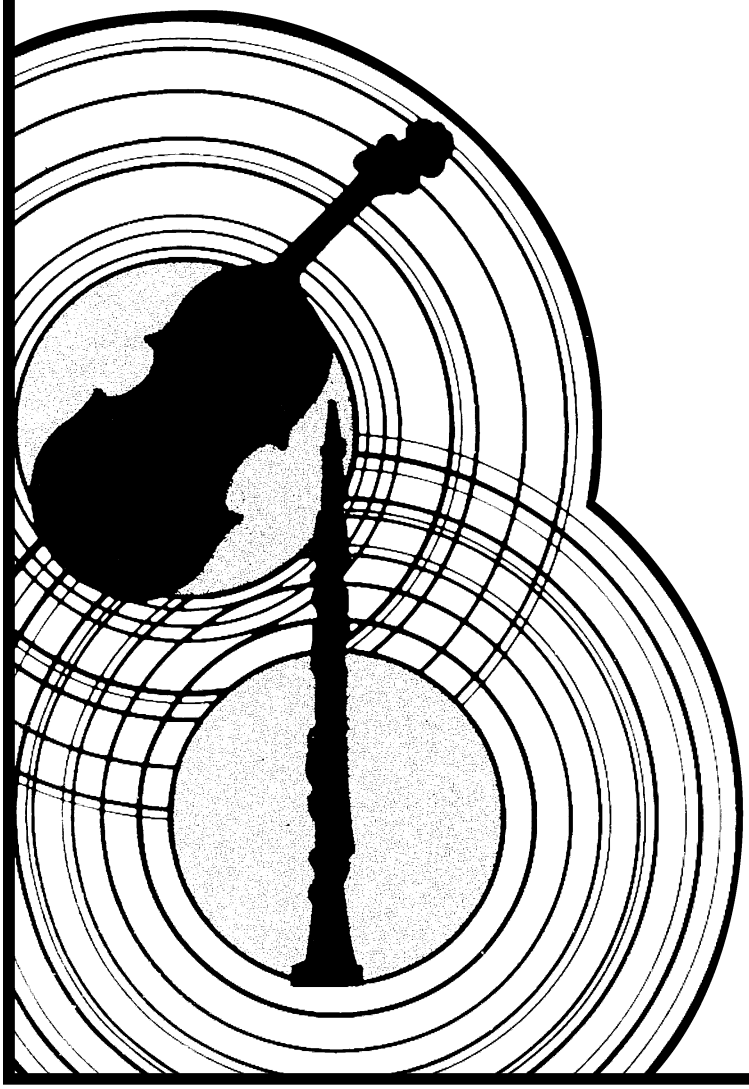
UNDERSTANDING MUSIC



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Introduction

There is an entertaining game called "Trivia" which all of us have played at one time or another. Someone chooses a subject and then the players try to stump each other by asking the most obscure questions they can think of relating to the chosen subject. Sometimes the subject is the movies: Which film won the Academy Award for Best Picture in 1963? Sometimes it is baseball: Who holds the record for the most stolen bases in a single season?

Often the game starts when an old popular song is played on the radio. Players grow silent and start shuffling through the music files in their brains, trying to be the first to identify the piece. Finally someone shouts, "That's Little Richard and he's singing 'Long Tall Sally'!"

You may have noticed that some people are better than others at playing musical trivia. They seem to have the ability to recall sounds and lyrics without really trying. If they like classical music, they can hear just a few seconds of a piece and announce immediately, "Easy! It's Beethoven's *Fifth Symphony.*" Or if they are interested in rock music, they can listen to a song for a moment and then say, "That's the Stones' 'Gimme Shelter.' "

These people can recall specific sounds quickly. They can relate them to the names of performers and songs. But you might ask yourself: Do they really *understand* music? Or are they like someone who knows the Latin names for every flower in the garden, but doesn't see their beauty? In other words, is it possible that experts at musical trivia are missing something?

The answer is that if all they can do is supply names and song titles, such people are indeed missing something. They understand music only partially. In their favor is the fact that they have a feeling for the history of music. Certainly this is important for a full understanding of what music is all about. Even though they may not know exactly which piece is being played, they can relate it to other works they have heard, placing it before some works and after others simply by virtue of the sound of the piece to which they are listening. By a process of elimination, they can help themselves to identify the piece.

But there is more to understanding music than simply understanding music history. And it is in these other areas where musical trivia experts sometimes fail. The purpose of this book is to introduce you to some of these other areas. Familiarity with each of them will bring you closer to an understanding of what music is all about.

