Theory of Music

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J. WESTON
WALCH
PUBLISHER
PORTLAND, MAINE

Contents

Introduction .... *v*

Chapter 1. The Basics of Notation 1

Chapter 2. Writing Music Notation 19

Chapter 3. Scales 27

Chapter 4. Intervals 39

Chapter 5. Transposition 53

Chapter 6. Harmonizing a Melody 67

Chapter 7. Chord Progressions, Voice Leading,
Four-Part Writing 85

Chapter 8. Chord Inversions, Seventh Chords 99

Chapter 9. Writing a Melody 113

Chapter 10. Augmented and Diminished Intervals,
Altered Chords 131

Chapter 11. Secondary Dominants, Modulation 143

Chapter 12. Chromatic Harmonization, Extended Chords 159

Chapter 13. Altered Sixth Chords, Nonharmonic Tones 173

Chapter 14. Imitation 189

Chapter 15. Modes, Invented Scales,
Parallel Chords, Non-tertian Harmonies 203

Chapter 16. Analyzing Musical Scores 219

Appendix A:
Arranging for Vocal Groups *233*

Appendix B:
Arranging for Instrumental Groups *243*

Appendix C:
Arranging for Stage Bands and Rock Groups *263*

Appendix D:
Suggested Recordings to Use with This Book *275*

Index *277*

Introduction

Learning to write music is a bit like learning to write a language you already speak. Chances are, you are already a *performer* of music—a singer or an instrumentalist. You may already be skillful at reading notation, and have some information about how to write music. But your present impression may be somewhat disorganized or inaccurate. In the language of music, your vocabulary is good, but your grammar needs some polishing.

Whether you are arranging someone else's music or writing your own, you will want your work to sound as professional as possible. The principles of musical grammar were developed over hundreds of years, through experimentation by some of the world's finest musicians. Even when musicians "break" the conventions of music, they know what they are doing, and they do it only for a special reason.

We are concerned here with musical grammar (more properly, musical *syntax*), and with learning how to write smooth, effective music of many types. The principles of musical grammar are not absolute; they may be avoided when it suits the musician's expressive purposes. They were compiled in instruction manuals, many of which were written almost three centuries ago by a French musician named Rameau. They have been used by professional composers ever since, even though musicians expand or even ignore them at times. Almost all the music you hear today is based on the fundamental principles that Rameau codified so long ago. Jazz and pop, country and rock, classical and blues—all share a harmonic vocabulary and a syntax that we will explore in this book.

Hearing the music *you* wrote is a marvelous thrill, and I hope you can do it often. Music is, after all, sounds in the air, not notes on a page. You want to get to the "air" stage as often and as directly as possible. On the other hand, try not to fall in love with your first efforts. At this stage, you are making experiments, not creating deathless art. Be critical of your own work, and of the work of others. Most pencils have erasers, and both ends of your pencil should be used judiciously.

There is no guarantee that by following all the principles you will write great music; nor can I guarantee that you will never write great music *unless* you follow the principles. Chances are, however, that the more careful you are with musical syntax, the better your music will sound—and that's what writing music is all about. You'll need a lot of manuscript paper, and don't be stingy with it. Try things, change things, throw away your old scratch copy, and leave room for corrections and alterations. Always make neat, clean copies of your products for performance; other people must read your manuscript, and you want your efforts to sound as good as they really are.

Two brief comments before we begin. First, it is *most* important that you sharpen your skills of music reading and train your ear to hear more acutely. You *must* sightsing regularly, and you *must* practice listening to music and analyzing it. Second, you learn to write music only by writing it. Some of what you write won't please you, but you must keep on writing to get any better. Don't sit around waiting for inspiration to strike, take pencil in hand and go at it. If one idea doesn't work out, try again until something does. Once you start writing, the ideas will come. Then, find a way to *hear* your own work; it's exciting, it's interesting, and it makes all music mean much more to you.

All set? Then let's begin.

Chapter Nine

Writing a Melody

What is a hit tune? It isn't necessarily a "top-40" song; they usually don't last out the year. No, a real hit tune is one that is popular and familiar for a long period of time, over a large territory, or both. By these standards, "Twinkle, Twinkle, Little Star" must rank near the top on the all-time hit parade; this simple little song has been around all of Europe and North America for over 300 years.

Composers such as Stephen Foster and George M. Cohan obviously understood what makes a good melody. So did Mozart, Tchaikovsky, Mendelssohn, Dvořák, and many others. March writers like John Philip Sousa, Karl King, and Henry Fillmore knew the secret. More recent popular songwriters such as Carol King, Andrew Lloyd Weber, and Stephen Sondheim are master tunesmiths.

The "secret" of writing successful melodies is really no secret at all, of course, nor is it any *one* thing. In this chapter we'll begin with a discussion of musical structure as one element of a successful melody.

Structure

Suppose a composer has a nice idea for a melody and writes the idea down, perhaps sketching out some accompanying chords. After notating a phrase of melody, maybe sixteen measures long, he or she stops to ponder the composer's eternal problem: "What do I do next?" The choices are absurdly few. The songwriter can:

1. Do the same thing again.
2. Do something different.
3. Do the same thing in a different way.

The entire composition will evolve from a series of such choices that are made as the composer goes along. The longer the piece is, the more careful he or she must be about these decisions because of the greater risk of boring or confusing the audience.

Let's examine "Twinkle, Twinkle, Little Star" (Illustration 1) to see how it treats the problem of what to do next.

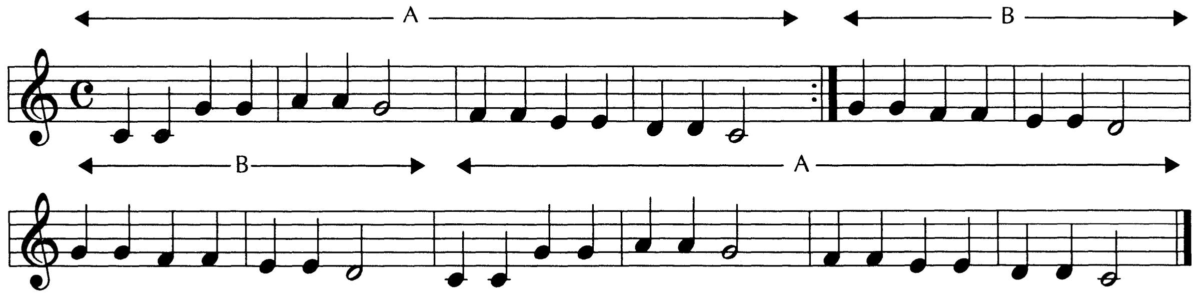


ILLUSTRATION 1

The basic melody (labeled A) is heard, and (in this version) is immediately repeated. This is followed by a new melody, B, which is only half the length of A, and is itself repeated. The piece concludes with the return of melody A. "Twinkle, Twinkle, Little Star" follows the pattern AABBA. This is its *form.*

Every melody follows a formal pattern, but not all of them are the same. The song "America," for instance, has two phrases; its form is AB (Illustration 2). "London Bridge Is Falling Down" has the form ABAC (Illustration 3).

