CHAPTER 1

Rhythm, Meter, and Tempo

Music is the art of sound in time. Its temporal aspect is the most basic place to start understanding music, and this aspect is summed up by the term **rhythm**.

> "Rhythm might be described as, to the world of sound, what light is to the world of sight. It shapes and gives new meaning."
>
> *Edith Sitwell, poet and critic, 1965*

1 Rhythm

In its broadest sense, rhythm refers to the general way music unfolds in time. The primacy of rhythm in the experience of music is taken for granted in our culture—and in most other cultures as well. Rhythm is the main driving force in music both popular and classical, music of all ages and all cultures.

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 quarterbacks, poems, and even paintings. But no sport and no other art handles rhythm with as much precision and refinement as music.

Beat and Accent

Beats provide the basic unit of measurement for time in music; if ordinary clock time is measured in seconds, musical time is measured in beats. When listening to a marching band or a rock band, to take two clear examples, we sense a regular recurrence of short pulses. These serve as a steady, vigorous background for other, more complicated rhythms that we discern at the same time. We can't help beating time to the music, dancing to it, waving a hand or tapping a foot. The simple pulse being signaled by waving, tapping, or dancing is the music's beat.

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 for people 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 simplest 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 according to a regular pulse but also to organize it, at least into these simple two- and three-beat patterns.

▶ Access an interactive tutorial on rhythm, meter, and tempo in the e-book at **bedfordstmartins.com/listen**

2 Meter

Any recurring pattern of strong and weak beats, such as the ONE *two* and ONE *two three* we have referred to 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 Western music there are only two basic kinds of meter: duple meter and triple meter.

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

Yan-kee	doo-dle	came to	town . . .
ONE	*two*	ONE	*two*

In *triple meter* the beats are grouped in threes (ONE *two three* | ONE *two three*). Our oldest national songs, "The Star-Spangled Banner" and "My Country, 'Tis of Thee," are in triple meter:

Oh,	say	can	you	see . . .	My	coun-	try,	'tis	of thee . . .
	ONE	*two*	*three*	ONE	ONE	*two*	*three*	ONE *two*	*three*

Two other national songs, "America the Beautiful" and "God Bless America," are in duple meter.

Often the main beats of duple and triple meter are subdivided into quicker pulses. This usually happens by dividing the main beat into either twos or threes. When the main beats are divided in twos, the meter is called a **simple meter**. Dividing the main beats in threes creates **compound meters** with two or three main beats and six or nine quicker ones:

ONE	*two*	ONE	*two*	*three*
ONE *two three*	*FOUR five six*	ONE *two three*	*FOUR five six*	*SEVEN eight nine*

The round "Row, Row, Row Your Boat" is in compound duple meter. While the first voice is moving at a fast six-beat clip at the words "Merrily, merrily, 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 they are found frequently enough in some other musical cultures. It was an unusual tour de force for nineteenth-century composer Pyotr Ilyich Tchaikovsky to have featured quintuple meter, five beats to a bar, in his popular Sixth Symphony.

Rhythm and Meter

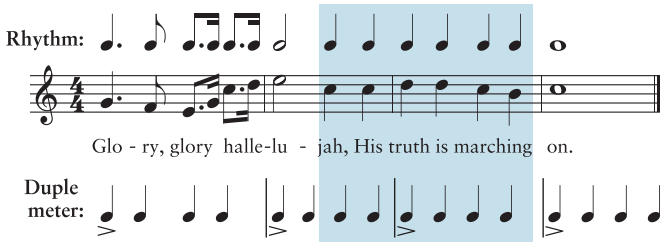
"The most exciting rhythms seem unexpected and complex, the most beautiful melodies simple and inevitable."

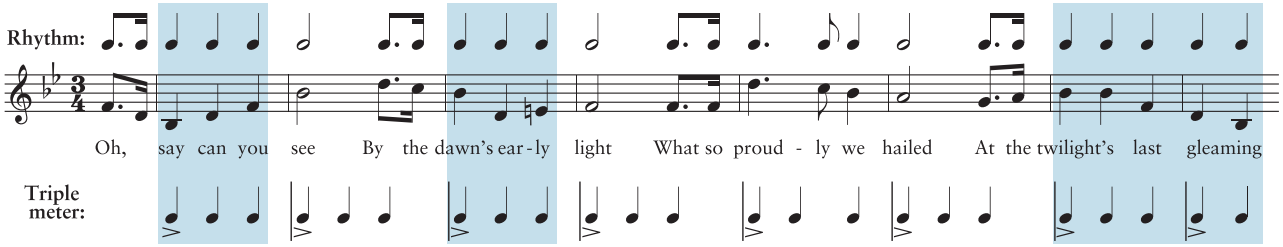
W. H. Auden, poet, 1962

Rhythm in the most general sense refers to the entire time aspect of music and, more specifically, *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 first 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 Appendix B) to indicate relative durations, or long and short notes; 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 pulses of the meter and sometimes departs from them. The shading indicates passages of rhythm-meter correspondence:





The above examples should not be taken to imply that meter is always emphasized behind music's rhythms. Often the meter is not explicitly beaten out at all. It does not need to be, for the listener can almost always sense it under the surface. Naturally, meter is strongly stressed in music designed to stimulate regular body movements, such as marches, dances, and much popular music.

