Understanding Music

Seventh Edition

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What Is Music?

What exactly is music?

This sounds like an easy question. We all know music when we hear it. And yet, if you think about it, perhaps it's not so easy to define.

Here are various thoughts about music from writers through the ages, from 400 BCE up to today.

"Music gives soul to the universe."
—Plato

"The food of love."
—Shakespeare

"Heaven is music."
—Thomas Campion

"Without music, life would be a mistake."
—Friedrich Nietzsche

"Music is a decoration of time."
—Frank Zappa

"Music washes away from the soul the dust of everyday life."
—Red Auerbach

"An explosive expression of humanity."
—Billy Joel

"Ah music...a magic far beyond anything done here."
—Albus Dumbledore

There is a difference between music and sound. Not many of us would consider the unpleasant sounds of a jackhammer to be music. But we cannot simply say that unpleasant sounds are noise and pleasant sounds are music. Many of us enjoy listening to the pleasant sounds of nature, such as rain falling or the rustle of leaves, yet we would not call these sounds "music."

We need to sense an element of human organization before we can call something music. In general, we define music as the deliberate organization of sounds by people for other people to hear.

The Elements of Music

Composers rely on certain basic organizing principles to express their ideas in music. Indeed, each art form has its own organizing principles. In literature, for example, we learn about vocabulary, grammar, and rhetoric. In music, the three basic elements are **melody**, **rhythm**, and **harmony**.

Melody

Memorable melodies are an integral part of our lives. Many people sing to themselves as they are walking around, sitting at their desks, or showering. We hear melodies every day: on the radio, on television, at school, and at work. Melodies can be smooth or jagged, short or long, simple or complex. Some melodies, like those in television ads or video games, stick in our heads even if we want to forget them. Popular melodies are an important element of all cultures.

A melody typically consists of different types of **melodic motion**. Melodic motion describes the way the melody moves from note to note. Most melodies contain a mixture of *steps* (movement to adjacent notes), *leaps* (movement to notes more than a step away), and *repeated notes*.

The distinctive quality of a melody is determined by the combination of steps, leaps, and repeated notes.

The melody of "Happy Birthday to You" contains a mixture of steps, leaps, and repeated notes. It is very simple in construction and can be divided into four sections: 1, 2, 3, and 4. Each of these sections is called a **phrase**. A musical phrase is marked by a small pause at its end, like a comma in a sentence. If you sing "Happy Birthday," you will notice that you naturally take a breath at the end of each phrase.

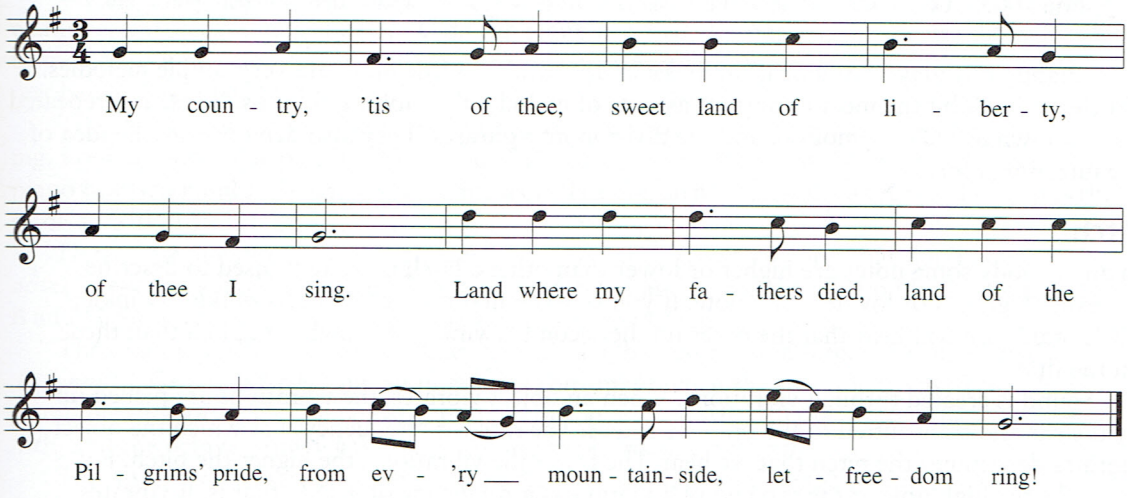
MusicNote 1

Listen to the Music Notes on MySearchLab

The first phrase starts out with repeated notes and steps on the words "happy birthday." Then there is a leap between "-day" and "to," and then another step between "to" and "you." The second phrase is similar. The third phrase has a much bigger leap (on the words "happy birth-"). That leap is the most memorable part of the melody.

