISTEN TO . . . Example 2.7 online.

Example 2.7 > **AN OCTAVE IN "TAKE ME OUT TO THE BALL GAME"**

Now, Example 2.8 shows the opening to Beethoven's famous *Ode to Joy* from his Symphony No. 9 (1823), in which almost all of the pitches are adjacent. It is known and beloved around the world because it is tuneful and singable. Try

it—you'll recognize the melody. If you're not comfortable with the words, try singing the syllable "la" to each pitch.

Example 2.8 > **ADJACENT PITCHES IN *ODE TO JOY***



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LISTEN TO . . . Example 2.8 online.

"Take Me out to the Ball Game" and Beethoven's *Ode to Joy* are very different in both intervallic structure and mood. Indeed, using all possible combinations of rhythms and pitches, an almost endless number of melodies can be created.

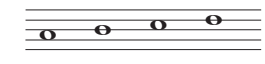
MindTap

DO . . . Listening Exercise 2.2, Hearing Melodies, online.

Melodic Notation

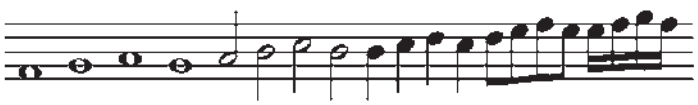
The type of notation used above for "Take Me out to the Ball Game" and *Ode to Joy* is useful if we need only to be reminded of how a melody goes, but it isn't precise enough to allow us to sing it if we don't already know it. When the melody goes up, how *far* up does it go? Around the year 1000, even before the advent of rhythmic notation, church musicians added precision to pitch notation in the West. They started to write black and, later, white circles on horizontal lines and spaces so that the exact distance between these notes could be judged immediately. This gridwork of lines and spaces came to be called a **staff**. The higher on the staff a note is placed, the higher its pitch (Example 2.9).

Example 2.9 > **PITCHES ON A STAFF**

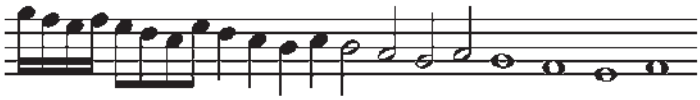


Over the course of centuries, the note heads also came to imply different durations, by means of stems and flags. Example 2.10A shows low, slow pitches that become gradually higher and faster, while Example 2.10B shows the reverse.

Example 2.10A > **PITCHES BECOMING HIGHER AND FASTER**



Example 2.10B > **PITCHES BECOMING LOWER AND SLOWER**



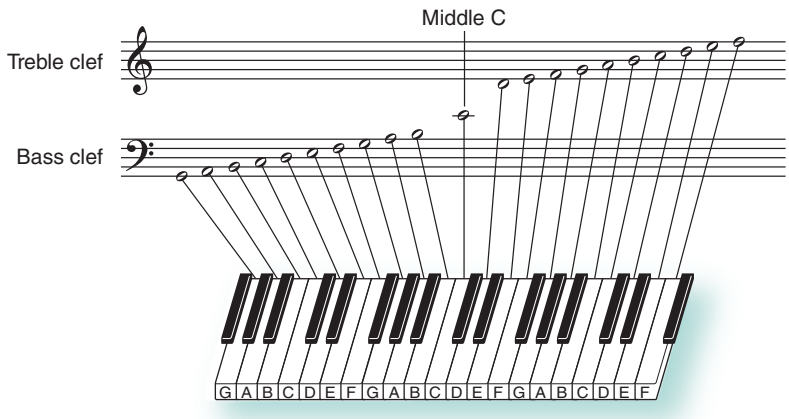
In notated music, the staff is always provided with a **clef** sign to show the range of pitch in which the melody is to be played or sung (Example 2.11). One clef, called the **treble clef**, designates the upper range and is appropriate for high instruments such as the trumpet and the violin, or a woman's voice. A second clef, called the **bass clef**, covers the lower range and is used for lower instruments such as the tuba and the cello, or a man's voice.

Example 2.11 > **CLEFS**

For a single vocal part or a single instrument, a melody could easily be placed on either of these two clefs. But for two-handed keyboard music with greater range, both clefs are used, one on top of the other (Figure 2.3). The performer looks at this combination of clefs, called the **great staff** (also **grand staff**), and relates the notes to the keys beneath the fingers. The two clefs join at middle C (the middlemost C key on the piano).