This, then, is not a book about music history. Instead, it is a book about the ingredients that go into a piece of music to make it what it is. Those ingredients don't change. We will see that what was true for a symphony written 200 years ago can also be true for a contemporary popular song. And we will find that the elements of music do not depend upon what kind of music is being played. String quartets and folk songs, concertos and rock music, jazz and sonatas—all have certain basic components in common. Our objective will be to find just what it is that goes into music which gives it that life we all find so appealing. If we can understand what is inside music, then perhaps we can understand music itself.

To familiarize yourself with the principal periods and styles of music history, study the charts which follow. Obviously, charts of this nature cannot be complete. They are meant only to give a very general idea of some of the important movements in music history. The charts also list a few of music's most important composers and performers. Since this is not a history book, you won't be expected to learn the information contained on the charts, but you will find it helpful to gain at least an elementary familiarity with the areas of music which are listed. You may be startled to find that there are so many of them to learn about. Perhaps you would find it interesting to pick one or two specific areas to study on your own.

But remember—to understand music, you should understand what goes into it. History alone, for you or for the trivia expert, is not enough.

* * * * *

Music is timeless but books about music are not. *Understanding Music* has enjoyed a long and happy life since 1972, but after seventeen years it seemed prudent to update the book to incorporate changes which have occurred during that time. Some of the changes have been technological, so I've added material to Chapter 5 to reflect the increased importance of electronics in music. I've added a new chapter that looks at how music is created and performed, and a second that discusses "new music," a topic that barely existed in 1972. The emphasis on Western music remains the same throughout the book, but I've used the subject of new music as a springboard to encourage students to move on, to explore the music of other cultures. My aim today remains the same as it was seventeen years ago, to illuminate the elements common to all types of music in an effort to further understand each.

Robert L. Reid
Albuquerque, NM
1989

Strauss waltz; for example, "On the Beautiful Blue Danube," "Tales from the Vienna Woods," or "The Emperor Waltz"
Dave Brubeck Quartet, *Time Out* ("Take Five," by Paul Desmond)
Copland, *El Salón México*

Chapter 4

Wagner, *Tristan und Isolde* (Prelude)
Debussy, *La Cathédrale Engloutie* (for piano)

Modern classical composition -
Recommended composers of non-electronic music include:
Elliott Carter
David Diamond
Henry Cowell
Wallingford Riegger

Recommended composers of electronic and experimental tape-recorded music include:
Pierre Boulez
Karlheinz Stockhausen

Dvořák, *Ninth Symphony* ("New World") (Second Movement)
Meredith Willson, *The Music Man* ("Lida Rose")
Bach, *Brandenburg Concerto No. 2* (Second Movement)

Chapter 5

Britten, *The Young Person's Guide to the Orchestra*

Chapter 6

Blues composition -
Recommended performers include:
Robert Johnson
Big Bill Broonzy
Bessie Smith
Muddy Waters
John Lee Hooker
Blind Lemon Jefferson

Rachmaninoff, *Rhapsody on a Theme of Paganini*
Brahms, *Variations on a Theme by Haydn*

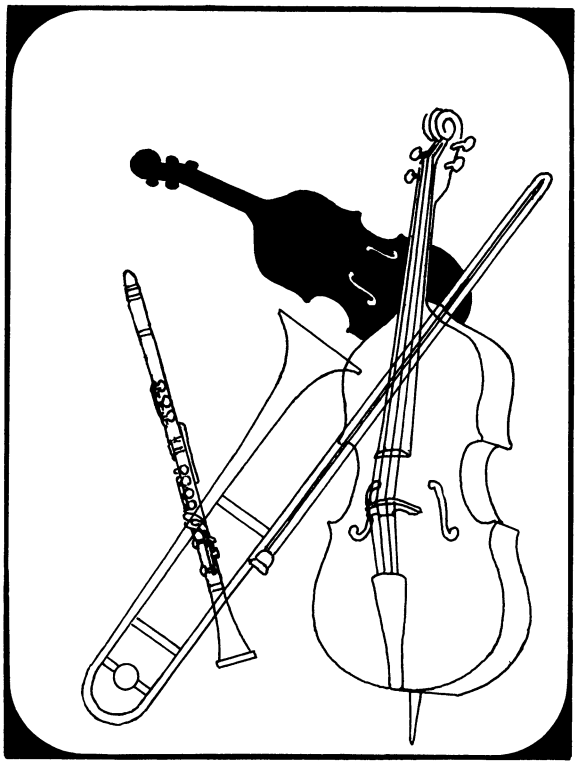
Chapter 4

HARMONY

Melody.

