

Music 11, 7/6/06

See page 130 in the textbook for the tetrachords. Remember the process of generating the different scales by transplanting tetrachords? If we perform this process beginning with C-major, where there are no accidentals, we will eventually arrive at a scale where all the notes are flat (moving the lower tetrachord to the top) or a scale where all the notes are sharp (moving the top tetrachord to the bottom).

C# D# E# F# G# A# B# C#

This is a “diatonic” scale. It is diatonic because it goes “through” the “tones.” If, for example, we were to express the 3rd note in the scale, E#, as “F,” its enharmonic equivalent, the scale would not be diatonic. Why? Because in a diatonic scale, each adjacent letter name must be listed, and only once. Changing E# to F takes away the scale’s “diatonic-ness.”

There are only 12 scalestechnically, because of enharmonic equivalents. Some entire scales that have flat key signatures can be rewritten, starting on a new tonic, with sharps instead, and vice versa.

A scale is: a pool of notes—resources for a composition.

Normally, a piece of music will have more than just the notes from the scale that represents its key. Think of a chicken salad sandwich. Someone might make a chicken salad sandwich with a bit of chopped tarragon, or some dried cranberries. This adds a little more “color” to the sandwich, even though it technically does not belong to the chicken salad.

Why do we have 12 different scales/keys if they all sound the same? They are all made of the same interval series, and many of us cannot identify a pitch by ear, anyway! Why 12? We have different keys so that music can be “moveable.” That means that if a singer wants to sing such-a-such song, but he has a very low voice, he can *move* the music down to a lower range, where he can more comfortably sing it. Moving a piece to a different range is called *transposition*. A piece is *transposed* to a different key, while its internal composition is not affected (it is like taking your chicken sandwich to the park for lunch).

Minor scales

Like C for major scales, there is a model for minor scales. The scale A-minor has no sharps and flats. It can be expressed with all the white keys.

A B C D E F G A

The minor scale, even though it has all the same notes as the C major scale, it sounds very different because of the way different notes relate to each other. We said earlier that

the major scale has a specific dynamism among scale degrees (^7 “wants” to go to ^8, ^2 “wants” to go to ^1, etc.) and this has to do with the *context* of the notes—the interval series that characterizes the major scale. In the minor scale, this interval series is different, and therefore, has a slightly different dynamism, and a very different “sound.” Dr. Rothfarb uses the adjective “melancholy” in lecture to describe the sound of the minor scale. The main reason for this melancholia is the narrow interval between the first and the third notes of the minor scale. There are only 3 semitones between ^1 and ^3 in the minor scale while there were 4 semitones between ^1 and ^3 in the major scale. This distinguishes the minor scale from the major, and gives it its melancholy affect.

The interval series in the minor scale is different from that in the major:

Note:	A	B	C	D	E	F	G	A
Interval:	1	½	1	1	½	1	1	

Notice that the two halves of the minor scale are not parallel in the way they were in the major scale. The minor scale has the same number of whole-tones and semitones, but they are distributed differently. **VERY IMPORTANT.**

There are 3 main differences between the major and minor scale:

1. The distance between the keynote (^1) and the third (^3) is different
 In major, it is 4 semitones (or a major third, M3).
 In minor, it is 3 semitones (or a minor third, m3).
2. The interval between the 5th and 6th notes is different:
 In major, ^5 and ^6 are a whole-tone apart (M2).
 In minor, ^5 and ^6 are only a semitone apart (m2).
3. The interval between the leading tone (^7) and the keynote (^1) is different:
 In major, it is a semitone (m2).
 In minor, it is a whole-tone (M2).

These three different greatly affect the dynamism among the notes in the scale (more on that later).

Relative Keys

When a major key and a minor key share the same key signature, they are called *relative keys*. C-major and A-minor are relative keys because they both have nothing in their key signatures (no sharps or flats). We say “A-minor is the relative minor of C-major,” and that “C-major is the relative major of A-minor.”

The keynote of every minor scale is exactly 3 semitones (m3) below that for its relative major.

So, if you know all the key signatures for the major scales, you can quickly identify those for the minor scales, too. Here are some examples:

1. What is the key signature for D-minor?

Since we know that it shares the key signature of its relative major, we can first find that—3 semitones above D (diatonic 3rd), is F. So, the D-minor scale has the same key signature as the F-major scale: 1 flat.

2. What is the relative minor for G-major?

Take the keynote, and count down three semitones (always passing “through” one letter name!): the relative minor is E-minor, and like the G-major relative, E-minor has exactly 1 sharp in its key signature.

3. What is the relative major of F-minor?

Count up 3 semitones. Is it G#? No no no no no. It is Ab. Why? Because in counting the 3 semitones, we must “pass” a letter—we need to skip G, and call the relative major Ab.

Here is a study tip: Instead of memorizing everything, try to learn a *process* for arriving at the answer. Since the process is always the same, it will be more helpful, and you will have to memorize less. For example, learn the relationships between the relative major and minor scales instead of learning the details of every major scale and the details of every minor scale.