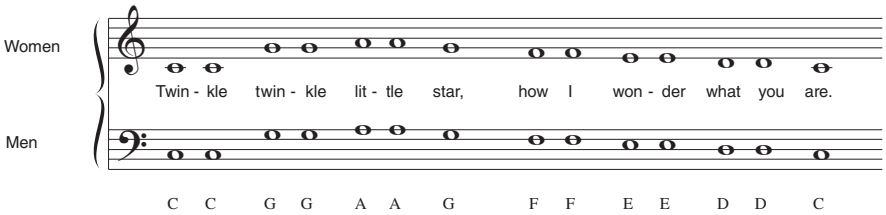
Each musical pitch can be represented by a particular line or space on the great staff as well as by a letter name (like C). We use only seven letter names (in ascending order A, B, C, D, E, F, and G) because, as we've seen, melodies were made up of only seven pitches within each octave. As a melody reaches and extends beyond the range of a single octave, the series of letter names is

FIGURE 2.3
The great staff >



repeated (see Example 2.12, bottom). The note above G, then, is an A, which lies exactly one octave above the previous A. Here "Twinkle, Twinkle, Little Star" is notated on the great staff with the pitches doubled at the octave, as might happen when male and female voices sing together, the women an octave higher than the men.

Example 2.12 > **"TWINKLE, TWINKLE, LITTLE STAR"**



Scales, Modes, Tonality, and Key

When we listen to music, our brain hears a succession of pitches spaced out on a grid. That grid is a **scale**, a fixed pattern of tones within the octave that ascends and descends. Think of the scale as a ladder with eight rungs, or steps, between the two fixed points, low and high, formed by the octave. You can go up or down the ladder, but not all the steps are an equal distance apart. Five are a full step apart, but two are only a half step. For example, the distance between A and B is a full step, but between B and C it's only a half step—that's just the way the ancient Greeks built their musical ladder, an odd arrangement that Western musical culture retains to the present day.

The position of the two half steps functions something like an aural GPS, providing both a general and an exact location. Specifically, it tells us what kind of scale is in play and where we are within that scale. Since the seventeenth century, almost all Western melodies have been written following one of two seven-note scale patterns: the major one and the minor one. The **major scale** follows a seven-pitch pattern moving upward 1–1–½–1–1–1–½. The **minor scale** goes 1–½–1–1–½–1–1. Once the eighth pitch (octave) is reached, the pattern can start over again.

The choice of the scale (whether major or minor)—and our ability to hear the difference—is crucial to our enjoyment of music. To Western ears, melodies based on major scales sound bright, cheery, and optimistic, whereas minor ones come across as dark, somber, and even sinister. Go back to the end of Chapter 1 and compare the bright, heroic sound of Richard Strauss's *Also sprach Zarathustra*, built on a major scale, with the almost-threatening sound of Beethoven's Symphony No. 5, written in a minor one. Switching from major to minor, or from minor to major, is called a change of **mode**. Changing the mode affects the mood of the music. To prove the point, listen to the familiar tune in Example 2.13. The mode has been changed from major to minor by inserting a flat into the scale near the last pitch (C), thereby switching from the beginning of the major scale (1–1–½) to that of the minor (1–½–1). Notice how this alteration sucks all the happiness, joy, and sunshine out of this formerly major melody.

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LISTEN TO . . . a podcast about hearing major and minor, online.

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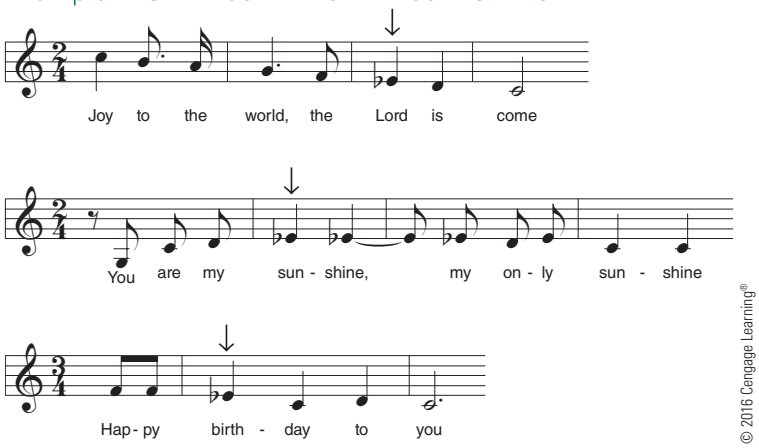
LISTEN TO . . . Example 2.13 online.