In other ways, the four phrases are very similar. Each is the same length. Each features almost the same rhythm. The difference between the phrases is in their melodic motion and shape.

MusicNote 2

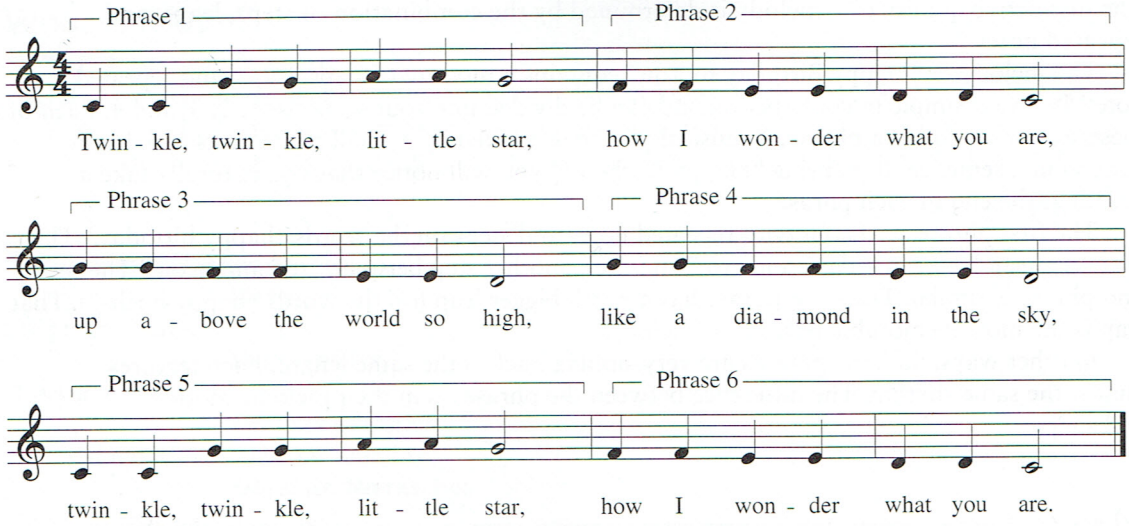


"America," also known as "My Country 'Tis of Thee," has a longer melody than "Happy Birthday," but it too contains phrases of equal length featuring similar rhythm. This melody, however, is made up almost entirely of steps. In fact, if you don't count the leaps that occur *between* phrases, there are only three leaps in the whole song. The first is a downward leap right at the beginning on "-try 'tis." The second, ascending, comes toward the end on "-'ry moun-." And the third, descending again, comes on the single word "let." These are all very small leaps, but they sound big since the rest of the melody is in stepwise motion. The word "let" also has the highest note. These two factors together create a strong climax for the words "let freedom ring!"

"Twinkle, Twinkle, Little Star" is an example of a melody that ends the same way as it begins. Again, all the phrases are the same length, and all the phrases have exactly the same rhythm. You will notice that the last two phrases (5 and 6) are identical to the first two (1 and 2). The middle two (3 and 4) provide contrast. The organizing structure of a composition, whether it is very simple (like this one) or very complex, is known as musical **form**.

The melody of "Twinkle, Twinkle, Little Star" is made up primarily of repeated notes and descending steps, though there is an upward leap at the beginning of the first phrase (and phrase 5). The simple form, the repetitive rhythm, and the pattern of its melodic motion make this a favorite early song for children.

MusicNote 3



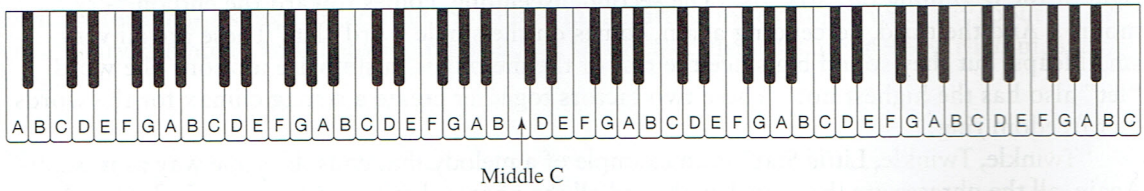
"Happy Birthday," "America," and "Twinkle, Twinkle, Little Star" are very simple melodies. Yet they all exhibit the most important aspects of melody: the mixture of steps, leaps, and repeated notes known as **melodic motion**, and the division into **phrases**. They also demonstrate the idea of organizational **form**.