And rhythm.

Put them together and we can write any kind of music that we choose. They are the building blocks. They are the basis on which all music rests.



But perhaps you want to object just a bit. "O.K.," you say, "they are the building blocks. But when *I* listen to a piece of music, I hear a lot more than just a melody and some rhythm. Things still sound pretty complicated to me. In fact, I'd have to say that I hear lots of melodies, and they all seem to be mixed together."

If you have actually had some thoughts along these lines, congratulate youself, for you have come up with something positively brilliant. The great mass of sound which we hear in a symphony or in a popular song is nothing more than a large number of instruments playing melodies. Each instrument has its own melody. Played together, they produce the sound which we interpret as a musical composition.

Let's take a look at the ways in which two or more melodies can interact with each other. We'll be investigating an area of music theory which is known as *harmony*.

Harmony

Melodies, you will recall, are made up of individual notes. Suppose now that in a particular composition there are four melodies being played by four different instruments. Suppose further that we could stop the music and listen to what was happening at one single moment—one fraction of a second—in the piece. Think of what we would hear. Would it be four distinct melodies? Not at all! Instead, we would hear four single notes, one being played by each instrument.

Melodies interacting with each other, then, are really just individual notes interacting with each other. At any given moment in a composition we can stop the music and hear single notes sounding together. If there are three or more different notes being played, the resulting sound is called a *chord.* Harmony is the study of chords.

The most common of all chords is called the *triad.* To get an idea of what a triad sounds like, sing the second, third, and fourth words of the *Star-Spangled Banner:* "Oh, *say can you* . . . " Of course, to be a chord, the three notes of your triad must be sung simultaneously. Perhaps you can do this with two of your friends. Let one person sing the low note, "say," one person the middle note, "can," and the third person the high note, "you":

"you
can
say"

You'll find that the triad has a very pleasing sound. This quality, together with its simplicity, has caused it to be the most useful of all chords.

Many pieces of music consist almost entirely of simple triads. For example, nearly all country music has this characteristic. The same goes for the area of music known as the blues. An authentic blues, in fact, has a harmonic background based on a pattern of just three triads, repeated over and over again.

Other music is often made up of more complicated chords than the triad. But close analysis shows that nearly all of these chords can actually be constructed by performing one of the following operations on a simple triad:

1. Changing one or two of its notes slightly;
2. adding one or two notes to it, or
3. combining these two operations.

Consonance and Dissonance

We noticed that the triad seemed to have a pleasant sound. A chord with this quality is said to be *consonant.* Usually the question of what is consonant and what isn't is a matter of opinion. What some people regard as a pleasant sound is interpreted by others to be most disagreeable.

For example, a large percentage of modern classical music and jazz consists of harmonies based on chords which, at first hearing, don't sound consonant to many people. As a result, these people find the music difficult to enjoy. Chords which produce this result are called *dissonances.*

Dissonances seem to be in abundance today because many modern composers have become tired of using the same old triads. And in their search for new sounds, they have come up with some unusual chords which many listeners have found disagreeable. If you'll think back to the first chapter, you'll realize that the problem here is with the listeners, not the composers. Listeners must devote themselves to new sounds. They must listen to these compositions for hours, for days, for weeks, before making their judgments. And in the end, they'll probably realize that the difficulty with dissonance is no difficulty at all. Dissonance becomes consonance in the ears of the experienced listener, who realizes that the composer with a reason for using new and unusual chords should by all means use them.

You can get a better idea of how dissonance gradually comes to be accepted as consonance by listening to the works of Richard Wagner and Claude Debussy. Try the prelude to Wagner's opera, *Tristan und Isolde.* Follow this with Debussy's piano composition, *La Cathédrale Engloutie.* You may be surprised to find out that the sounds of both of these works were once thought by many people to be extremely unpleasant. Critics were shocked, and said that both works were filled with dissonant chords. But *Tristan* was written more than 100 years ago, and the Debussy

composition, more than 50. In the intervening period of time, standards have changed. Now when we listen, we find that the chords of both pieces are quite agreeable. Today we judge them to be consonant.

Now listen to a modern classical composition. Try a work by Elliott Carter, David Diamond, Henry Cowell or Wallingford Riegger. At first you might feel as the first listeners to *Tristan und Isolde* felt. But don't jump to conclusions. Give the music a chance to become a part of you. Today the chords might seem dissonant. But in time, they may well become as consonant to you as the sound of the simplest triad.