Example 2.13 > **MAJOR MELODY BECOMES MINOR**

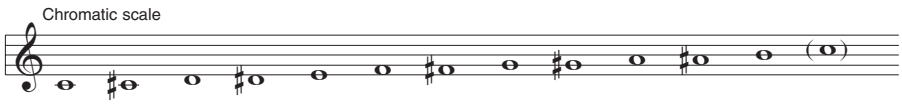


MindTap

DO . . . Listening Exercise 2.3, Hearing Major and Minor, online.

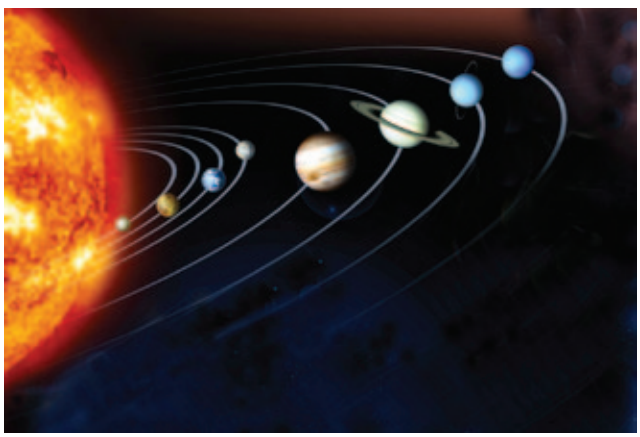
Finally, a third, special scale sometimes sounds in music: a **chromatic scale** (Example 2.14), which makes use of all twelve pitches, equally divided, within the octave.

Example 2.14 > **CHROMATIC SCALE**



Chromatic (from the Greek *chroma*, "color") is a good word for this pattern because the additional five pitches do indeed add color to the music. Unlike the major and minor scales, the chromatic scale is not employed for a complete melody, but only for a moment of twisting intensity. You can hear it in the first line of the song "White Christmas."

When listening to any music, we take pleasure, consciously or not, in knowing where we are. Again, the steps of the scale play a crucial role, orienting us during the listening experience. Virtually all the melodies that Western listeners have heard since birth have been in major or minor, so these two patterns are deeply ingrained. Intuitively, our brain recognizes the mode and hears one pitch as central and the others as gravitating around it. That central, or home, pitch is called the tonic. The **tonic** is the first of the seven pitches of the scale and, consequently, the eighth and last as well. Melodies almost always end on the tonic, as can be seen in the familiar tunes given in Example 2.13, all of which happen to end on the pitch C. The tonic provides a point of focus and repose, a place to which you want to return (Figure 2.4).



Courtesy NASA/JPL

FIGURE 2.4
Planets rotate around and are pulled toward the sun, just as outlying pitches are pulled toward the tonic pitch. v

The organization of music around a central pitch, the tonic, is called **tonality**. We say that such and such a piece is written in the tonality, and similarly the **key**, of C or of A (musicians use

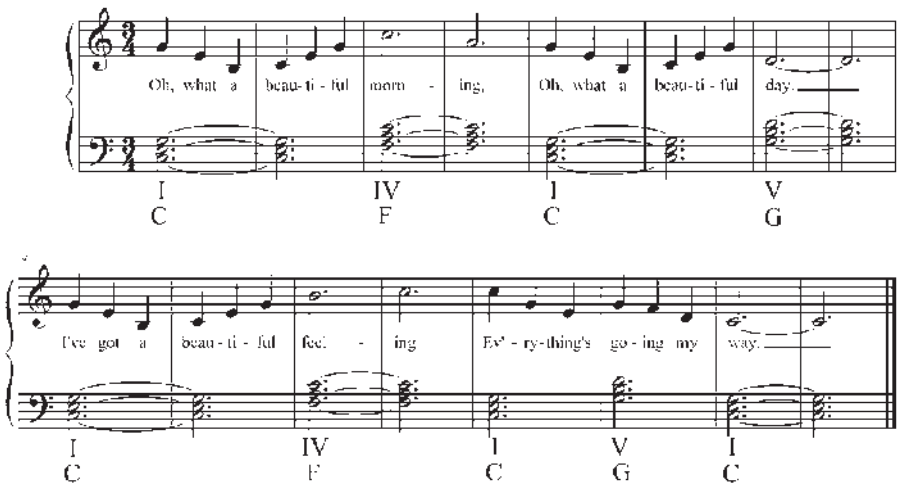
the terms *tonality* and *key* almost interchangeably). Composers—classical composers in particular—like to move temporarily from the home scale and home tonality to another, just for the sake of variety. Such a change is called a **modulation**. In any musical journey, we enjoy traveling away from our tonic "home," but we experience even greater satisfaction arriving back home. Again, almost all music, pop as well as classical, ends on the tonic pitch.

