UNIT 19

HARMONIC SYNTAX

To this point in the course, you as students have had very limited control over composition tasks. In most cases, the choice of which chords to use was not yours to make. Instead, you were given a pre-composed chord succession, usually as a string of root letter names (C-F-G-C) or Roman numerals (d: i iv V i).

Having now surveyed the types of chords that can be expected in major and minor pieces, it is now possible to introduce the concept of chordal **syntax**. Doing so will give us a means for discussing how chords should be ordered in composition.

What is Syntax?

Syntax is a word that applies to language. Specifically, it refers to the *rules for ordering the words within that language to create logical, comprehensible sentences*. Below we have two sentences in English. The first obeys the rules of syntax, and the second one breaks them.

Sentence 1: The green car sped around the corner and out of sight.

Sentence 2: Sped the car green corner the around of sight out and.

Even without Sentence 1 present, we might be able to guess at the meaning of Sentence 2, but it would take a lot of work. The nouns, verbs, and prepositions do not line up with our expected word ordering rules for English, which is, roughly as follows:

Subject	Verb	Objects, including prepositional objects
Car	Sped	around the corner / out of sight

The formula given above explains why Sentence 1 sounds right to English speakers and why Sentence 2 sounds wrong.

In music, the issue of syntax applies a bit differently, since there is no direct parallel to a "literal" sentence as from a spoken language. True, a musical phrase communicates a full musical thought. But the notes of a phrase do not relate a specific event such as a car speeding, or a dog catching a frisbee.

Due to this, the issue of how syntax applies to music is a bit looser. Every musical style (or, if you prefer, dialect), such as Rock, Classical, or Jazz, has its own expected formulas for chord progressions, which can be communicated in strings of Roman numerals. When the syntax is followed, the resulting music

sounds like it belongs to the style. When it is not, the music sounds like it doesn't fit the style.

Classical Syntax

The musical style that this class has been rooted in is Classical music, which developed originally in Western Europe roughly from 1700-1825, though it soon was adopted in many other parts of the world and is still widely in use today in movie music and advertising jingles. Closely wedded to the notion of "good chord choice" in classical music is the idea of **Progression**. For a phrase to sound good to a Classical listener, it should start on a tonic (I) chord and constantly move forward towards a **cadence** that is expected within 4-8 bars.

This brings up the question: how does one make music sound like it is moving forward, harmonically? In preparation for answering this question, we must first introduce the concept of chord root motion.

Root Motion Types

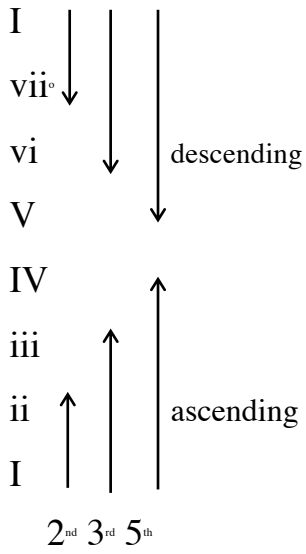
We return one last time to the idea that only seven letter-name and seven basic triads exist. Excluding the unison/octave, that means that *only six intervals exist among roots*. For convenience, we will group them further into three basic root intervals, which can occur either in an upward or downward direction:

Motion by Step: for example I-ii, iii-IV, vi-V

Motion by Third: for example I-iii, iii-V, vi-IV

Motion by Fifth: for example V-I, ii-V, I-IV

Or, more pictorially:



*Notes:

1. **Any** ruler-arrow at right can be shifted to start on **any** Roman numeral.

2. Interval size is counted as before. The distance from I-iii involves three different number names ("I, ii, iii") and is therefore a 3rd.

Readers will note that this is a much simpler system than the one given in Unit 4. Where earlier, we were concerned with all types of intervals, 2nds all the way up to 7ths, now we are limiting ourselves just to 2nds, 3rds, and 5ths.