Pitch

In any melody some notes are higher or lower than others. **Pitch** is the term used to describe the exact highness or lowness of a note. If you sing the first two words of "Twinkle, Twinkle, Little Star," you will hear that the notes on the second "twinkle" are higher in pitch than those on the first.

Sound is created through vibrations. When an object vibrates, the vibrations are picked up by the ear and transmitted to the brain as sound. The rate (or "frequency") at which the object vibrates determines the pitch that we hear. The faster the vibrations, the higher the pitch. For example, the high note at the top end of a piano has a frequency of 4,186 (that is, it vibrates 4,186 times per second), whereas the low note at the bottom end has a frequency of 27.5.

Most differences in pitch are not so extreme. Two adjacent notes on the piano may have a difference of only about 10 vibrations, but there is still a clear difference in pitch between them. Most of us can hear differences in pitch much smaller than this (for example, on an out-of-tune guitar), and some trained musicians can detect a difference in pitch of only one vibration per second.



Note Names

We use the first seven letters of the alphabet to indicate notes: A, B, C, D, E, F, and G. The seven letter names are repeated again and again for notes of different frequencies. For example, find "middle C" on the piano keyboard. There are lots of other Cs on the piano, both higher and lower. Similarly there are lots of other Ds and Es and so on. All notes with the same name are closely related. The C above middle C, for example, has exactly twice the number of vibrations as middle C. The C below middle C has half the number of vibrations. So these notes are very closely related in pitch. That is why they have the same name.

Intervals

MusicNote 4

The distance between any two pitches is called an **interval**. The closest possible interval is a **unison**. A unison is made up of two notes on the same pitch. You hear a unison when two different people sing the same note at the same time. But most intervals are made up of combinations of half steps and whole steps. A **half step** is the distance between a white note on the piano and the adjacent black note. A **whole step** is the distance between one white note and the next, if there is a black note in between. (Some of the white notes do not have black notes between them. That is because they are only a half step apart.) In the first phrase of "Happy Birthday," the two notes on the syllables "-py" and "birth-" are a whole step apart.

After the unison, the other intervals are the *second*, *third*, *fourth*, *fifth*, *sixth*, *seventh*, and *octave*. You determine the name by counting the distance from one note to the next. (In music, you always count the first note as 1.) The interval from C to F, for example, is a fourth: count C as one, D as two, E as three, and F as four. The interval from C to A is a sixth. If you count up to eight, you'll get to another note of the same name (C up to C, for example). The name for this interval is an **octave**. In "Happy Birthday," the interval between "-py" and "birth-" in the third phrase is an octave.

We use the word *sharp* to indicate a note that is just a half step up from a particular note. For example, the black note just above C on the piano is called "C-sharp (C♯)." We use the word *flat* to indicate a note that is just a half step *down* from a particular note. For example, the black note just below E is called "E-flat (E♭)."

The clever ones among you (and that's all of you, right?) will have noticed something interesting. Look at the C-sharp again. Now find D-flat. Yes, *it's the same note*! Every black key on the piano has two names: D-sharp is the same as E-flat; G-sharp is the same as A-flat; F-sharp is the same as G-flat; and so on.

Here's just one more thing to notice: look again at those white notes that don't have black notes between them. There is no black note between E and F, and there is no black note between B and C. So, for example, E-sharp is the same as F, and C-flat is the same as B.

The quality of sound of each of the intervals can be described in terms of *consonance* and *dissonance*. Generally speaking, an interval is **consonant** when the two notes played together sound pleasing or stable. The most stable or consonant intervals are the unison, the fourth, the fifth, and the octave; somewhat consonant are the third and the sixth.

The intervals of a second, from C to D, and a seventh, from C to the B above it, sound harsh. These intervals are **dissonant**. To our ears, dissonances sound unstable or "unfinished." The harsh dissonances of the second and the seventh seem to require *resolution* to a consonance. We can "resolve" the dissonance of the seventh made by playing C and B together by playing the octave C and C after it. And the interval of the second can be resolved by either moving up to a third or down to a unison. (Unisons are rather hard to play on one piano!)

Dynamics

Loudness and softness, or **dynamics**, are an intrinsic part of the character of most music. A melody can surge and ebb in volume—and there is no quicker way to get an audience's attention than with a sudden change in dynamics.

Dynamics are indicated by a simple system of three letters: ***p***, ***m***, and ***f***, which represent the Italian words ***piano*** (soft), ***mezzo*** (medium), and ***forte*** (loud). The letters are combined to create a wide variety of dynamic markings.

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

When composers want to indicate a *gradual* change in volume, they use the term **crescendo** for a gradual increase in volume and **decrescendo** or **diminuendo** for a gradual decrease.