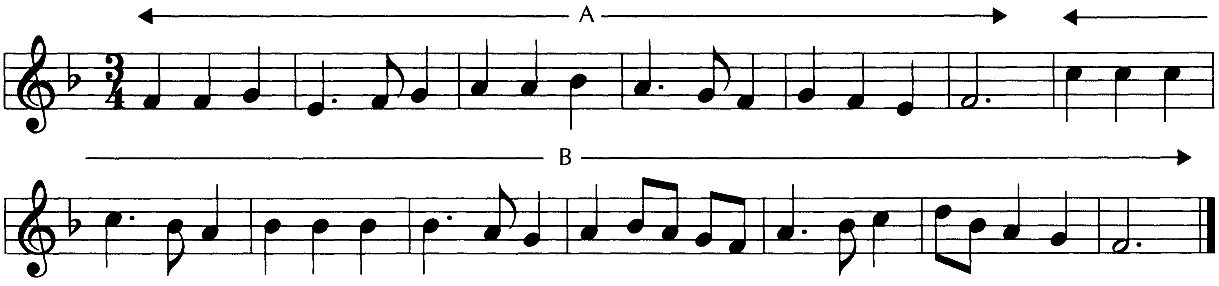


ILLUSTRATION 2

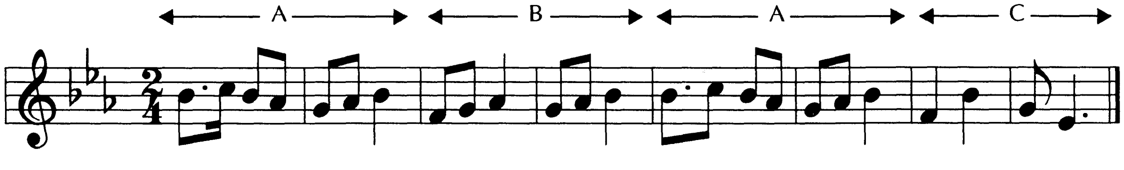


ILLUSTRATION 3

"The Marines' Hymn" has the form AABA (Illustration 4). "Row, Row, Row Your Boat" has an ABCD form (Illustration 5).

The same song may be diagrammed differently by different people. For example, "Twinkle, Twinkle, Little Star" is sometimes sung without repeating the first phrase. Also, since phrases tend to be of the same length, the two B phrases can be combined

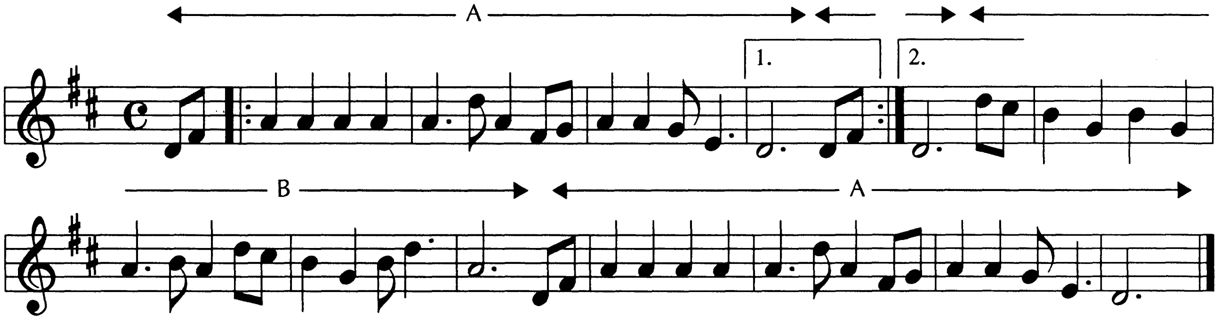


ILLUSTRATION 4

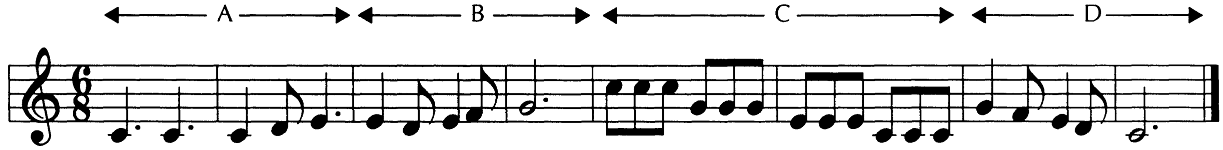


ILLUSTRATION 5

into one B, and the shorter, repeated sections can be indicated by lowercase b's below the capital B, as in Illustration 6. When analyzed this way, our song has the form ABA.

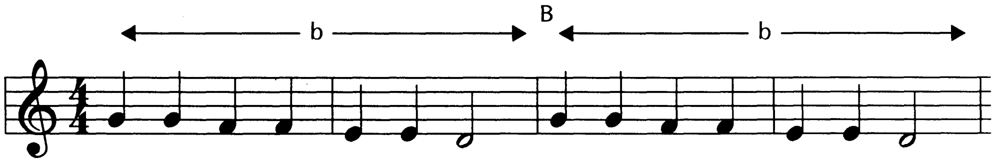


ILLUSTRATION 6

Frequently, one phrase of a song will be *nearly* identical to another except for a few notes, usually at the end of the phrase. The famous melody from Beethoven's "Choral Symphony" illustrates such differences in phrases, as can be seen in Illustration 7. The first two phrases are essentially the same, except for the last three notes. To indicate the difference in phrases, we can use a small numeral 1 beside the A, to represent the second phrase. The third phrase will be indicated with a B, of course, giving us A-A1-B. How would the final phrase be indicated?

The *function* of a melody may help determine its form. "Row, Row, Row Your Boat," for instance, is a round; several voices sing different phrases at the same time. If any two phrases are the same, then two voices will have the same part, and the character of the round will be weakened. In a round, once the second voice has started singing, each phrase should be different from the others.

The *length* of the melody is another consideration. The longer a melody is, the more important it becomes to repeat a section. A short tune like "Row, Row, Row Your Boat" (16 beats long) can be remembered easily. Longer ones, like "Swanee

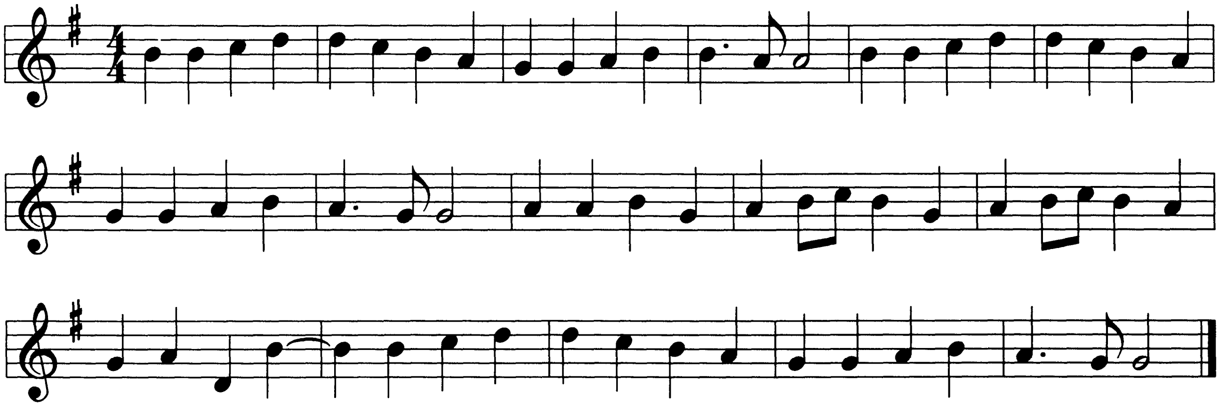


ILLUSTRATION 7

River"—at 64 beats, four times the length of "Row, Row, Row Your Boat"—must have much repetition for the average person to remember them. The formal structure of "Swanee River" is A-A1-B-A1.

A third factor that affects a melody's form is the extent to which it remains in, or varies from, one *key.* (The subject of key changes will be discussed at length in other chapters.) Short songs usually stay in one basic key throughout; they are too short to permit a modulation (change of key). Longer songs may need more variety to keep up the listener's interest level. Examine the arrangement of "America, the Beautiful" in Illustration 8. The form is A-A1-B-C, which allows for quite a bit of variety by itself. The song also changes key in measure 6 (to G), then returns to the original key in measure 8. Notice that in measure 7 there is a D^7 chord, which is the dominant chord in G major. If the song did *not* modulate to G in measure 6, the chord would be a d^7 (ii in C major). Try both the D^7 and the d^7 chords here and see how they sound. The d^7 just isn't the right chord.