Vertical Harmony

When we first considered the triad, we saw that the notes of the chord could be thought of as being built one on top of the other. To make this clearer, we diagrammed the three words of the *Star-Spangled Banner* vertically:

"you
can
say"

Some music consists of single chords much like our triad, following each other one by one, but distinctly separated from one another. We could diagram this type of music as follows:

notes of chord 1	notes of chord 2	notes of chord 3	notes of chord 4
A	D	G	J
B	E	H	K
C	F	I	L

Such music is said to consist of *vertical harmonies*. The characteristic sound which results arises from the vertical stacking of notes. The individual notes of each chord are dependent on the other notes of the chord to help give the music its special quality.

You can hear a beautiful example of vertical harmony at the beginning of the second movement of Dvořák's *New World Symphony*. Listen carefully and you'll be able to pick out seven distinct chords. Notice how each chord consists of stacks of notes. Each single note by itself would be dull. But by interacting with each other, the notes produce a lush, full sound.

Vertical harmony forms the basis for much of our folk music and many of our church hymns. And one of the richest sounds that has ever been invented, a sound which goes by the strange name of "barbershop harmony," is completely dependent on it. A fine example of barbershop harmony can be found in the song, "Lida Rose," from Meredith Willson's musical comedy, *The Music Man*.

"Lida Rose" illustrates a point that was made at the beginning of this chapter. At first hearing, the song sounds complex. But when we analyze it, we see that it consists of four separate melodies. Each performer sings one of the melodies. The individual notes of the melodies interact with each other and form single chords. These chords are nothing more than vertical stackings of notes. One chord follows another with neat precision—and the result is the lovely song, "Lida Rose."

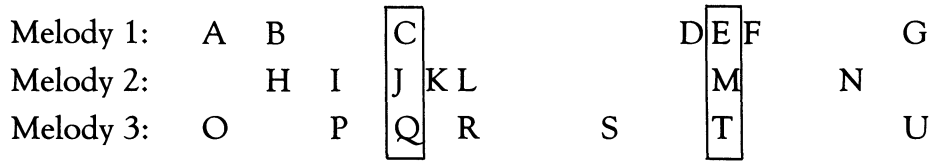
Horizontal Harmony

With vertical harmony, we found that individual notes were dependent on the other notes which lay above them or below them in the chord. This vertical dependence produced the effect of single chords marching along, one after the other.

A second important type of harmony occurs when the notes of each melody are dependent on other notes which come *before* them or follow *after* them in the same melody. In this case, melodies are more or less *independent* of other melodies which lie above or below them. We call the harmonies which result from such independent melodies *horizontal* harmonies.

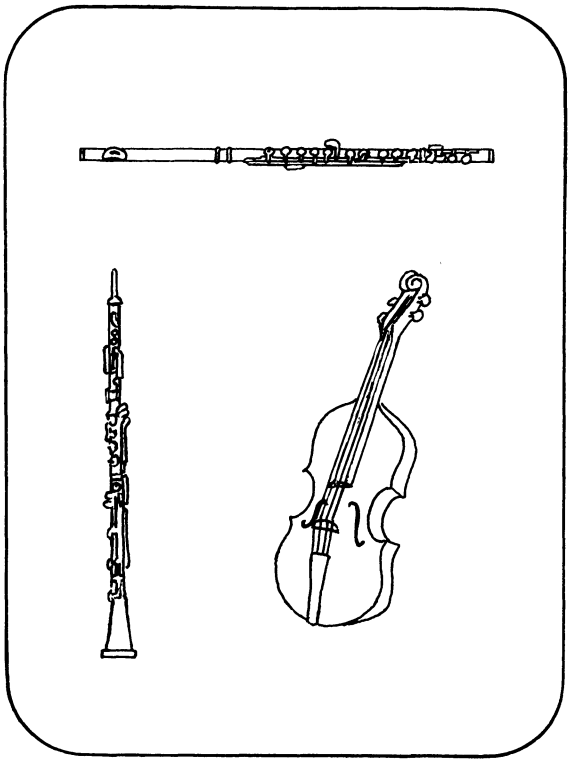
The word "harmony" here still refers to chords which consist of notes from different melodies sounding at the same time. Horizontal harmony, then, unquestionably has a vertical quality. But this vertical character is minor. We don't sense the effect of single chords following one another. Instead, we are more aware of the importance of individual melodies. Each one seems to have a character of its own. Occasionally we will hear the individual notes of the melodies sounding all at once, thus stacking themselves vertically, but these instances seem almost to be accidents. They allow us to orient ourselves momentarily, perhaps to identify a chord, but then the melodies are off and running on their individual paths again.

