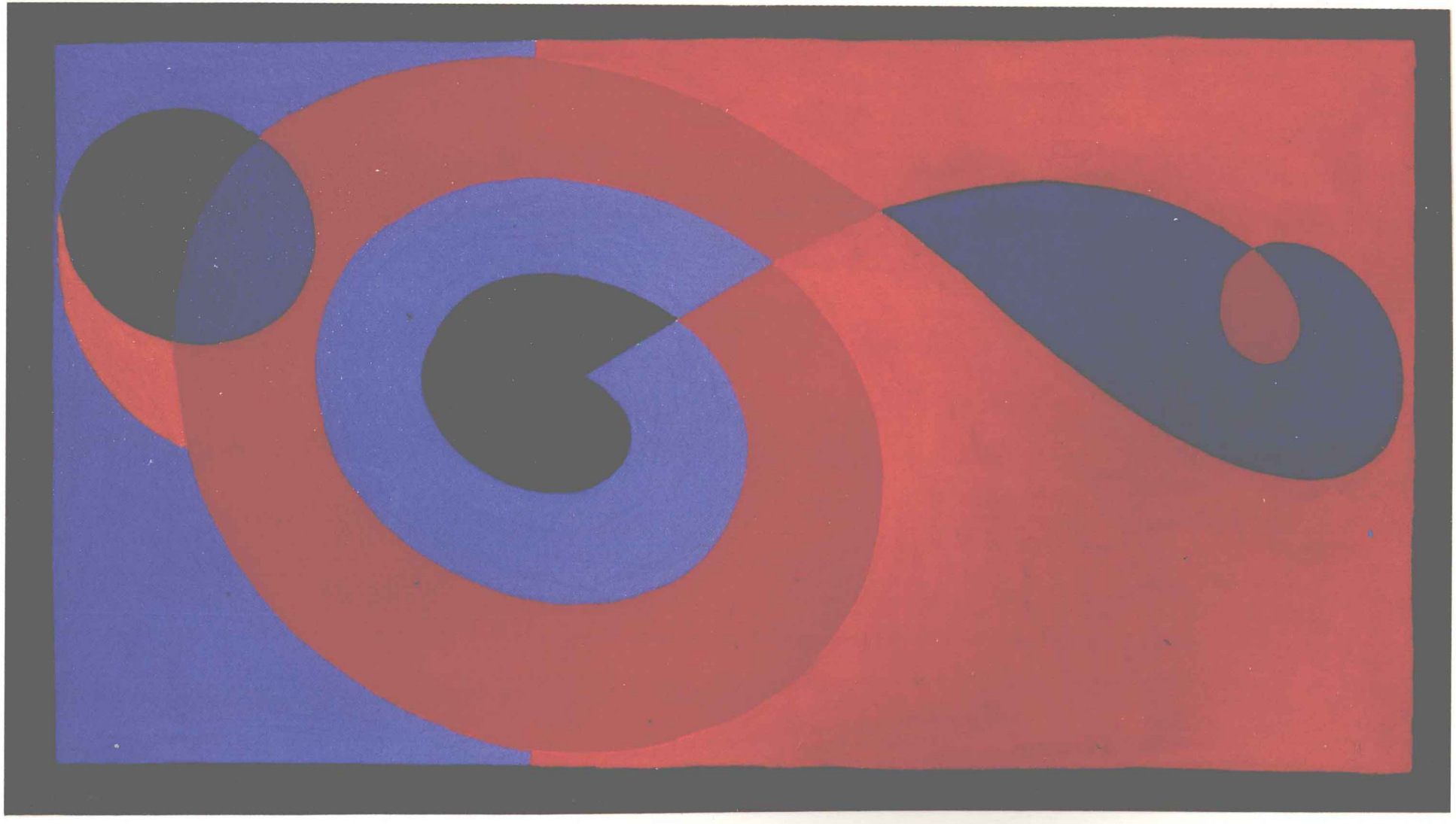

JOSEPH KERMAN

LISTEN

THIRD BRIEF EDITION

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University of California, Berkeley

with

VIVIAN KERMAN

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UNIT I

Fundamentals

Unit I, the introductory unit in this book, covers music fundamentals and their standard terminology. In Chapter 1 we are introduced at once to a piece of music, the Overture to The Bartered Bride *by the Czech composer Bedřich Smetana. Chapter 2 presents the basic concepts of sound and time—pitch, dynamics, tone color, and duration—and Chapter 3 explains how time is organized into rhythm and meter, and how pitch is deployed in scales. Then Chapter 4 deals with melody, harmony, and other combinations of the basic elements that have already been treated. Chapter 5 carries the discussion one stage further, to a consideration of musical form and style. Our "Interludes" treat musical instruments and musical notation.*

Listening

The basic activity that leads to the love of music and to its understanding—to what is sometimes called "music appreciation"—is listening to particular pieces of music again and again. Such, as least, is the premise of this book. Its pages are filled mostly with discussions of musical compositions—symphonies, concertos, operas, and the like—that people have found more and more rewarding as they have listened to them repeatedly. These discussions are meant to introduce you to the contents of these works and their aesthetic qualities: what goes on in the music, and how it affects us.