Any successful melody, however, must have a balance between variety and unity. There has to be some strong unifying element to the song or it will sound like a collection of phrases from four different songs. In "America, the Beautiful," unity is obtained by the rhythm. Notice that the rhythm for the first phrase is used in the other three phrases. This is called an *isorhythm* (*iso* means one), and we say that the song is *isorhythmic.* Some other songs that are isorhythmic are "Twinkle, Twinkle, Little Star" and "My Darling Clementine." Can you think of more?

The following principles apply to the formal structure of melodies:

1. The shorter the song, the less the need for repetition. If the song is a round, there should be no repetition. In longer melodies, repetition is needed.

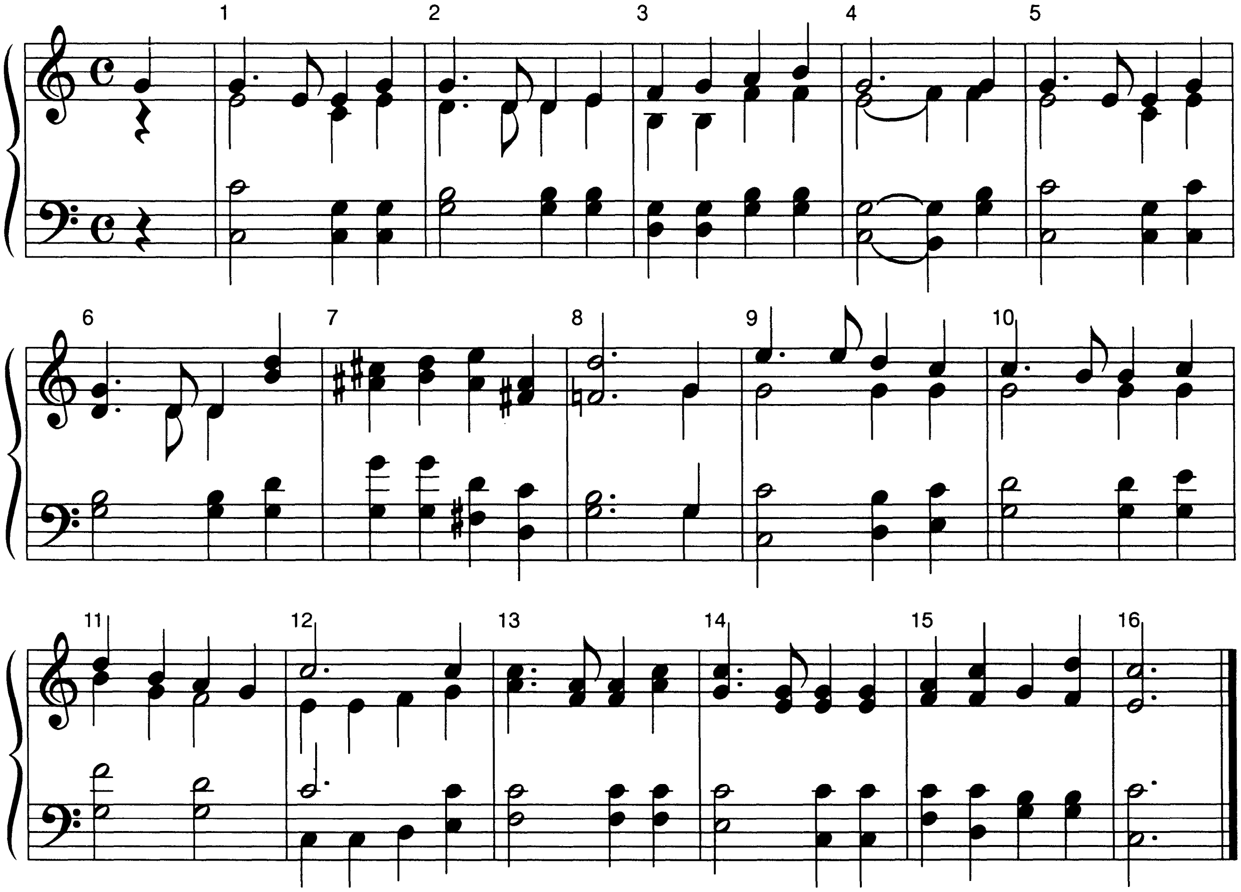


ILLUSTRATION 8

2. Many different patterns of phrases can be found, even in simple songs. Formal structures using one, two, three, or even four phrases are common. Some of these patterns, and the songs that illustrate them, are the following:

AA1BA1—"Swanee River"	AA1BC—"America, the Beautiful"
ABAC—"London Bridge"	ABCD—"Are You Sleeping?"
ABCA— "Sweet Betsy from Pike"	AB—"On Top of Old Smoky"

Test your understanding of this material by completing Exercise A on Worksheet #10, identifying the forms of these two melodies. Have your teacher check your work.

Motif

Now let's take a single phrase apart to see what makes it tick. Let's begin by playing "Name That Tune." Play each of the patterns of tones in Illustration 9 in a steady, even rhythm; see if you can guess what song each tonal pattern represents. Answers may be found at the end of the chapter.

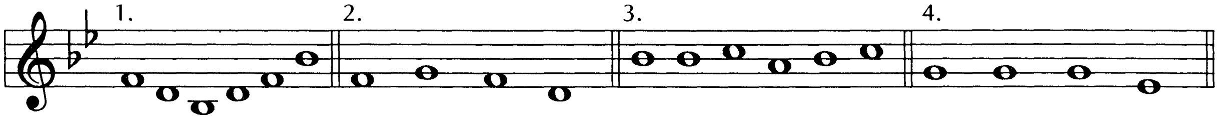


ILLUSTRATION 9

Assuming that you got them all right, what is there about these patterns that gives the tune away? The answer is that each tonal pattern is strongly associated with one song and almost no other. Play them again and see if you can imagine any other song using the same pattern. Perhaps you can, but there are not many.

We'll carry the test one step further. The rhythm patterns in Illustration 10 apply to the songs in Illustration 9, but they are in different order. Two have six notes and two have four notes. Try to match the rhythms with the tonal patterns.

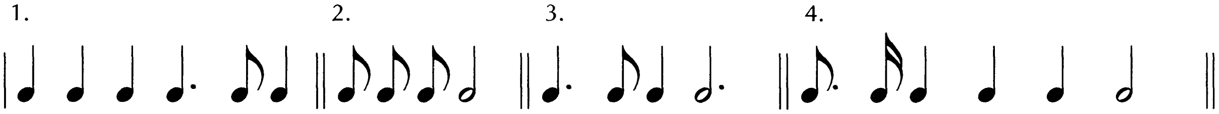


ILLUSTRATION 10

Each rhythm pattern is characteristic of one song, almost to the exclusion of any other song. The rhythm patterns and tonal patterns, alone or in combination, make up what is called a *motif.* Motifs are the short, characteristic "signatures" of melodies.

Good strong melodies are easy to remember, largely because they repeat a motif over and over. Some songs consist of little else *but* a motif. In the song "Skip to My Lou," Illustration 11, measures 1 and 2 make up the motif. Measures 3 and 4 repeat the motif a step lower, while measures 5 and 6 are identical with 1 and 2. Only measures 7 and 8 are really different. The folk song "Shoo, Fly, Don't Bother Me" works the same way.