Finally, the greatest musical mystery of all: What makes a good melody? Why are some ("Greensleeves" and Beethoven's *Ode to Joy*) timeless and others immediately forgettable? Although there is no certain recipe for composing a great tune, consider the following: most have an overall arch (shape), are composed of symmetrical phrases (subsections), progress to a climax, and end with a final affirmation of the home pitch (the tonic). Beyond this, it's anyone's guess!

Harmony

Perhaps because of the long history of keyboard instruments in the West—the uniquely Western piano and organ can play several pitches at once—Western music is exceptional among musical cultures in its emphasis on harmony. Simply said, **harmony** is the sound of one or more pitches that support and enhance a melody. Almost always, the pitches of the melody are higher than those of the accompanying harmony. At the piano, for example, our "higher" right hand usually plays the melody and our left the harmony (see Example 2.15). Although a melody can stand by itself, an accompanying harmony adds a richness to it, just as the dimension of depth adds a rich backdrop to a painting.

Example 2.15 > **HARMONY SUPPORTING A MELODY**



By definition, every harmony must be harmonious (Figure 2.5). From this truism, we can see that there are two meanings of harmony. First, *harmony* means "a general sense that things work or sound well together"; second, *harmony* specifically denotes an exact musical accompaniment, as when we say "the harmony changes here to another chord."

© Lauros/Giraudon/The Bridgeman Art Library

FIGURE 2.5
Claude Monet, *Waterlily Pond: Pink Harmony* (1900). Monet's painting of this famous bridge at Giverny, France, reveals not only the harmonious qualities of nature but also the painter's ability to harmonize various colors into a blend of pastels. ∧

Building Harmony with Chords

Chords are the building blocks of harmony. A **chord** is simply a group of two or more pitches that sound at the same time. The basic chord in Western music is the **triad**, so called because we construct it using three pitches arranged in a very specific way. Let's start with a C major scale beginning with the tonic note C. To form a triad, we take one, skip one, and take one—in other words, we select the pitches C, E, G (skipping D and F) and sound them together (Figure 2.6).

Triads can be constructed in a similar fashion on every pitch of the scale. But given the irregularity of the scale (not all steps are the same distance apart), some triads will be major and others minor. A major triad has its middle pitch a half step closer to its top pitch than to its bottom one; conversely, a minor triad has its middle pitch a half step closer to its bottom pitch than its top one. While this may seem complicated, the difference between a major and a minor triad is immediately audible. Major triads sound bright; minor ones dark. Example 2.16 shows triads built on every note of the C major scale. Each is assigned a Roman numeral to indicate on which pitch of the scale it is built. These triads provide all the basic chords necessary to harmonize a melody in C major.

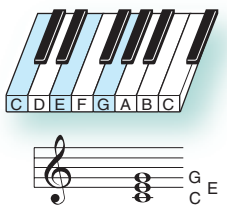


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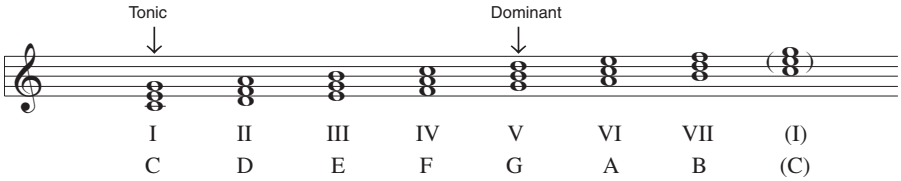
FIGURE 2.6
A triad ∧

Example 2.16 > **TRIADS OF THE C MAJOR SCALE**



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LISTEN TO . . . Example 2.16 online.

MindTap™

WATCH . . . YouTube online to hear how thirty-six pop songs have been constructed on one and the same repeating harmony.