The kind of hands-on knowledge of music that is necessary for a music professional—for a composer or a performer—is of no special use to you as a nonprofessional listener. But an acquaintance with musical concepts and musical terms can *be useful, by helping you grasp more clearly what you already hear in music. Analyzing things, pinpointing things, even simply using the right names for things all make us more actively aware of them. Sometimes, too, this process of analysis, pinpointing, and naming can actually assist listening. We become more alert, as it were, to aspects of music when they have been pointed out. And sharper awareness contributes to greater appreciation of music, and of the other arts as well.*

Since our emphasis is on music, that is where we start—with an actual listening experience, our "overture" to this book. This will exemplify in a general way some of the concepts to be introduced in the following chapters, and make understanding the terminology of music, when we come to explain it, seem less abstract and mysterious, more immediate and alive.

CHAPTER 1

Overture

Listen, then, to the Overture to *The Bartered Bride*, a comic opera by Bedřich Smetana (1824–1884). Smetana is not as well-known a name as some of his nineteenth-century contemporaries, such as Chopin, Wagner, Brahms, and others, whom we will be studying in Unit IV of this book. In his native Bohemia, however, later called Czechoslovakia and now the Czech Republic, Smetana is revered because he insisted on endowing his music with a distinctively Czech flavor—and this at a time when Bohemians were struggling for independence from the Austrian Empire. Several of Smetana's pieces, including this overture, have an unshakable place in today's concert repertory. For a word about *The Bartered Bride*, see page 6.

If you want to understand music better, you can do nothing more important than listen to it. Nothing can possibly take the place of listening to music. Everything I say in this book is about an experience that you can only get outside this book.

From what is still one of the best books on "music appreciation," *What to Listen for in Music* by composer Aaron Copland (see page 335), 1939

You may prefer to skip the indented, colored paragraphs in the following discussion and leave them until later, at a second listening. They give the standard terminology for effects and features mentioned in the main text, terms that will be explained in later chapters. The idea is not to learn these terms at the present stage, but simply to get some impression about their use in the context of an actual piece of music, Smetana's Overture to *The Bartered Bride*.

Opening Outburst Overtures are relatively short orchestral pieces played before the beginnings of operas, ballets, musicals, and (occasionally) stage plays. Nearly all of them start with something bright and forceful, to quiet the audience down and put them in the mood for the show that is about to begin. Smetana has fulfilled this necessary if modest task brilliantly. The music he provides at this point is a regular outburst, a blast, a noisy wake-up call: loud, irregular, insistent, and irresistible.

One of the basic properties of sound is its volume, its loudness or softness, referred to as ***dynamics*** in music terminology. The Italian word ***forte*** (fórteh) is used for "loud," ***piano*** for "soft" (abbreviated *f* and *p*). After the opening outburst, Smetana writes ***subito p*** on his score, calling for a sudden change in dynamics from loud to soft.

Build-up The outburst feels like the preparation for something exciting; yet what it leads into is a long, fast passage played softly by violins, which seem to rustle or rush, expectantly and a bit nervously. Suddenly another group of violins breaks in with music that we recognize: the ending portion of the outburst (slightly shortened). Then they too start rustling.

The Bartered Bride: Mařenka looks on as Kecal, the village marriage-broker, delivers his pitch to her mother.

This happens twice more, as shown in the diagram below (the four ***f***'s stand for four loud spurts—like machine-gun spurts—of loud music; ***p*** stands for the rustling):

f f f f p ----------

f f f f p ----------

f f f f p ----------

f f f f p -------

This is a good passage for help in recognizing the sound of the violin and other violin-like instruments, members of the violin **family**: entering first are the **violins,** next the larger and lower **cellos,** next the even lower **double basses.** Orchestras have two violin groups, the **first violins** and the **second violins.**

The ending portion of the outburst, which has already been heard five times and will be heard many more, is the main **theme** of the overture. A theme is a section of music that is heard throughout a composition and that contributes significantly to its sense.