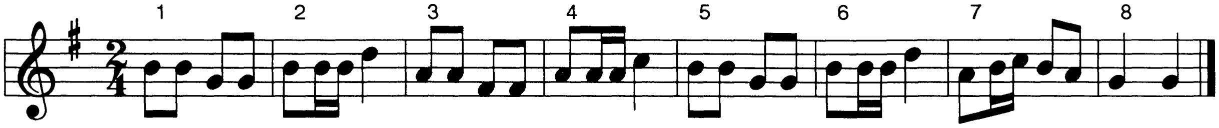


ILLUSTRATION 11

Most melodies consist of one or two motifs. A good example is the song "Maryland, My Maryland," found in Illustration 12. The opening motif (marked A), which resembles "Here comes the bride," is immediately repeated on higher pitches. The second motif (marked B) contrasts with the vigorous A motif. The whole first phrase is

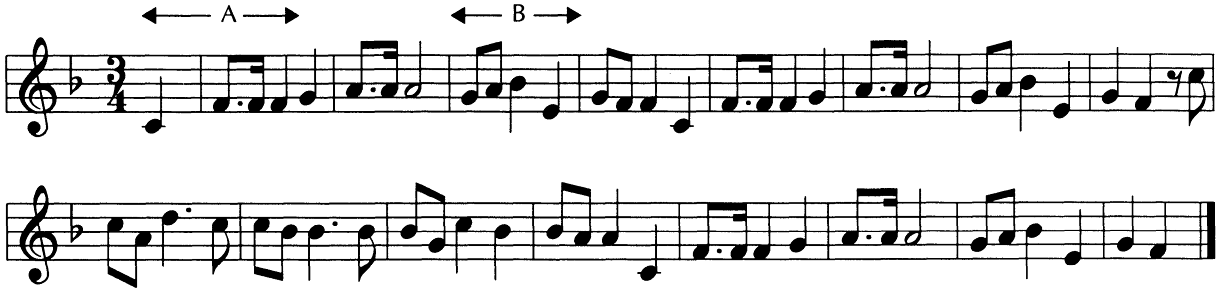


ILLUSTRATION 12

repeated (A-A) and then followed by a B section based on the B motif. The melody returns to the A phrase at the end.

A good motif is strong in rhythm and tonal motion because it is often varied within a song, rather than being repeated note for note. In Illustration 12, the second appearance of the motif (measure 2) has the same rhythm and the same upward motion as the first, but where the first appearance goes up a perfect fourth (measure 1), the second goes up only a major second (measure 2). The second statement is analogous to, rather than identical with, the first. Nonetheless, we easily recognize the similarity and understand that the second measure is just a variation on the first.

Sometimes a motif is slightly changed just to fit a change of chord in the song. In the Mexican folk song "La Cucaracha," presented in Illustration 13, we can see this type of change. The motif (first five notes) outlines the G chord at the beginning, but

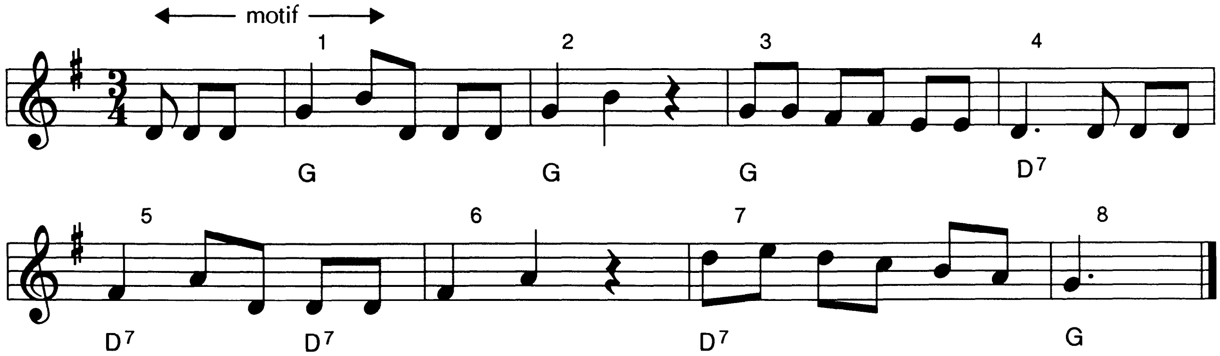


ILLUSTRATION 13

when it appears in measures 4 and 5 it has been altered to fit the notes of the D^7 chord.

A motif may be recognizable even though it has been drastically changed. In Illustration 14, the melody is an old barbershop quartet song, "Sweet Genevieve." The motif in this song (the first four notes) features a dotted-eighth-and-sixteenth-note rhythm and a rather chromatic series of notes. In notes 1 to 4 the series skips up a sixth and moves upward. The next four notes (5 to 8) also feature the rhythm and the

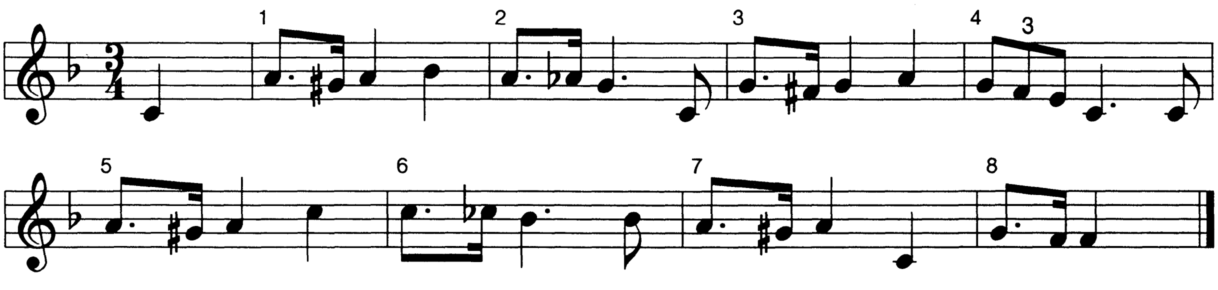
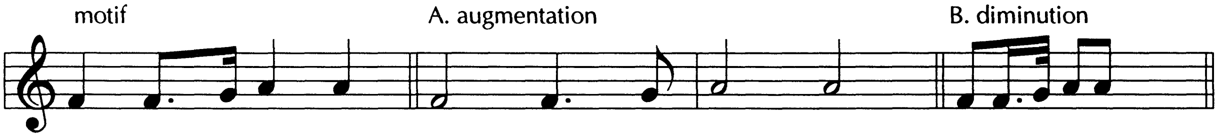


ILLUSTRATION 14

chromatic nature of the notes, but the direction here is downward and all in half steps. We identify these two figures as variants of the same motif *because* of the similarities and *in spite* of the differences.

Now examine the rest of Illustration 14, observing how the motif is used in other places. Which parts are similar to the first four notes, and which are similar to the second four?

Composers of both art music and popular tunes make great use of motifs and often find interesting things to do with them. Sometimes they stretch a motif out over twice as much time, as in Illustration 15A, a process called *augmentation*. Sometimes they squeeze them into half the time of the original motif, as in Illustration 15B. This is called *diminution*.



ILLUSTRATIONS 15A and 15B

Tchaikovsky, the popular Russian composer, used diminution of a motif quite cleverly in his Third Symphony. The low instruments play the motif in normal note values. When they are halfway through, the high instruments play it in diminution, making it sound as if they were running to catch up (see Illustration 16).