But why do we need more than one chord to harmonize a melody? Why is it necessary to change chords? The answer lies in the fact that the pitches of a melody continually change, sometimes moving through all the notes of a scale. But a single triadic chord can be harmonious, or consonant, only with the three notes of the scale that it contains. In order to keep the harmony consonant with the melody, then, chords must continually change.

As chords change in a purposeful fashion beneath a melody, they create what is called a **chord progression.** Chords, other than the tonic, are unstable. They want to reach the tonic, "pulling" each other along. One gives way to the next, all gravitating toward the powerful tonic triad. Along the path of the progression, a surprising, unexpected chord might sound, and this can cause a sudden, powerful emotional response. The end of a chord progression is called a **cadence.** Usually at a cadence, a triad built on degree V of the scale, called the **dominant** triad, will yield to the tonic triad. This is a powerful harmonic move, one conveying a strong feeling of conclusion, as if to say, "THE END."

To sum up: In Western music, melodies are supported by an enriching, chordal accompaniment—a harmony. The harmony gains force and enriches

the melody as the chords move in a purposeful progression. It is necessary to change chords in a harmony so as to avoid unwanted dissonance.

Consonance and Dissonance

What is art? Art is a collateral life that runs outside of ourselves. As we engage the external work of art, we experience another life of the emotions within ourselves. And just as emotional life is full of consonance and dissonance, so, too, with music.

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LISTEN TO . . . a podcast about consonance and dissonance, online.

You've undoubtedly noticed, when pressing the keys of the piano at one time or another, that some combinations of keys produce a harsh, jarring sound, whereas others are pleasing and harmonious. The former chords are characterized by **dissonance** (pitches sounding momentarily disagreeable and unstable) and the latter by **consonance** (pitches sounding agreeable and stable). Generally speaking, chords that contain pitches that are very close to one another, just a half or a whole step apart (C joined to D, for example), sound dissonant. On the other hand, chords built with the somewhat larger interval of a third (C joined to E) are consonant, as is the case for each triad in Example 2.16. But culture, and even personal taste, plays a role in dissonance perception, too; what might be a hot, spicy, distasteful dissonance to one listener might be a delight to another. While some, for example, find the loud, aggressive distortion of heavy metal bands such as Metallica intolerable, others thrive on it.

But whatever the music, dissonance adds a feeling of tension and anxiety, while consonance produces a sense of calmness and stability (see Listening Cue). Dissonant chords are unstable, and thus they seek out—want to move to—consonant resolutions. The continual flux between dissonant and consonant chords gives Western music a sense of drama, as a piece moves between moments of tension to longed-for resolution. We humans try not to end the day with an unresolved argument; nor do we end our music with unresolved dissonance.

Listening Cue

Consonance and Dissonance; Cadences

WHAT TO LISTEN FOR: A demonstration of consonance and dissonance, as well as chord progressions

MindTap **WATCH . . .** an Active Listening Guide of this demonstration online.

Hearing the Harmony

If you were asked to listen to a new song by your favorite pop artist and sing it back, you'd undoubtedly sing back the melody. The tuneful melody is invariably the line with the highest-sounding pitches. Thus, we've become trained, consciously or unconsciously, to focus on the top part of any musical texture. To hear and appreciate harmony, however, we've got to "get down" with the bass. Chords are

usually built on the bass note, and a change in the bass from one pitch to another may signal a change of chord. The bass is the foundation of the chord and determines where the harmony is going, more so than the higher melody. Some pop artists, such as Paul McCartney and Sting, control both the upper melody and the lower harmony simultaneously. While they sing the tune, they play electric bass, setting the bass pitches for the lead guitar to fill out as accompanying triads.

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LISTEN TO . . . a podcast about chord changes, online.