Two, three, four simultaneous rustling strands—the tension is getting to be unbearable! Extra instruments come in. The music grows louder and louder.

Crescendo (creshéndo) is the term for gradually increasing dynamics, ***diminuendo*** the term for decreasing dynamics. Compare with **subito f** and **subito p** (see page 10).

Polka At last the whole orchestra explodes into a loud, enthusiastic Czech dance, a polka—which is cut off almost at once by more rustling. Notice a new two-note rhythmic figure that energizes the rustling from below.

The two-note figure sounds doubly energetic because the stringed instruments are being plucked with a finger, not bowed; the term for this is ***pizzicato*** (pitzicáhto). The percussive, dynamic quality produced by pizzicato is well known from double-bass playing in jazz.

The polka fragment is repeated, softly now, as though the composer were trying again . . . then repeated again, extended somewhat . . . we get the feeling that Smetana is struggling to construct an entire dance out of that fragment, before our very ears. He moves a short bit of the dance through several levels, using the new two-note figure as a lever or propeller.

A fragment of music that is repeated several times at different levels, higher and higher or lower and lower, is called a **sequence.** The sequence here has four levels.

Finally he gives us the entire polka: a joyous, noisy item. Its varied, lively rhythms give way to fast even notes, which seem to be preparing for a stop. But it takes a return of the opening outburst to make the music *really* stop.

An ending or a stop in music is called a **cadence;** the stoppage can be total, partial, or tentative-sounding. Cadences are an extremely important feature of music, because of the (often) subtle way in which they punctuate music's constant flow.

Closing Outburst Listening to the outburst for the second time, and to the theme part in particular, you may be struck by the way its four spurts of music focus on the same note, more and more insistently (this note is the TAK in the rhythmic shorthand in the margin). You may even find it rather comical, like someone impatiently shaking a clogged-up salt shaker.

Four spurts:
ta-ki TAK *(wait)*
ta-ki ta-ki TAK *(wait)*
ta-ki ta-ki-ta-ki TAK
ta-ki ta-ki-ta-ki-
-ta-ki-ta-ki-**TAK**

It also gives a very strong sense of finality; no wonder this music works so well as a cadence. Smetana has ingeniously concoted a theme that sounds like an opener in one context and like a termination in another. It is an achievement we can appreciate and perhaps enjoy, the way we enjoy a pun.

New, Slower Melody The quiet rustling that follows the closing outburst fades almost at once, turning into a regular and distinctly slower ticking.

Above this quiet ticking, a relatively long melody emerges, unlike anything that has been heard in the overture so far: slower, with smoother rhythms and richer, more emotional harmonies. Even at first hearing, we perceive this melody in three segments. The first two are played by wind instruments and start the same way, the third starts differently and more richly, in the strings.

The term for quality of sound is **tone color,** or **timbre.** These wind instruments are **oboes,** recognizable by their clear, concentrated tone color.

Segments of a melody are called **phrases;** something in the music makes one phrase sound separate from the next. Smetana's melody can be diagrammed **a a′ b,** where **a′** denotes a varied version of **a,** and **b** is a contrasting phrase.

Interruption: Return to the Opening Outburst The melody does *not* reach a cadence; it has hardly had a chance to work its way into our memory before it is cut off by a drum—as the outburst crashes in again. Notice that in its position after the melody (and after three hard drum strokes), this passage sounds less like a cadence, and more like a new beginning and a new lead-in. What it leads into is the by-now familiar rustling.

New Build-up So we might expect another build-up, such as happened after the very first outburst. What we now hear differs in (at least) three ways from the first build-up:

1. the theme comes many more times, more closely spaced than before

2. the theme is focused on many different notes, played by a whole array of different instruments

Another good passage for help in recognizing instrument sounds: in order, the theme is played by **violas** (a viola is a slightly larger violin), a **clarinet, flutes** (wind instruments), oboes, violins plus one oboe, and then oboes again.

3. Wind instruments are now added to the strings, as the rustling grows louder, clearer, and more interesting. It is heard not only simultaneously with the theme, but also on a par with it, competing for the listener's attention. It sounds less like rustling than rattling, arguing.

Texture is a term used for the "weave" of music, for the blending together of various elements heard at the same time. The new build-up passage is said to have a polyphonic texture, or to be in **polyphony,** meaning that many melodies are playing at once.

The polka is **homophonic,** because all the instruments playing it are coordinated or synchronized. On the other hand, whenever the theme comes in the outburst, it is **monophonic**—just the one musical line, without any accompaniment. The Greek prefixes *poly-*, *homo-*, and *mono-* mean "many" (*polygamy*), "same" (*homogenize*), and "single" (*monopoly*).