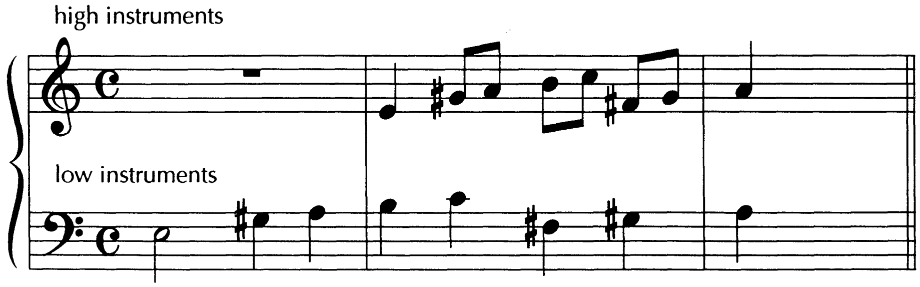
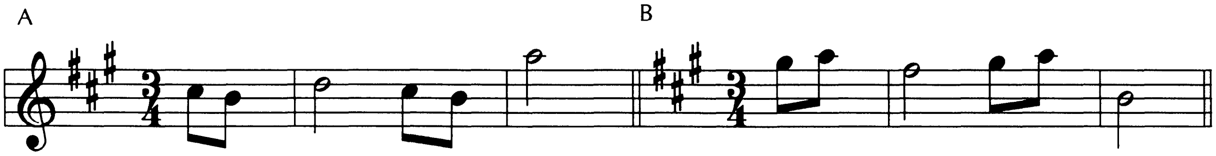


ILLUSTRATION 16

Sometimes a motif is *inverted,* or turned upside down. The German master Johannes Brahms wrote a lovely "Intermezzo" for piano (Op. 118, no. 2) that uses the motif in Illustration 17A. In measure 35, Brahms introduces a figure (Illustration 17B) that at first sounds like a new idea. This turns out to be an inverted form of the original motif. Where the original goes down a second and then up a third, the inversion goes up a second and down a third, and so on.



ILLUSTRATIONS 17A and 17B

Some melodies use one main rhythmic motif at points throughout the composition. Notice how the dotted-eighth-and-sixteenth-note pattern dominates "The Battle Hymn of the Republic" (Illustration 18).

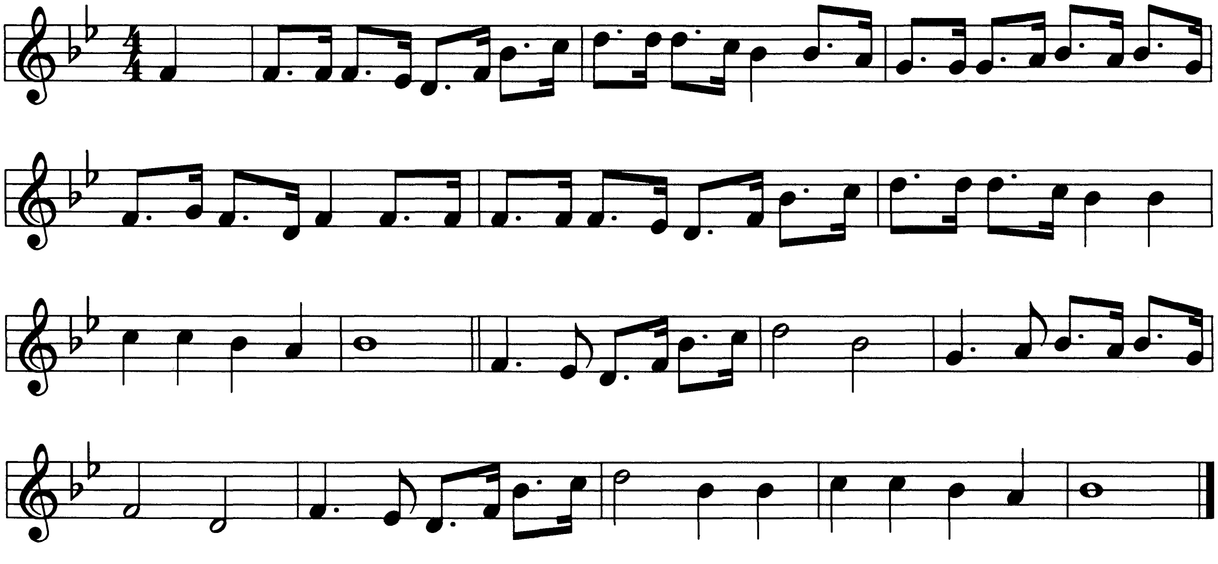


ILLUSTRATION 18

Other melodies, such as "Sourwood Mountain," have two strong and contrasting ideas (Illustration 19). Here the ideas alternate at two-measure intervals. Other such melodies are "Swing Low, Sweet Chariot," "All Night, All Day," and the sea chantey "Blow the Man Down." See if you can think of others.

One of the secrets to a good melody is a good strong motif. If you invent a strong motif, your melody nearly composes itself. We can illustrate the process by writing a song. Let's begin with a motif, simple in tonal motion, with a vivid rhythm pattern, as in Illustration 20. Next, decide on the formal structure you want to use. Try out two or

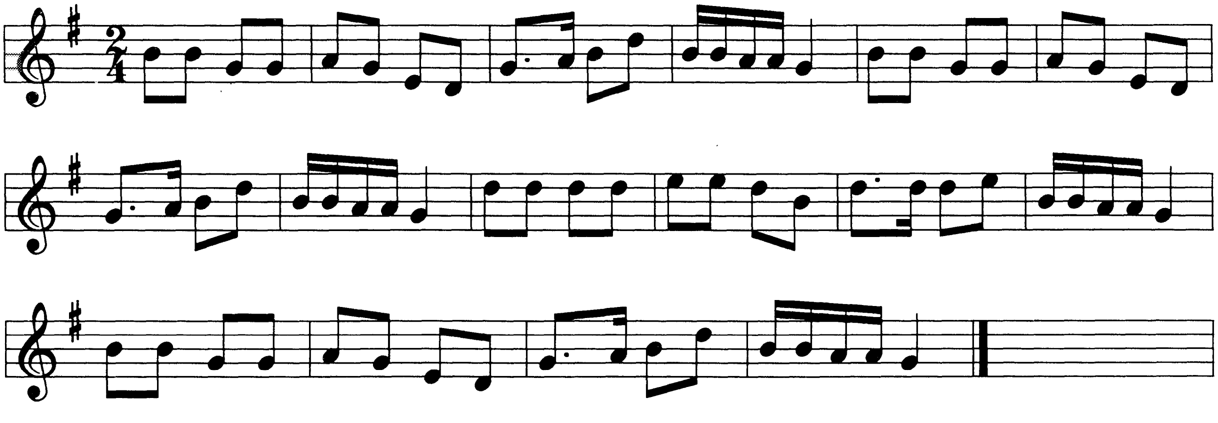


ILLUSTRATION 19

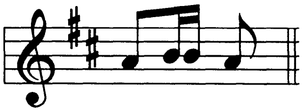


ILLUSTRATION 20

three patterns: AABA, AABB, ABAB, and so on—to see which one fits your ideas best. Keep in mind that you want a lot of repetition of your motif. Remember also that the B section should differ substantially from the A, and that it will probably be less forceful.

For the first phrase, start with the motif. Use it twice in the phrase. Change the pitch of the second occurrence to keep it from being too static. One solution might be similar to Illustration 21. Next, we will repeat the phrase, ending on *do* rather than on *mi*, as in Illustration 22.

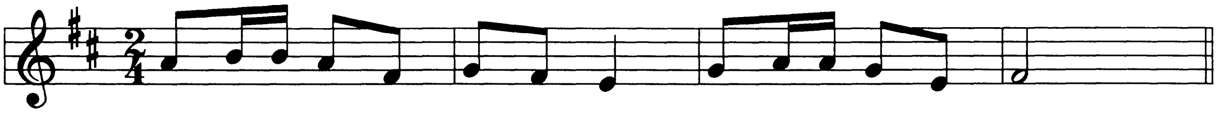


ILLUSTRATION 21

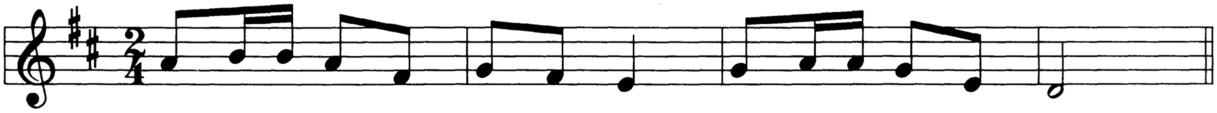


ILLUSTRATION 22

For a B phrase, we'll use something less vivid, but we'll sneak the motif into the second half of the phrase, as in Illustration 23. Now you must decide how to finish the piece. Should you repeat A, repeat B, or invent a new phrase, C, to end the song? Illustration 24 provides two endings; you decide which you like better.