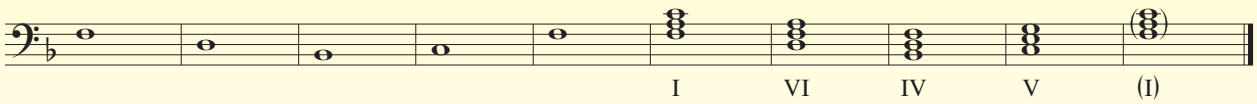
To begin to hear the harmony beneath a melody, let's start with two completely different pieces, one from the world of popular music, the other a well-known classical favorite. First, a bit of soul music called doo-wop. **Doo-wop** emerged in the 1950s as an outgrowth of the gospel hymns sung in African American churches in urban Detroit, Chicago, Philadelphia, and New York. Often doo-wop was improvised **a cappella** (voices only) on the street because it was direct and repetitive—the accompanying singers could easily hear and form a harmony against the melody. And because the lyrics that the accompanying singers sang were often little more than "doo wop, doo wah," the name "doo-wop" stuck to describe these songs. Finally, doo-wop harmony used a short chord progression, most commonly a sequence of triads moving I-VI-IV-V-(I) that repeated over and over again (for these four repeating chords, see Listening Cue). In music any element (rhythm, melody, or harmony) that continually repeats is called an **ostinato** (from the Italian word meaning "obstinate thing"). In the doo-wop song "Duke of Earl," we hear the bass voice lead, not with "doo, doo, doo," but with "Duke, Duke, Duke," setting the foundation for the chords that soon enter in the other voices. The tempo is moderately fast, and each of the four chords lasts for four beats. Every time the harmony sings the word "Earl," the chords change. The I-VI-IV-V-(I) chord progression lasts for about nine seconds and then repeats over and over again. As you listen to this doo-wop classic, sing along with the bass, no matter what your vocal range. Anyone can hear this harmony change.

Listening Cue

Harmony (Chord Changes)

Download 3

Gene Chandler, "Duke of Earl" (1962)



WHAT TO LISTEN FOR: A harmony that repeats as a four-bar ostinato. The bass singer first sets the bass line, and the other singers then add a chordal harmony in support of the melody.

MindTap **READ . . .** a detailed Listening Guide of this selection online.

MindTap **LISTEN TO . . .** this selection streaming online.

MindTap **WATCH . . .** an Active Listening Guide of this selection online.

Finally, for a similar, but slightly more complex, piece from the classical repertoire, we turn to the famous Pachelbel Canon. (See also "Pachelbel and His Canon" in Chapter 5, where the ostinato bass can be seen.) Johann Pachelbel (1653–1706), who lived in Germany and was a mentor to musicians in the Bach family, composed this piece for four musical lines. The top three, here played by violins, are performed as a **canon** (a "round" in which one voice starts out and the others duplicate it exactly, as in "Three Blind Mice"). Below the three-part canon is a harmonic ostinato, this one consisting of eight chords. So popular has Pachelbel's harmony become that it has been "borrowed" by The Beatles ("Let It Be"), U2 ("With or Without You"), and Celine Dion (chorus of "To Love You More")—as well as parodied endlessly.

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WATCH . . . a rant by comedian Rob Paravonian about the excessive popularity of Pachelbel's famous eight-bar harmony, in YouTube online.

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DO . . . Listening Exercise 2.4, Hearing the Bass Line and Harmony, online.

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PRACTICE . . .

your understanding of this chapter's concepts by reviewing the elements of music and working once more with the chapter's Active Listening Guides online.

DO . . .

online multiple-choice and critical thinking quizzes that your instructor may assign for a grade.

Join us on Facebook at **Listening to Music with Craig Wright**

chapter THREE

Color, Texture, and Form

MindTap **START** ... experiencing this chapter's topics with an online video activity.

LEARNING OBJECTIVES

After studying the material in this chapter, you should be able to:

1. Recognize the different voice parts and musical instruments in their families.
2. Distinguish the three primary musical textures.
3. Recognize how musical form is created by the use of statement, repetition, contrast, and variation.

Art Resource

If rhythm, melody, and harmony are the *what* of music, then color, texture, and form are the *how.* These are the surface details of musical sound that catch our attention and evoke an emotional response, as when a brilliant trumpet suddenly shines forth or a silvery flute floats effortlessly on high. Color, texture, and form, then, refer not so much to the musical idea itself, but instead to the way the musical idea is presented.

Musical **dynamics** (louds and softs) also influence our reaction to music. Heroic themes are usually played loudly and mournful ones quietly, for example, so as to create the desired mood and effect. Because Italian musicians once dominated the Western musical world, most of our musical terminology is drawn from that language. Thus, we refer to loud and very loud as ***forte*** (pronounced FOUR-tay) and ***fortissimo***, and soft and softer as ***piano*** and ***pianissimo***. But changes in dynamics need not be sudden and abrupt. They can also be gradual and extend over a long period of time. A gradual increase in the volume of sound is called a **crescendo**, whereas a gradual decrease is called either a **decrescendo** or a **diminuendo**. An impressive crescendo sounds at the beginning of Richard Strauss's *Also sprach Zarathustra* (see second Listening Cue in Chapter 1) as the full orchestra enters and gains momentum. Spectacular moments like these remind us that in music, as in marketing, the medium (here, powerful dynamics and color) can be the message. When heard as background music for a TV commercial, the viewer is led to conclude, "This product *sounds* great!"