And after a while, Smetana really mixes things up, combining fragments of various elements—the theme, the rustling material, even of the polka—to complete the build-up and the crescendo. This leads as before to the polka.

Polka This time, however, there is a difference: by now everyone has heard this polka, and it would be boring to hear it being built up bit by bit a second time. So the entire dance is played right away. Wind instruments, including the trumpet, play a brisk new rhythmic figure back of the polka, derived from the main theme: *ta-ki ta-ki-ta-ki TAK* (see margin).

ta-ki TAK *(wait)*
ta-ki ta-ki TAK *(wait)*
ta-ki ta-ki-ta-ki TAK
ta-ki ta-ki-ta-ki-
-ta-ki-ta-ki-**TAK**

While listening to the polka for the second time, try beating time to the music, in ***duple meter:*** ONE *two*, ONE *two* . . .. This is easy enough to do at the end, less easy at the beginning, where the *fourth* and *fifth* notes of the polka refuse to fall out on the strong ONE beats. But of course it is just these notes—called **syncopated** notes—that give this polka its special verve. Best known, perhaps, from jazz, syncopation occurs in nearly all music.

Closing Outburst The polka ends as it did before, with its cadence hammered home by the closing outburst.

At this point you are probably aware of having heard the same series ***Opening Outburst—Build-up—Polka—Closing Outburst*** twice, albeit with significant differences the second time. This is an experience of musical **form,** the "shape" of music in time. There is usually a sense of satisfaction in coming back, after new material (here, that middle slower melody), to something we remember from before.

Distant Echoes The polka ends as it did before—but with a surprise. The theme gets a new destination: instead of all four spurts ending on the same note, the final one goes to a new, very strange note. Smetana lets the strangeness sink in, by stopping the music dead for the first time, and then by extending the note (actually, two quiet notes are present here).

What is altogether unexpected (and indescribable) is the mood: nostalgic, delicate, half-sensuous, as though this earthy overture has been jolted into a

magical dream world. The music glides through several new, mysterious-sounding regions, all of them echoing with distant polka recollections.

The strange "regions" through which we are guided by Smetana's shifting chords are **keys**; the process of changing keys, called **modulation**, is a major compositional resource. Another passage in the overture that features modulation is the ***New (second) Build-up*** passage, with the theme focused on different notes. Each note modulates to a new key.

At the end of this passage, do you notice that the music sounds even more dream-like because it is slowed down, just a little? The speed of music is called its **tempo**. **Ritardando** is the term for slowing down the tempo; **accelerando** (achelerándo) means speeding up (accelerating).

Final Rush The dream (if that is what it is) is shattered by a drum roll and a fast crescendo. The polka appears for a moment, with new harmonies. And we hear yet another outburst, ending with rocking motion which seems to say "we really *have* to stop!"—though not before the woodwinds try to throw a final block, using the opening portion of the outburst (not the end).

Eventful as this final segment of the overture may be, it feels like a single mad rush to the finish line. A fragment of music that repeats many times at the same level (like the sixfold rocking motion here) is called an **ostinato**, "obstinate" in Italian.

***Smetana's* The Bartered Bride** The show that is introduced by this cheerful overture is a light-hearted affair, half-way between an opera and what we would now call a musical. Originally there was spoken dialogue between the musical numbers. *The Bartered Bride* acquired its status as a model for Czech national music for three rather simple reasons: it is written to Czech words (not German or Italian, the usual languages for opera at that time); its score is full of Czech tunes and dances and rhythms; and it tells a rose-tinted story of Czech peasant life. Young lovers Mařenka and Jeník have to contend with a characteristic "folk" figure, the marriage broker Kecal, who tries to pair Mařenka off with Vašek, the wealthy village half-wit. But Vašek runs off with a circus, and *The Bartered Bride* comes to the mandatory happy ending.

All the themes of the overture turn up again during the opera, at the end of the first act. And the interesting main theme—with its four spurts focusing on a single note, each longer than the last—seems to derive from a special feature in the opera itself. As though being dim and shy were not enough, poor Vašek is also given a stutter; the music he sings on stage depicts the stutterer's frustration when he can't get through a sentence, and his relief when he finally succeeds. So does the overture theme: "it's an ***in–***, it's an inter***es–***, it's an interesting ***ov–***, it's an interesting overture to ***hear.***"

ta-ki TAK *(wait)*
ta-ki ta-ki TAK *(wait)*
ta-ki ta-ki-ta-ki TAK
ta-ki ta-ki-ta-ki-
-ta-ki-ta-ki **TAK**

Listening Charts

So hear it one more time, in order to become familiar with the Listening Charts that form an integral feature of this book. Follow the first of these charts on page 7. Note that it is not necessary to read music to use these charts. Even people who think they are tone deaf (there's no such condition) can follow the music with the help of the timings at the left side, cued to the performance of the piece on the CD/Cassette set accompanying *Listen*. For the benefit of those who are able to read music, the charts in subsequent chapters include brief notations of the main themes, directly across from the timing indication and the reference.