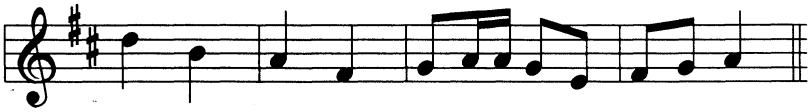
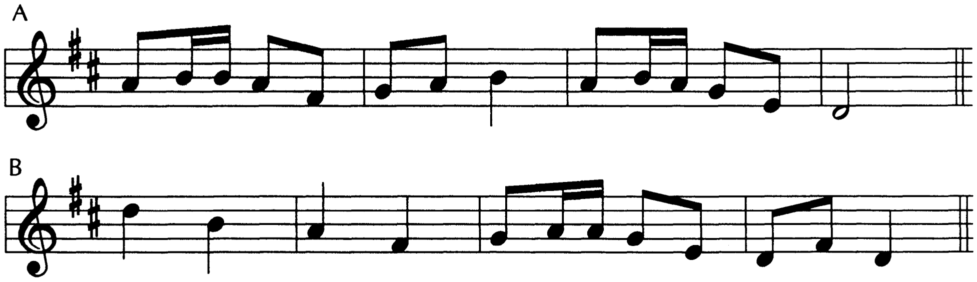


ILLUSTRATION 23



ILLUSTRATIONS 24A and 24B

Now that you see how simple it is, compose your own melody, using the previous steps as a guide (Worksheet #10, Exercise B). Don't be afraid to change things if you aren't satisfied. Also, don't be concerned if your first effort isn't a masterpiece. You learn by writing, and once you get the hang of it, you'll improve rapidly on your other attempts.

Melodic Shape

The last aspect of good melody writing that we need to consider is melodic shape, or contour. Let's begin by considering *shape* in the visual arts. What do you think the picture in Illustration 25 represents?

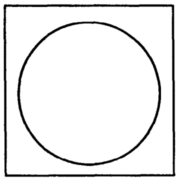


ILLUSTRATION 25

You might have said a hole, or a ball, or an orange, or Earth floating in space; all these answers (and many others) could be correct. In a more abstract sense, you might say that it symbolizes completeness, or self-sufficiency, or restfulness, or solidity. These answers are equally correct.

Now look at Illustration 26.

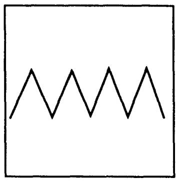


ILLUSTRATION 26

This picture could represent mountains, saw teeth, or ocean waves; it could symbolize regularity, or anxiety, or tension, or discord. Both these pictures could represent or symbolize many other things as well. The point is that they are *basic shapes* or *designs.* They can represent or symbolize a wide variety of objects or emotional states.

Just as there are standard visual shapes, there are standard melodic shapes as well. Let's consider a well-known melody and see how it represents a standard melodic shape (Illustration 27). The song consists of four phrases, has a phrase structure of A-A1-B-A2, and features the motif "*do-mi-sol.*" There is a strong isorhythmic motif throughout the song, shown in Illustration 28.

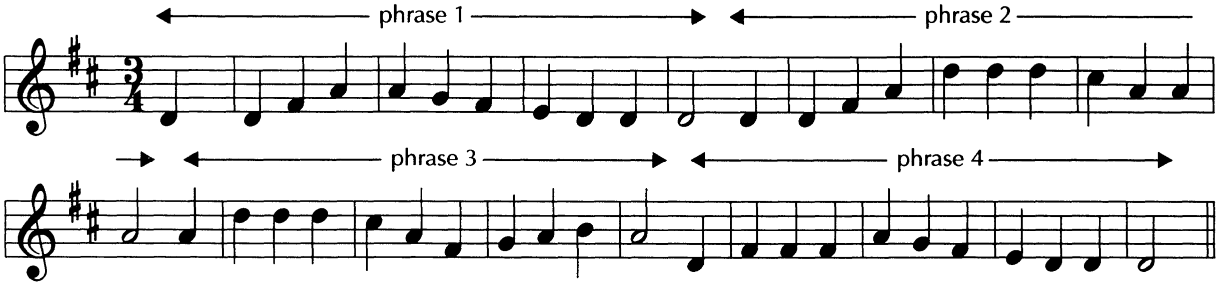


ILLUSTRATION 27

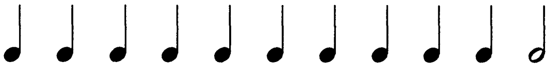


ILLUSTRATION 28

Let's carry the analysis a bit further. Phrase 1 begins and ends on *do*; phrase 2 begins on *do* but ends on *sol*; phrase 3 begins and ends on *sol*; and phrase 4 begins and ends on *do*. Furthermore, the range of notes in phrase 1 (from lowest to highest note) is a fifth, *do-sol*; for phrase 2, the range is an octave, *do-do*; for phrase 3, it is a sixth, *mi-do*; and for phrase 4, a fifth, *do-sol*, as in phrase 1. All this is summarized in Illustration 29.

Finally, each phrase has its own characteristic way of moving by step or by skip. Phrase 1 goes upward by skip and then downward by step (up the chord, down the scale). Phrase 2 skips up the chord for an octave, then comes down halfway, by step

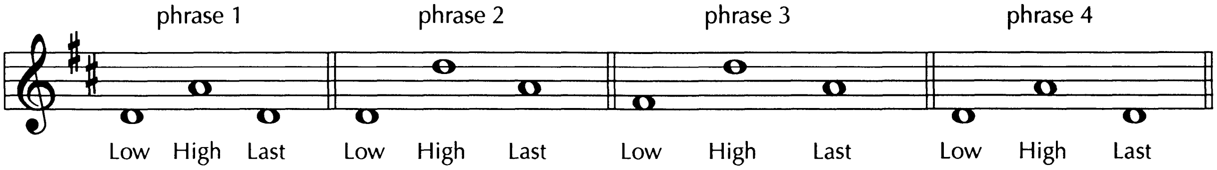


ILLUSTRATION 29

and skip. Phrase 3 begins with an upward skip, then moves by step and skip downward, and finally up by step, in a complex series of moves. Phrase 4 skips upward and returns by step.

Reduced to its simplest pattern, this type of melodic contour describes a large arc, or rainbow, over its four phrases, as can be seen in Illustration 30.

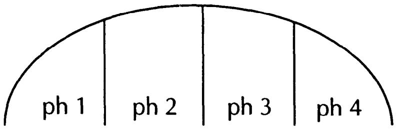


ILLUSTRATION 30

Other songs with similar melodic contours are "America, the Beautiful," "Frère Jacques," and "Down in the Valley." Can you think of still others?

It is easy to see why rainbow melodies often begin and end with A phrases. These songs have great strength and stability and are easily remembered because of the symmetry of their structures and the dramatic shape of their melodic contours.

Another typical melodic shape might be called the rocket. The rocket melody begins with a rapid climb upward and then meanders down from there. A good example of this form is Illustration 31, "On Top of Old Smoky."