To determine the interval between two chord roots, one can read the chords in terms of their Roman numerals or letter name root and then determine the most direct path between them. Here are three examples of this process, worked out:

Chords involved	Question to self	**Answer**
I° chord --->V° chord	2nd 3rd 5th?	I-ii-iii-IV-V = **5th** Count is Ascending Root motion= A5
F#° chord ---> E chord	2nd 3rd 5th?	Answer: F#-E = **2nd** Count is Descending Root motion = D2
iii chord ---> vi chord	2nd 3rd 5th?	Answer: iii – iv – V – vi ~~4th?~~ Retry: iii – ii – I - vii° – vi = **5th** Count is Descending Root motion = D5

Notice that for some of the chord pairs above, one or more of them appear in inversion. This makes no difference at all for measuring the harmonic interval between them.

Preferred Root Motions

The three strongest, most directed root motions in classical music are as follows:

1. Descending Fifth:

The descending fifth motion is the basis of tonality. From whatever chord you are in in a piece, it is always possible to descend by 5th the following chord. Here is the full string of descending fifths, which connects a tonic to itself with all strong motions.

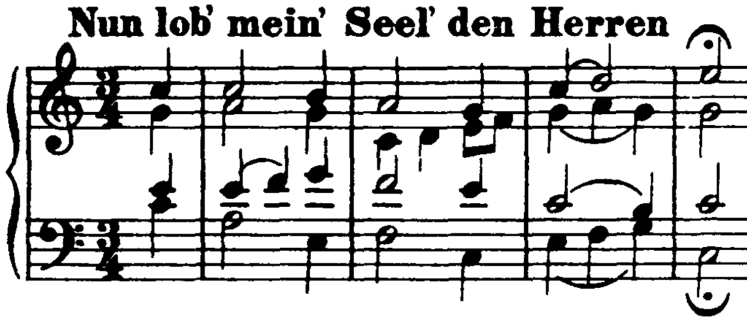
A Circle of Fifths:

I – IV – viio – iii – vi – ii – V - I

In fact, many pieces are based entirely on this chord pattern, including "Fly Me to the Moon" and the chorus of the children's song, "B-I-N-G-O".

In analysis of chord syntax, we will bracket **[ ]** all instances of descending fifth motion together, whether it involves a whole string of chords in the descending fifth relation or just two.

Bach Chorale 296:



C: I vi iii IV I ^{6} **[** ii^{6} V I **]**

The brackets above **[ ]** indicate two descending fifth motions, one from ii-V and the other from V- I. The motion from vi to iii in m. 2 is an *ascending* 5th, and so is not bracketed.

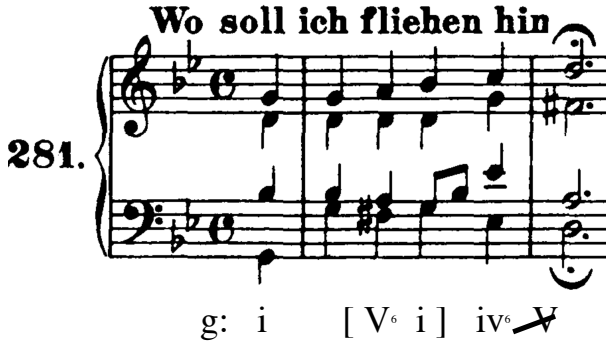
Look further at the Chorale above. These four measures of music constitute a **phrase**, or a full musical thought. As such, it is no accident that the bracketed Descending 5th motions happen right at the end. All phrases conclude with a gesture of *musical punctuation* called a **cadence**, which is often associated with some kind of root fifth motion. The D5 motion in the harmony on V-I works with both the scale degree motion of the melody (2-1) *and* the rhythm (larger note values) to create the sense of stopping and completeness that one might find at the end of a clearly delivered sentence in spoken language.

2. Ascending Step

The most notable ascending step motion is from IV-V near the end of a phrase. Other common ascending steps involve I-ii as at the beginning of a phrase or V-vi, the so-called "deceptive motion".