CHAPTER 2

Music, Sound, and Time

It has always seemed to me more important for the listener to be sensitive to the musical tone than to know the number of vibrations that produce the tone. . . . What the composer desires above all is to encourage you to become as completely conscious and wideawake a listener as possible.

Aaron Copland, *What to Listen For in Music*

Music is the art of sound in time. We start with an outline of the basic properties of sound as it is produced, each of which corresponds to an effect that we experience when sound is heard. The scientific terms for sound all have their analogues in the terminology of music.

Sound Vibrations

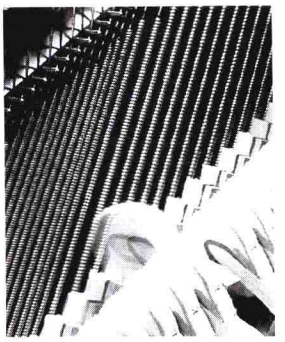
As everyone who has taken a course in elementary physics knows, sound is produced by vibrations that occur when objects are struck, stroked, or otherwise agitated. The vibrations are transmitted through the air, or some other medium, and picked up by our ears.

For the production of sound in general, almost anything will do—the single rusted hinge on a creaky door as well as the vast air masses of a thunderstorm. For the production of musical sounds, the usual objects are taut strings and membranes, columns of air enclosed in pipes of various kinds, and silicon chips. The point is that these produce relatively simple vibrations, which translate into clearly focused or, as we say, "musical" sounds. Often the membranes are alive: they are called vocal cords.

Sound-producing vibrations are very fast; the range of audible sound extends from around 20 to 20,000 cycles (that is, our vocal cords warble that many times every second). The vibrations are also very small. Look inside a piano while it is being played: you will not detect any movement in the

Natural resonators: *left*, gourds in a pair of Mexican maracas; *right*, a tortoise shell in the ancient Greek lyre, a small harplike instrument.

lengthy strings, except possibly for some blurring of the very biggest ones. To be heard, sound vibrations often need to be *amplified*, either electronically or with the aid of something physical that echoes or resonates along with the vibrating body. In a piano, this is the big wooden soundboard.



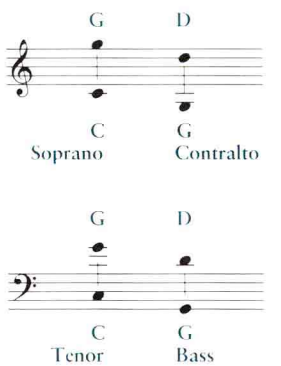
Pitch (Frequency)

The scientific term for the rate of sound vibration is **frequency.** Frequency is measured in cycles (per second). On the level of perception, our ears respond differently to sounds of high and low frequencies, and to very fine gradations in between. Indeed, people speak about "high" and "low" sounds quite unselfconsciously, as though they knew that the latter actually have a low frequency—relatively few cycles—and the former a high frequency.

The musical term for this quality of sound, which is recognized so instinctively, is **pitch.** Noises, with their complex, unfocused vibrations, do not have pitch. And the totality of musical sounds, as distinct from noises, serves as a kind of quarry from which musicians of every age and every culture carve the exact building blocks they want for their music. They never (or virtually never) make use of the total range of pitches—which we experience when we hear the sliding scale of a siren, starting low and going higher and higher until it is out of earshot. Instead a limited number of fixed pitches is selected from this sound continuum. These pitches are calibrated scientifically (orchestras tune to a pitch with a frequency of 440 cycles), given letter names (that pitch is labeled A), and collected in *scales*. Scales are discussed in Chapter 3.

The experience of pitch is gained very early; babies only a few hours old respond to human voices, and they soon distinguish between high and low ones. They seem to prefer higher pitches, naturally—those in their mothers' pitch range. At the other end of life, it is the highest frequencies that older people find they are losing. The range of pitches that strike us as "normal," those spoken or sung by most men and women, is shown to the right. (If you are not familiar with the notation for pitch, consult pages 22–23.)