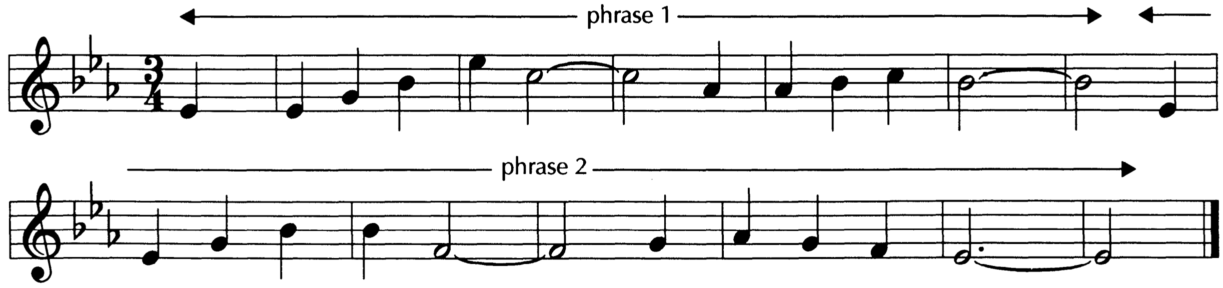


ILLUSTRATION 31

We can see how the rocket effect occurs by analyzing the two phrases for their first and last notes, and their ranges, as in Illustration 32. Other songs that have a rocket contour are "Leaving Old Texas," "Twinkle, Twinkle, Little Star," and "The Ash Grove." Each of these songs tends to ascend quickly by skip and to descend by step.

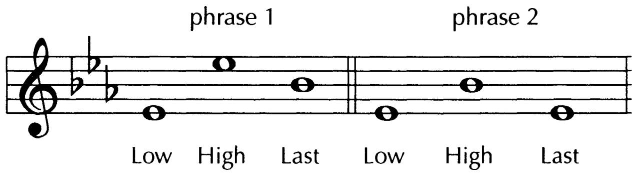


ILLUSTRATION 32

Certain other songs begin with a downward scale, and oscillate usp and down throughout the song. The familiar Christmas carol "Joy to the World" (Illustration 33) illustrates this type. This interesting melody has five phrases, two of which (phrases 3 and 4) contain balancing half-phrases that are alike. Unlike the typical rocket melody, "Joy to the World" returns to its highest note several times. Other oscillating melodies are "The Streets of Laredo," "Away in a Manger," and the Creole song "Michie Banjo."

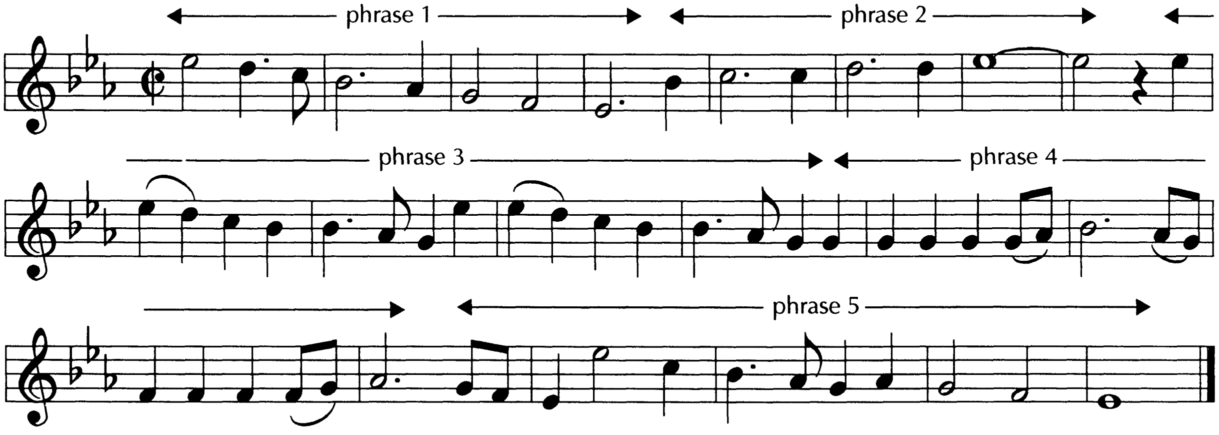


ILLUSTRATION 33

Some oscillating songs have ascending scales at their beginnings. One such melody is found in Illustration 34, "Long, Long Ago." Notice how much of this song moves stepwise, rather than skipwise. Other songs of this type are "Row, Row, Row Your Boat," "Home, Sweet Home," and "Joshua Fit the Battle of Jericho."

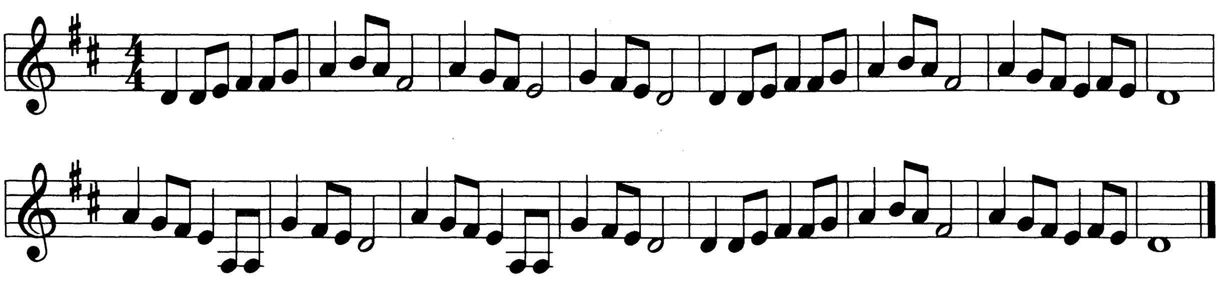


ILLUSTRATION 34

Still other songs are based on ascending or descending chord patterns. Songs like those in Illustration 35 are based on ascending chord patterns. Other songs, like those

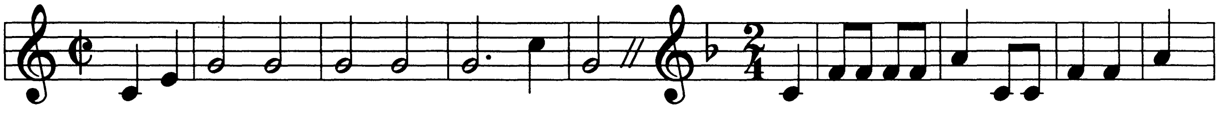


ILLUSTRATION 35

in Illustration 36, are based on descending chords.

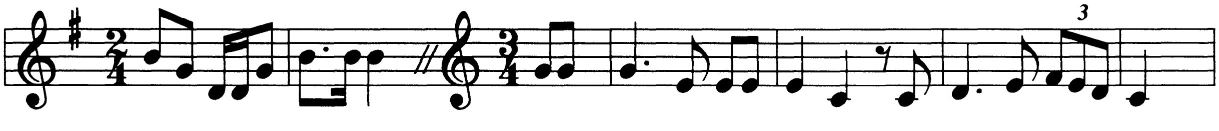


ILLUSTRATION 36

Once in a while, a melody's contour will be influenced by the use of *text painting*; that is, music in which the notes illustrate the words of the song. In Illustration 37, the melody illustrates the text. The word "high" is sung on the highest note of the phrase, and the word "low" is sung on the lowest note. In Illustration 38, "Sweet and Low,"

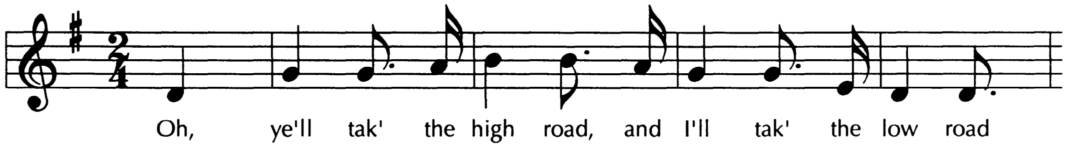


ILLUSTRATION 37

the melody suggests the waves that are described by the words. In Illustration 39,

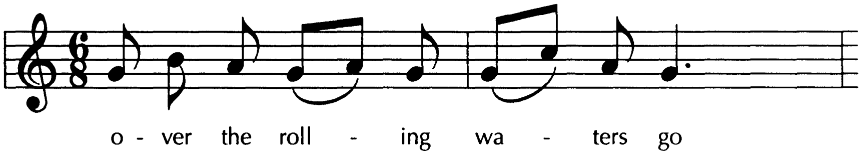


ILLUSTRATION 38

"Rockabye, Baby," the melody "rocks" back and forth over a range of a ninth, and gently swings in a $\frac{6}{8}$ meter.