The following diagram might make the idea of horizontal harmony a little clearer to you. Suppose that one melody consists of single notes labeled with the letters A through G. A second melody is labeled H through N. And a final melody is labeled O through U. These three melodies form a section of a piece of music. By careful listening, we are able to take this section apart and diagram it as follows:



You can see that at only two places have the individual notes stacked themselves vertically to form a chord. The rest of the time they sound only by themselves, or perhaps with one other note. The melodies are really quite independent of each other. They are important in their own right, not just in how they relate to the other melodies.

Of course, a composer using horizontal harmonies must be careful to choose melodies which are not *totally* independent. Otherwise the listeners will most certainly become confused. They might think that they are listening to three or four different compositions at once! Thus, the skillful composer chooses melodies which have a certain amount of independence, but which interact with each other vertically just enough so we can keep our bearings.



Johann Sebastian Bach was one of the most skillful composers who ever lived. His genius in the composing of works based on horizontal harmonies reflects this fact. Listen to the middle movement of his *Brandenburg Concerto No. 2.* Here a flute, an oboe, and a violin are each given wonderful melodies, each with its own character and charm. We have no difficulty thinking of them as independent melodies. But at the same time, we marvel at how they fit together, weaving their ways around and about each other and giving us just enough of a sense of vertical harmony that we don't become lost.

Other examples of such music can be found in the string quartets of Beethoven and Brahms. And more recent examples are provided by some of the big-band compositions of Duke Ellington. Ellington often gives one melody to his saxophone section, another to his trombones, and a third to his trumpets. These melodies retain their independence while threading themselves together in the same incredible manner that Bach's melodies displayed in his *Brandenburg Concerto.*

Combining Horizontal with Vertical

Much of our popular music, soul music, and country music displays combinations of horizontal and vertical harmonies. The singer or singers normally sing a melody of such importance that it has horizontal independence. But backing up the singer are usually three or four dependent melodies which are stacked vertically in simple chords, many of them triads.

And most longer works for orchestra, you'll soon discover, consist of individual sections, some of them consisting of mostly vertical harmonies and some of them, horizontal. As usual, careful and persistent listening will tell you which is which.

A Few Recommendations

As you listen to music, especially complicated music, you should try to discover how the melodies are interacting with each other. Try to pick out the individual melodies played by each instrument. Hunt for obscure melodies, far in the background. Then ask yourself these questions: Are the melodies independent, coming together only occasionally to allow us to get our bearings? Or are they dependent on each other, stacking themselves into individual chords which follow one another in an easily discernible pattern?

Don't worry about not being able to name individual chords. Instead, look for broad relationships among melodies. If you can see how individual melodies affect each other harmonically, you will have come a long way toward understanding what is happening inside a piece of music.

STUDY ACTIVITIES

1. The diagram on page 29 showed how three melodies could interact horizontally. Using a similar diagram, show how the same melodies would appear if they were interacting vertically. Represent melody 1 by the letters A though G, melody 2 by the letters H through N, and melody 3 by the letters O through U.

2. Decide which of the following are examples of vertical harmony and which are examples of horizontal harmony:

	Vertical	*Horizontal*
The Chopin *Prelude in C Minor* (You may wish to listen to the prelude again before deciding.)	_____	_____
Three people singing the "round," *Three Blind Mice*	_____	_____
A crowd at a baseball game singing *The Star-Spangled Banner*	_____	_____
An orchestra holding the final note of a symphony	_____	_____
A robin and a sparrow singing	_____	_____
People at a party singing "For He's a Jolly Good Fellow"	_____	_____
A jazz trumpeter and a jazz trombonist improvising melodies simultaneously	_____	_____

3. A difficult assignment: Give as many possible explanations as you can for the fact that certain chords sound dissonant to some people while those same chords sound consonant to other people.

4. Listen to two songs by a small group which you especially enjoy. Then answer the following questions:
   a. Is there anything in either of these songs that your parents would label "dissonant"?
   b. How many instruments are playing in each song?
   c. How many singers are there in each song?
   d. Listen carefully to the melodies played by each instrumentalist. Would you characterize these melodies as dependent or independent?