NORMAL VOICE RANGES as in a chorus



Dynamics (Amplitude)

In scientific terminology, *amplitude* is the level of strength of sound vibrations—more precisely, the amount of energy they contain and convey. As anyone who has been near a big guitar amplifier knows, very small string vibrations can be amplified up until the energy in the air that is transmitting them rattles the eardrums. Amplitude is measured in *decibels*.

In musical terminology, the level of sound is called its **dynamics.** Musicians make use of very subtle dynamic gradations from very soft to very loud, but they have never worked out a calibrated scale of dynamics, as they have for pitch. The terms used are only approximate. They are usually in Italian, because all European music looked to Italy when this terminology first came into use.

The main categories are simply loud and soft, ***forte*** (pronounced fórteh) and ***piano***, which may be qualified by expanding to "very loud" or "very soft" and by adding the Italian word for "medium," ***mezzo*** (medzo):

pianissimo	*piano*	*mezzo piano*	*mezzo forte*	*forte*	*fortissimo*
pp	***p***	***mp***	***mf***	***f***	***ff***
very soft	soft	medium soft	medium loud	loud	very loud

Other terms are **più** (pyo͞o) **forte** and *meno forte*, "more loud" and "less loud." Changes in dynamics can be sudden *(subito)*, or they can be gradual—a soft passage swells into a loud one, or a powerful blare fades into quietness. Below are the terms for changing dynamics and their notational signs (sometimes called "hairpins"):

crescendo (**cresc.**)

gradually getting louder

decrescendo (**decresc.**), *or diminuendo* (**dim.**)

gradually getting softer

LISTEN

In Unit I of this book, we will illustrate the concepts introduced with short selections from the CD/Cassette set. We can skip pitch—the difference between high and low pitch is heard so instinctively that it requires no illustration—and start with dynamics. Again, everyone can tell loud from soft, but it may be well to show how many different gradations can exist in an actual piece of music.

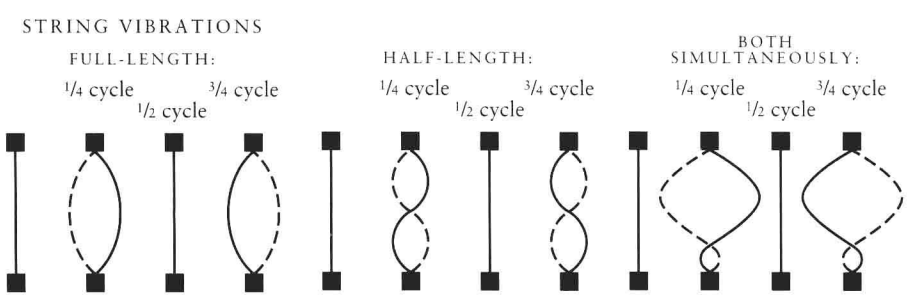
Turn back to Listening Chart 1 for Smetana's Overture to *The Bartered Bride*, on page 7. Play the sections labeled **Opening Outburst and Build-up** and **Polka,** the first minute and a half of cassette 1 or track 1 of CD 1 (either set). The dynamics you hear are:

0:00	opening outburst, full orchestra	***fortissimo***
0:11	sudden change to quiet rustling sounds (produced by violins)	***subito piano***
0:24	three appearances of a short, gruff bit of music, (a *theme*), spaced out from one another	each is ***forte***
1:14	the music gradually gets louder	***crescendo***
1:17	culminating in a rowdy dance, the polka	***fortissimo***, again
1:22	but the rustling soon returns (etc.)	***mezzo forte***

Tone Color: Overtones

At whatever pitch, and whether loud or soft, musical sounds differ in their general *quality*, depending on the instruments or voices that produce them. **Tone color,** or **timbre,** is the term for this quality.

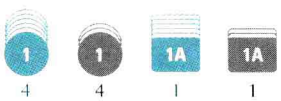
The scientific explanation of tone color is more complex (and more amazing) than the explanations of pitch and dynamics. Guitar strings and other sound-producing bodies vibrate not only along their total length, but also simultaneously in half-lengths, quarters, eighths, and so on. The diagrams below attempt to illustrate this. The amplitudes of these fractional vibrations, called **partials** by scientists, **overtones** by musicians, are much lower than the



amplitude of the main vibration; indeed, they are not heard as new pitches, but as part of the string's basic or fundamental pitch. It is the amount and proportion of overtones in a sound that gives it its characteristic tone color. A flute has few overtones. Luciano Pavarotti has many.