Color

Simply stated, **color** in music is the tone quality of any sound produced by a voice or an instrument. **Timbre** (pronounced TAM-ber) is another term for the tone quality of musical sound. We can all hear that a clarinet produces a much different tone quality than does a trombone. Similarly, the voice of pop singer Rihanna has a different timbre than that of opera star Renée Fleming, even when the two produce the same pitch.

The Voice

How many different voices can you recognize? Perhaps as many as a hundred. Each of us has a uniquely constructed set of vocal cords (two folds of mucous membrane within the throat). When we talk or sing, we send air through them, creating vibrations that reach the ear as sounds of a distinctive timbre. We need hear only a few notes of a song to recognize that this is the voice of Bruno, for example, and not that of Bono.

Musical voices are classified by range into four principal parts. The two women's vocal parts are the **soprano** and the **alto**, and the two men's parts the **tenor** and the **bass**. (Men's vocal chords are longer and thicker than women's, and for that reason the sound of the mature male voice is lower.) Midway between the soprano and the alto voice is the **mezzo soprano**, and between the tenor and the bass is the **baritone**. Most male pop singers—John Mayer, Michael Bublé, and Blake Shelton, for instance—are baritones; a few voices, such as

those of Justin Timberlake, Bruno Mars, and the late Michael Jackson are more in the tenor range.

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WATCH . . . the instruments of the symphony orchestra as they sound in Prokofiev's popular musical narrative *Peter and the Wolf.*

Musical Instruments

Have you ever wondered why a flute or violin sounds the way it does—why it has a distinctive timbre? In brief, instruments are constructed in different shapes with different materials of different densities. Even when they sound the same pitch, they emit slightly different vibrations, which our brain perceives as distinctive musical colors. Having heard those distinctive vibrations and *seen* a particular instrument as it creates them, we come to associate a particular sound with a particular instrument.

Musical instruments come in groups, or families—instruments of one general type having the same general shape and made of the same materials. The Western **symphony orchestra** traditionally includes four such groups—the four "food groups" of classical music, so to speak: strings, woodwinds, brasses, and percussion. In addition, there is a fifth group of instruments, the keyboard instruments (piano, organ, and harpsichord), instruments not normally part of the symphony orchestra.

Strings

If you travel to Beijing to hear a traditional Chinese orchestra, most of the instruments (erhu, pipa, and qinqin, for example) will be string instruments. If you attend the Bonnaroo Arts & Music Festival in Manchester, Tennessee, the rock bands there play electric bass and a variety of guitars—all string instruments. Visit the Country Music Hall of Fame in nearby Nashville, Tennessee, and you'll likely hear a fiddle and perhaps a mandolin added to the guitar ensemble. Watch the San Francisco Symphony on stage at Davies Symphony Hall, and you'll notice the majority of its performers playing, again, string instruments. In sum, string instruments, whether plucked or bowed, dominate musical ensembles around the world.

Christian Steiner/Courtesy Brentano String Quartet

FIGURE 3.1
This photo of the American group the Brentano String Quartet shows the relative size of the violin (center), viola (left), and cello (right). Founded in 1992, the group is currently in residence as performers and teachers at Yale University. v

VIOLIN GROUP

The violin group—violins, violas, cellos, and double basses—constitutes the core of the Western symphony orchestra. A large orchestra can easily include as many as a hundred members, at least sixty of whom play one of these four instruments.

The **violin** (Figure 3.1) is chief among the string instruments. It is also the smallest—it has the shortest strings and therefore produces the highest pitch.

Because the tune usually sounds in the highest part of the musical texture, the violin generally plays the melody. In an orchestra violins are usually divided into groups known as firsts and seconds. The seconds play a part slightly lower in pitch and subordinate in function to the firsts.

The **viola** (Figure 3.1 left) is about six inches longer than the violin, and it produces a somewhat lower sound. If the violin is the string counterpart of the soprano voice, then the viola has its parallel in the alto voice. Its tone is darker, richer, and more somber than that of the brilliant violin.