In analysis of chord syntax, we will link all instances of ascending 2nd motion with an upward-tilting line as follows:

Bach Chorale 281:



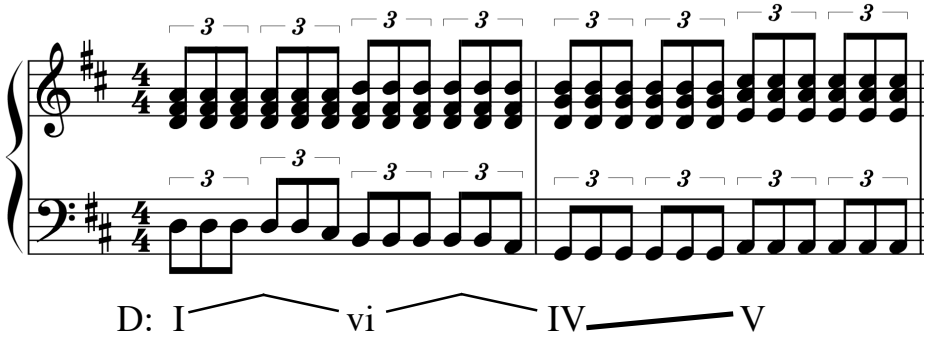
Even though the bass line descends from Eb to D near the end, the root motion between the last two chords is *up* by step, from C – D!

3. Descending Third

A descending third can be thought as covering half the ground of a descending fifth. It is thus similarly directed, but a bit less powerful. Descending thirds often are strung together, connecting tonic (I) all the way to a ii or IV chord that will then proceed to V to mark the end of a phrase in some way (either stopping on V in a questioning, **half-cadence**, or continuing to I in a conclusive V-I, **authentic cadence**).

In analysis of chord syntax, we will link all instances of descending 3rd motion with "bridging" carets ^ as follows:

"Doo Wop" Progression from 1950s Pop:



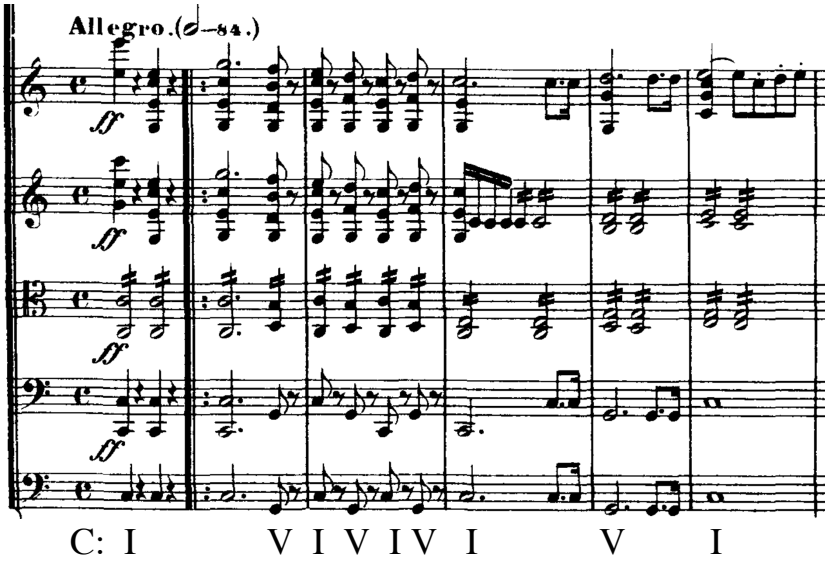
Other Good, but non-Directed, Motions

In addition to the stronger root motions noted above which push the phrase forward, there are a number of "holding pattern" progressions. These chord formulas typically involve alternation between two chords. They can go on for quite some time.