Musicians make no attempt to tally or describe tone colors; about the best one can do is apply imprecise adjectives such as *bright, warm, ringing, hollow,* or *brassy.* Yet tone color is surely the most easily recognized of all musical elements. Even people who cannot identify instruments by name can distinguish between the smooth, rich sound of violins, the bright sound of trumpets, and the thump of drums.

LISTEN



For illustration of a few different instrumental tone colors (just a very few of those available in a symphony orchestra), turn back again to the Listening Chart 1 on page 7. Play the sections labeled **Interruption: Return to the Opening Outburst** and **New Build-up**—CD 1 track 4, or three minutes after the start of Cassette 1 band 1. This passage goes like the wind, with the tone color changing every five seconds or so. The same gruff theme is played by different instruments, each with its characteristic tone color.

2:59	three drum strokes and an outburst	timpani, then massed woodwind instruments
3:04	(part 2 of the outburst is the ***theme***)	massed string instruments, timpani
3:08	quiet rustling	violins (about twenty, playing together)
3:11	theme (consists of four spurts of music)	violas (about ten)
3:16	theme again	clarinet
3:21	theme, third time	flutes (two)
3:26	theme, fourth time	oboe (and bassoon below—hard to hear!)
3:40	by now, so many instruments are playing that tone colors are hard to distinguish	

Musical instruments are the subject of Interlude B, directly following Chapter 4. The variety of devices invented for the different tone colors that people have desired for their music, in all societies, is quite extraordinary.

The most distinctive tone color of all, however, belongs to the first, most beautiful, and most universal of all the sources of music—the human voice.

"The first, most beautiful, and most universal of all sources of music": Cecilia Bartoli, a leading young opera singer of the 1990s.

Duration

Sound exists in time, and any sound we hear has its **duration**—the length of time we hear it in minutes, seconds, or microseconds. Though duration is not an actual property of sound, like frequency, amplitude, and other of sound's attributes that are taught in physics courses, it is obviously of central importance for music, which is the art of sounds in time. The broad term for the time aspect of music is **rhythm**.

The primacy of rhythm in the experience of music is practically an act of faith in our culture. However, there is some music in which rhythm counts for less than, say, tone color; such a piece will be studied in Chapter 23, the chorus *Lux aeterna* by the contemporary composer György Ligeti. Think also of New Age music. But rhythm is the driving force in the vast majority of music both popular and classical, music of all ages and all cultures, and rhythm is where we will begin our discussion of the elements of music, in Chapter 3.

CHAPTER 3

Time and Pitch

We start this chapter by discussing *rhythm*, the way composers organize musical time by the use of durations of various magnitudes. We then go on to the organization of pitch into *scales* and *intervals*.

Music has four essential elements: rhythm, melody, harmony, and tone color. These four ingredients are the composer's materials. He works with them in the same way that any other artisan works with his materials.

Aaron Copland, *What to Listen For in Music*

1 Rhythm

As we have seen, the term **rhythm** in its broadest sense refers to the time aspect of music. In a more specific sense, *a rhythm* refers to the actual arrangement of durations—long and short notes—in a particular melody or some other musical passage. Of course, the term is also used in other contexts, about golfers, quarterbacks, poems, and even paintings. But no sport and no other art handles rhythm with such precision and refinement as does music.

The term *rhythmic* is often used to describe music that features simple patterns (such as ONE *two* ONE *two*) repeating over and over again, but that is not really right (think about rhythm in golf). Such patterns should be described as *metrical*, or strongly metrical, not rhythmic. See the section "Rhythm and Meter" below.

Beat

The basic unit for measuring time in music is the **beat.** When listening to a marching band, to take a clear example, we surely sense a regular recurrence of short durational units. These units serve as a steady, vigorous background for more complicated durational patterns that we discern at the same time. We can't help beating time to the music, waving a hand or tapping a foot, following the motion of the drum major's baton and of the big-drum players' drumsticks. The simple durational pattern that is being signaled by waving, tapping, or thumping is the music's beat.

Accent

Beats provide the basic unit of measurement for time; if ordinary clock time is measured in seconds, musical time is measured in beats. There is, however, an all-important difference between a clock ticking and a drum beating time.

Mechanically produced ticks all sound exactly the same, but it is virtually impossible to beat time without making some beats more emphatic than others. This is called giving certain beats an **accent.**

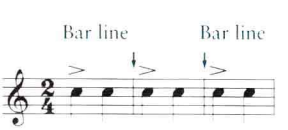
And accents are really what enable us to beat time, since the natural way to do this is to alternate accented ("strong") and unaccented ("weak") beats in patterns such as ONE *two*, ONE *two*, ONE *two*, . . . or ONE *two three*, ONE *two three*, ONE *two three*. . . . To beat time, then, is not only to measure time but also to organize it, at least into these two- and three-beat patterns. That is why a drum is a musical instrument and a clock is not.