At the other extreme, there is *nonmetrical* music. In such music, the rhythms suggest no underlying pattern of strong and weak beats. For example, the meandering, nonmetrical rhythms of Gregorian chant contribute to the cool, otherworldly, and spiritual quality that devotees of this music cherish.

Syncopation

One way of obtaining interesting, striking effects in music is to move the accents in a foreground *rhythm* away from their normal position on the beats of the background *meter.* This may seem counterintuitive, but it works. In **syncopation**,

LISTENING EXERCISE 1

Rhythm, Meter, and Syncopation

In Unit I of this book, we illustrate the concepts that are introduced with listening examples drawn from the Companion DVD. Follow the timings in these Listening Exercises, which are simplified versions of the Listening Charts provided for complete compositions later in the book. The charts are explained on page xxviii.

For samples of *duple, triple,* and *compound meters,* listen to the following tracks on the DVD.

10, 14	Duple meter	Count ONE *two* | ONE *two* . . . etc., for about half a minute.
16	Duple meter	Count ONE *two* THREE *four* | ONE *two* THREE *four* . . . etc.
12, 19	Triple meter	Count ONE *two three* | ONE *two three* . . . etc.
17	Compound meter	Count ONE *two three* FOUR *five six* | ONE *two three* FOUR *five six* . . . etc.

10 ***Syncopation:*** In Scott Joplin's "Maple Leaf Rag," listen to the piano left hand, with its steady ONE *two* \| ONE *two* beat in duple meter, while the right hand cuts across it with syncopations in almost every measure.

as it is called, accents can be displaced so they go *one* TWO \| *one* TWO (*weak* STRONG \| *weak* STRONG) instead of the normal ONE *two* \| ONE *two* (STRONG *weak* \| STRONG *weak*). Or syncopation can occur when an accent is placed *in between* beats ONE and *two,* as in this Christmas ballad:

Ru-*dolf*		the		red -		nosed		rein -		deer					
ONE	*two*		ONE	*two*		ONE	*two*		ONE	*two*		ONE	*two*		

The consistent use of syncopation is the hallmark of African American–derived popular music, from ragtime to rap. See Chapter 24, and listen to the lively, uneven, *syncopated* rhythms of Scott Joplin's "Maple Leaf Rag" in Listening Exercise 1.

3 Tempo

Our discussion so far has referred to the *relative* duration of sounds—all beats are equal; some notes are twice as long as others, and so on—but nothing has been said yet about their *absolute* duration, in fractions of a second. The term for the speed of music is **tempo**; in metrical music, the tempo is the rate at which the basic, regular beats of the meter follow one another.

Tempo can be expressed exactly and measured by the **metronome**, a mechanical or electrical device that ticks out beats at any desired tempo. When composers give directions for tempo, however, they usually prefer approximate terms. Rather than freezing the music's speed by means of a metronome, they prefer to leave some latitude for different performers. Because all European music looked to Italy when this terminology first came into use, the conventional terms for tempo are Italian:

An early metronome owned by Beethoven; its inventor was a friend of his. A clockwork mechanism made the bar swing side to side, ticking at rates controlled by a movable weight.

LISTENING EXERCISE 2

Rhythm, Meter, and Tempo

DVD 11

A more advanced exercise: Our excerpt, from the middle of *Rhapsody on a Theme by Paganini*, for piano and orchestra, by Sergei Rachmaninov, consists of four continuous segments in different meters and tempos, here labeled A, B, C, and D. (If you note a family likeness among the segments, that is because they are all variations on a single theme. See page 174.)

0:00	**A**	The piano starts in ***duple meter*** (ONE *two* | ONE *two*). The loud orchestral interruptions are ***syncopated.*** (After the interruptions the meter is somewhat obscured, but it gets clearer.)
0:33		Clear duple meter by this time; then the music comes to a stop.
0:49	**B**	No meter. The piano seems to be engaged in a meditative improvisation, as if it is dreaming up the music to come.
1:45		Orchestral instruments suggest a slow ***duple meter***? Not for long.
2:24	**C**	Slow ***triple meter*** (ONE *two three* | ONE *two three*)
3:47		***Ritardando*** (getting slower)
3:56	**D**	Fast ***triple meter***, assertive (note one or two syncopated notes)
4:26		Faster ***triple meter***

COMMON TEMPO INDICATIONS

adagio:	slow
andante:	on the slow side, but not too slow
moderato:	moderate
allegretto:	on the fast side, but not too fast
allegro:	fast
presto:	very fast

LESS COMMON TEMPO INDICATIONS

largo, lento, grave:	slow, very slow
larghetto:	somewhat faster than *largo*
andantino:	somewhat faster than *andante*
vivace, vivo:	lively
molto allegro:	faster than *allegro*
prestissimo:	very fast indeed

It's interesting that in their original meaning many of these Italian words refer not to speed itself but rather to a mood, action, or quality that can be associated with tempo only in a general way. Thus, *vivace* is close to our "vivacious," *allegro* means "cheerful," and *andante,* derived from the Italian word for "go," might be translated as "walking along steadily."

The most important terms to remember are those listed under "common tempo indications" above. Composers often use tempo indications alone as headings for major sections, called movements, in long works. People refer to the "Andante" of Beethoven's Fifth Symphony, meaning a certain movement of the symphony (the second), which Beethoven specified should be played at an *andante* tempo.