You can easily spot the **cello** (Figure 3.1 right) in the orchestra because the player sits with the instrument placed between his or her legs. The pitch of the cello is well below that of the viola. It can provide a low bass sound as well as a lyrical melody. When played in its middle range by a skilled performer, the cello can produce an indescribably rich, expressive tone.

The **double bass** (Figure 3.2) gives weight and power to the bass line in the orchestra. Because at first it merely doubled the notes of the cello an octave below, it was called the double bass. As you can see, the double bass is the largest, and hence lowest-sounding, of the string instruments. Its job in the orchestra, and even in jazz bands, is to help set a solid base/bass for the musical harmony.

The members of the violin group all generate pitches in the same way: a bow is drawn across a tight string. This produces the familiar penetrating string sound. In addition, a number of other effects can be created by using different playing techniques.

- **Vibrato:** By shaking the left hand as it stops the string, the performer can produce a controlled "wobble" in the pitch. This adds richness to the tone of the string because, in fact, it creates a blend of two or more pitches.
- **Pizzicato:** Instead of bowing the strings, the performer plucks them. With this technique, the resulting sound has a sharp attack, but it dies away quickly.
- **Tremolo:** The performer creates a musical "tremor" by rapidly repeating the same pitch with quick up-and-down strokes of the bow. Tremolo creates a feeling of heightened tension and excitement when played loudly, and a velvety, shimmering backdrop when performed quietly.
- **Trill:** The performer rapidly alternates between two distinctly separate but neighboring pitches. Most instruments, not just the strings, can play trills.

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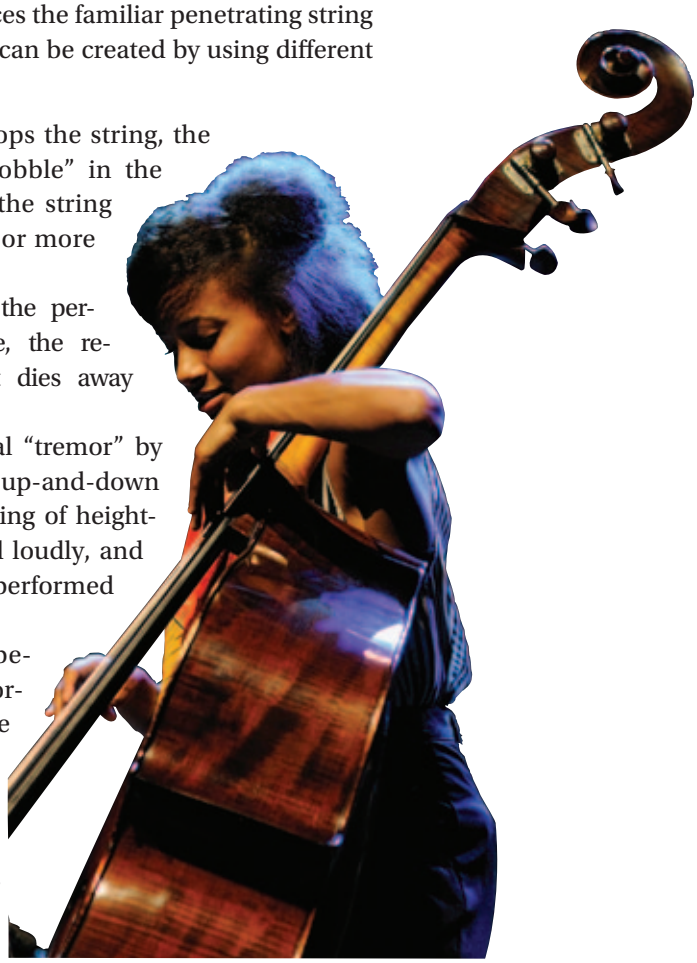
LISTEN TO . . . the violin streaming online.
LISTEN TO . . . the viola streaming online.
LISTEN TO . . . the cello streaming online.
LISTEN TO . . . the double bass streaming online.
LISTEN TO . . . vibrato streaming online.
LISTEN TO . . . pizzicato streaming online.
LISTEN TO . . . tremolo streaming online.
LISTEN TO . . . a trill streaming online.



Christian Bertrand/Shutterstock.com

FIGURE 3.2
Grammy Award–winning jazz double bass player Esperanza Spalding with her instrument. (She also plays electric bass.) The double bass is equally at home in a small jazz combo and in a large classical orchestra. >