Accents are not always indicated in musical notation, since in many types of music they are simply taken for granted. When composers want a particularly strong accent—something out of the ordinary—they put the sign > above or below a note. Thus a pattern of alternating very strong and weak beats is indicated as shown to the right. An even stronger accent is indicated by the mark ***sfz*** or ***sf***, short for *sforzando*, the Italian word for "forced."

The beat: there are times when the drummers in a band do little more than bang it out.

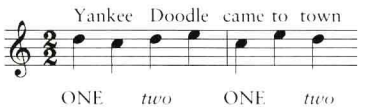
Meter

Any recurring pattern of strong and weak beats, such as we have already referred to and illustrated above, is called a **meter.** Meter is a strong/weak pattern repeated again and again. Each occurrence of this repeated pattern, consisting of a principal strong beat and one or more weaker beats, is called a **measure,** or **bar.** In musical notation, measures are indicated by vertical lines called **bar lines.** The meter indicated schematically in the margin above is notated as shown to the right.

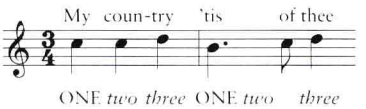


There are two basic kinds of meter, called **simple meters:** duple meter and triple meter, plus a third, **compound meter,** which involves a subdivision of one of the simple meters.

In duple meter the beats are grouped in twos (ONE *two*, ONE *two*). Duple meter is instantly familiar from marches—such as "Yankee Doodle," below—which tend always to use it in deference to the human anatomy (LEFT *right*, LEFT *right*).



Duple meter



Triple meter

In triple meter the beats are grouped in threes (ONE *two three*, ONE *two three*). As it happens, our national songs "America" and "The Star-Spangled Banner" are both in triple meter. "America" starts on a strong ONE beat of the triple meter; "The Star-Spangled Banner" starts on a weak *three* beat.

Not infrequently, there is a clearly marked subdivision of the main beats into threes, resulting in *compound meters* with six or nine beats:

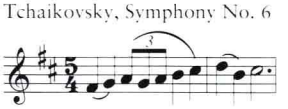
ONE			*two*			ONE			*two*			*three*		
ONE	two	three	*four*	five	six	ONE	two	three	*four*	five	six	*seven*	eight	nine

Compound meters can be treated as subtypes of duple and triple meter. In the round "Row, row, row your boat," while the first voice is moving at a fast six-beat clip at the words "Merrily, merrily," the second voice comes in pounding out the basic duple meter, "Row, *row*, row":

first voice:																	
Row,	row,	row your	boat	gently	down the	stream,		Merrily,	merrily,	merrily,	merrily
1 2 3	4 5 6	1 2 3	4 5 6	1 2 3	4 5 6	1 2 3	4 5 6	**1 2 3**	**4 5 6**	**1 2 3**	**4 5 6**
ONE	*two*	ONE	*two*	ONE	*two*	ONE	*two*	ONE	*two*	ONE	*two*
								second voice:	Row,	row,	row . . .	
									ONE	***two***	ONE	***two***

Meters with five beats, seven beats, and so on have never been used widely in Western music, though composers have often experimented with them, especially in the twentieth century. It was an unusual tour de force for Tchaikovsky to have provided his popular Sixth Symphony with a very convincing waltzlike movement in *quintuple* meter (five beats to a bar).

Tchaikovsky, Symphony No. 6



Rhythm and Meter

We have already seen that, in the most general sense, *rhythm* refers to the whole time aspect of music and, more specifically, that *a rhythm* refers to the particular arrangements of long and short notes in a musical passage. In most Western music, duple or triple *meter* serves as the regular background against which we perceive music's actual rhythms.

As the rhythm now coincides with the meter, then cuts across it independently, then even contradicts it, all kinds of variety, tension, and excitement can result. Meter is background; rhythm is foreground.

Musical notation has developed a conventional system of signs (see pages 21–22) to indicate relative durations; combining various signs is the way of indicating rhythms. Following are examples of well-known tunes in duple and triple meters. Notice from the shading (even better, sing the tunes to yourself and *hear*) how the rhythm sometimes corresponds with the meter and sometimes departs from it. The shading indicates passages of rhythm-meter correspondence:

The most exciting rhythms seem unexpected and complex, the most beautiful melodies simple and inevitable.

Poet W. H. Auden, 1962