I – IV – I (– IV – I – IV – I – as desired)

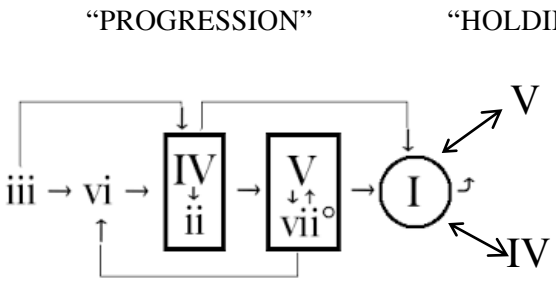
I – V – I (– V – I – V – I – as desired)

Beethoven, Symphony No. 5, final: a phrase built out of only I and V



A Global Model for Classical Chord Progression

The following diagram encapsulates all of the points made about chord progression above. By following the arrows, you will quickly be able to generate classical-sounding phrases. This, of course, is not the method that experienced composers use to write music, but it allows you to begin exploring how harmonies can work together to create harmonic progression.



A few important points to note about this chord chart:

1. **The tonic, I, may move to any chord!** These arrows are omitted only to avoid cluttering up the diagram.

2. Harmonic progressions are shown at left. The two "holding patterns" are shown at right. Chords may toggle back and forth as many times as desired.

3. The backbone of the PROGRESSION area, moving from left to right, is descending fifth motion. iii-vi, vi-ii, ii-V, and V-I are all examples of D5 motion.

4. Within any box, the two chords are related by thirds. It is always better to move by descending third motion, particularly for IV-ii.

4. Notable ascending 2nd motions are shown from iii-IV, IV-V, and from V-vi.

5. **The diagram applies to minor keys as well as major.**

Here are some strategies to generate chord progressions following the path of arrows in the box. All will begin with tonic.

Strategy 1: Start on tonic. Leap back in at vi and follow the circle of fifths back home

I vi ii V I

Strategy 2: Same as 1, but now stretch out the progression by using both chords in the IV/ii box and extending the last I by bouncing off the I-IV-I double headed arrow at the end.

I vi IV ii V I IV I

plagal (amen) cadence

Strategy 3: This time leap in at the first iii chord and explore A2 motions.

I iii IV V I

Strategy 4: Same as 3, but now once we reach V, loop back to vi using the arrow below. Continue to I this time with all D5 motions.

I iii IV V vi ii V I

"*Deceptive*" motion: listeners hearing this V will expect I, not vi!

Other Chord Models from Other Musical Styles

In this class, we will not have the opportunity to explore other styles of music. You should be aware, though, that chord progressions vary tremendously among different types of music. In fact, a motion that sounds perfect in one style can sound completely strange, like a mistake, in another.

Consider the case of V-IV. This is considered a "retrogression" (backwards motion) in classical music, and is often marked wrong in theory classes. Yet this motion is absolutely stylistic to blues, jazz, and rock. In the standard 12-bar blues progression, shown below, the V-IV motion occurs in mm. 9-10 in what could be considered the essential "cadence" of each blues phrase.

Model for 12-bar blues: each chord represents 1 measure of music

I	I	I	I
IV	IV	I	I
V	IV	I	I (or V)

Famous examples of 12-bar blues: "Rock around the Clock" (Bill Haley)
"Johnny B Goode" (Chuck Berry)
"Rock and Roll" (Led Zeppelin)

Countless other examples of chord motions can be found that are commonly used in rock and roll but not in Classical music. Often they involve the use of "altered-root" chords, in which the chord itself is based on a chromatic tone like Ab or Bb in the key of C.

bVI – bVII – I cadence of "Crazy Little Thing Called Love" (Queen)

I – bVII – IV – I "Na na na" chorus from "Hey Jude" (Beatles)

As you develop your ears, you should try and spend time transcribing the basslines of your favorite jazz and popular music tunes. Many of them will end up closely following the Classical chord model given above, such as "Creep" by Radiohead:

G:	I	III/IV	iv	I
	G	B C	c	G

Many others songs will not. The more you study a style, though, the more you will gain appreciation for the chordal patterns that establish its language. This can help you distinguish what makes Bruno Mars sound like Bruno Mars, as opposed to Taylor Swift, Johnny Cash, Jay-Z, or Metallica.