Rainbows and rockets, scales and chords are all common melody shapes. Of course, there are many, many songs that don't follow any of these procedures. There are still other melody shapes not discussed here. For example, a song like "Bow, Belinda" goes alternately higher and lower than the starting note. A song like "Red River Valley" wanders back and forth within an octave before settling on the tonic.

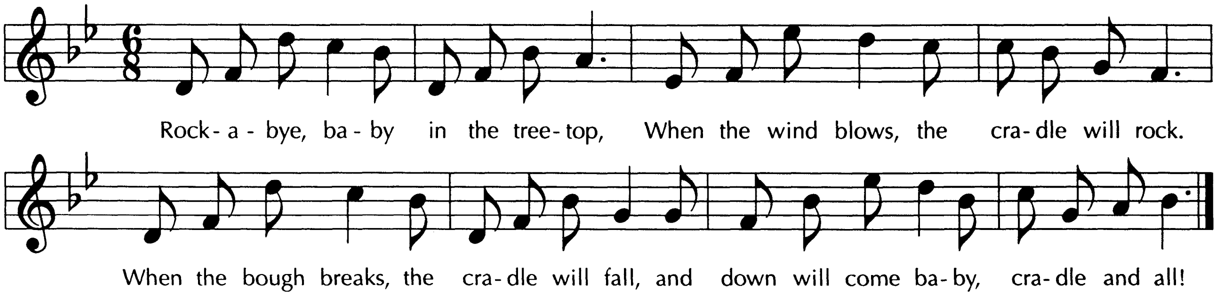

Rock- a - bye, ba - by in the tree- top, When the wind blows, the cra- dle will rock.
When the bough breaks, the cra- dle will fall, and down will come ba- by, cra- dle and all!

ILLUSTRATION 39

Most good songs have their own distinctive personalities and shapes, although they are similar to other songs in some ways.

Here are some general principles of melodic shape which apply to most strong, memorable tunes. Keep these principles in mind when you create your own melodies; it will help you to write more vigorous, interesting tunes.

1. A good tune needs a strong motif that appears several times within the song. If a melodic motif is not used, a rhythmic one is even more important to provide melodic unity.
2. The tune should have a simple structure. It should feature some repetition, as in AABA, AABB, or AABC. Sometimes you can make the song more interesting by using an unusual structure like ABBA.
3. Melodies to be sung should have a range no greater than an eleventh (i.e., an octave plus a fourth). "The Star Spangled Banner" has a range of a twelfth, and most people find it to be at the limits of their vocal range.
4. Songs, or short melodies for instruments, should stick closely to the basic key, with diatonic notes on all strong beats and with few accidentals throughout. A longer melody may have more accidentals, and perhaps even a brief modulation.
5. Nearly all songs begin on a note of either the I or the V chord in the key. For now, make it a rule to end on the tonic note.

Principles such as these may be ignored, but only when the composer has a command of the art of writing music. For now, try to write good melodies "by the book." Later, you should experiment with different ideas.

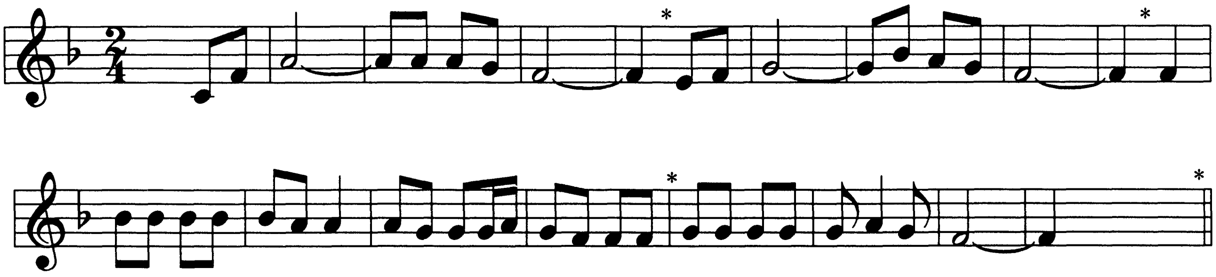
These are some of the secrets of good tunesmithing: strong structures with repetition, a vivid motif, and an overall shape that gives drama to the melody. You are now ready to work Exercise C on Worksheet #10.

Answers to song-matching exercise at beginning of chapter: 1. "Star Spangled Banner," 2. "Silent Night," 3. "America," 4. Beethoven's *Symphony No. 5.*

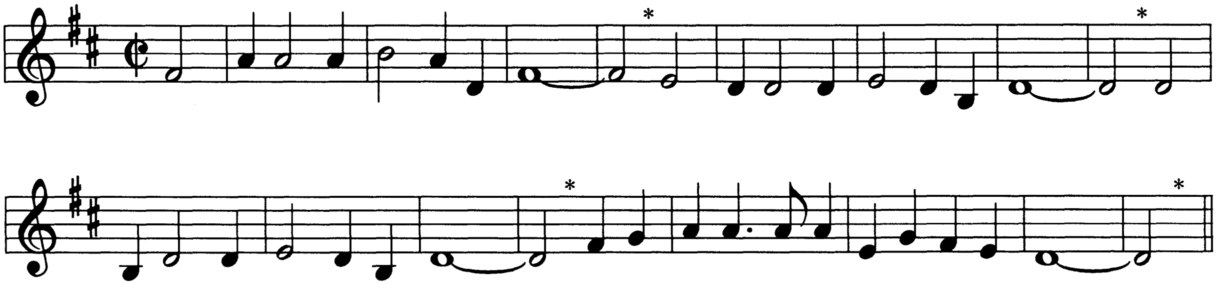
WORKSHEET #10

Exercise A

Identify the forms of the two songs below. Phrases end at the asterisks (*).



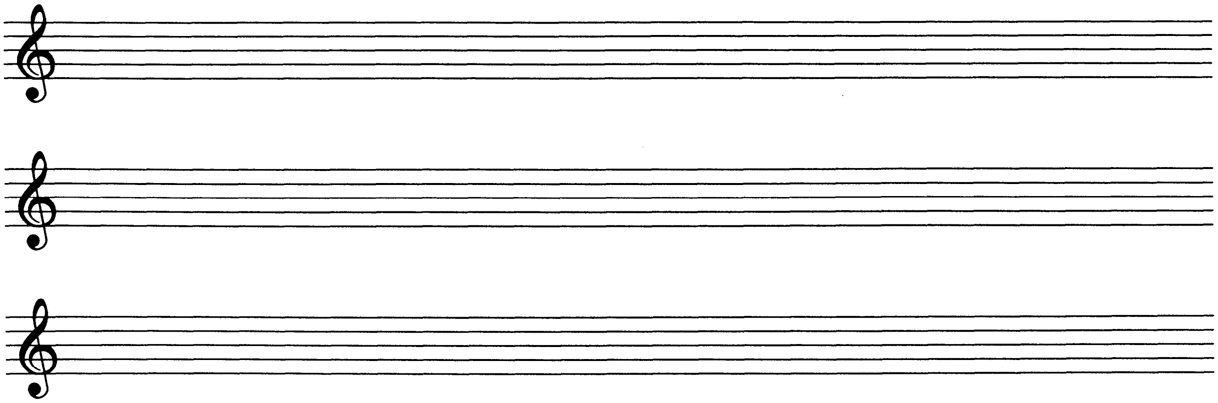
1. ______________________________



2. ______________________________

Exercise B

Compose your own melody, beginning with a strong motif.



Exercise C

Compose a song using the rainbow, the rocket, or the scale shape.