Fundamentals of Music Creation: Unit Four

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Playlist

Clocks (Coldplay)

All Blues (Miles Davis)

The Simpsons Theme (Danny Elfman)

Solea (Gil Evans)

Dark Star (Grateful Dead)

Sweet Child O'Mine (Guns N' Roses)

Sonata K. 545, First Movement (W.A. Mozart)

All Apologies (Nirvana)

Concerto in modo misolidio (Ottorino Respighi)

Ganga Dev (Cheb i Sabbah)

Creep (Radiohead)

Sweet Home Alabama (Lynyrd Skynyrd)

Kimono (Submotion Orchestra)

Swallowtail Jig (traditional)

Chapter 22

Modulation and Transposition

Modulation is the process of changing from one key area to another within a piece. While it is possible to modulate directly to any key, the smoothest way is to move to a key area that shares most of its pitches. Key areas that share a key signature (relatives) or are within one accidental (plus or minus a sharp or flat) are called **closely related.**

Consider *Wild Rider* from *Album for the Young* by Robert Schumann, printed below.

First, look at the overall structure. Notice time signature (compound meter, $\frac{6}{8}$) and key signature (no sharps or flats), and the total number of measures (32: the first eight repeat, and we do not count the first partial measure). 32 measures should suggest two things: one, it breaks evenly into eight measure sections (symmetrical). Two, like 32-bar song form studied in Unit 2, there may be a contrasting section.

Notice that it starts with an anacrusis or pickup note, typically the fifth note of the key area. Because one eighth note is at the beginning, the last measure only has five eighth notes (in the case of an anacrusis the first and last measures must total the beats of the time signature). The right hand (treble clef) starts with the melody while the left hand has blocked chords. After the repeat, the left hand has an anacrusis into its own version of the melody. However, the beginning has a pickup note of E and the second half left hand melody has a pickup of C. In the measure marked 16 (really measure 24 because of the repeat), the melody goes back to the right hand and the pickup is back to E.

Now reduce your focus to the first eight measures. G# is used several times, and it is the only accidental written. Given the key signature, there is one major and one minor choice: C Major or A Minor (refer to the Circle of Fifths)**.** One note is commonly changed in minor keys, creating a leading tone (raised seventh note) and the scale used to build harmonies. If G# is this leading tone, one half step down from the first scale degree, the first note of the scale is A. Go back to the anacrusis. It is most commonly the fifth scale degree and usually followed by the first scale degree: the fifth note of an A Minor scale is E. The melody of this section also ends on A. The overall key of this piece is A Minor.
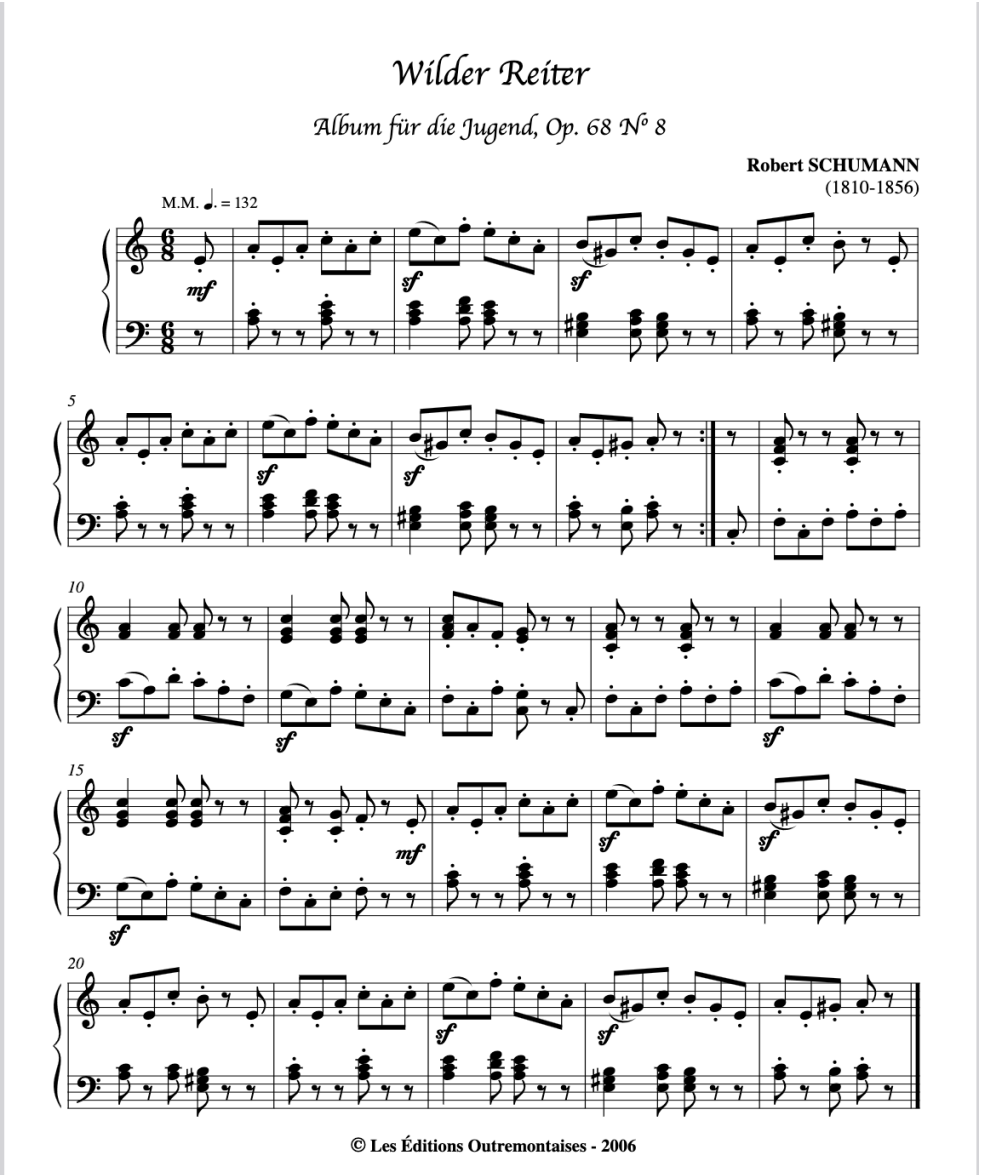
Analyze the second section. The time signature hasn't changed, but the pickup and following note have. We have modulated or moved to a different key area. Use all the clues from the first half. If the beginning was giving 5-1 in the home key, perhaps this is 5-1 in the new key. The melody is the same, just starting in a different place. When it ends in measure 16, the last note is F, and the fifth note of an F scale (major or minor) is C (your anacrusis!). Schumann has modulated to F Major. F Major does have a B flat in the key signature, but because this note is not used, Schumann does not need to change the key signature or add

any accidentals to the score. The key of A Minor is closely related to F Major because it's only one accidental different (no sharps or flats to one flat). The pickup to measure 17 (really 25) takes us back to the home key and it ends in A Minor.

Listen to this piece a few times with the music in front of you.

Wilder Reiter, opus 68 no. 8 by Robert Schumann.

Following is a Spotify link with pianist Lang Lang:
https://open.spotify.com/track/7yQncCbmVIUYC3l9gpvOZF?si=63d69c258f544231
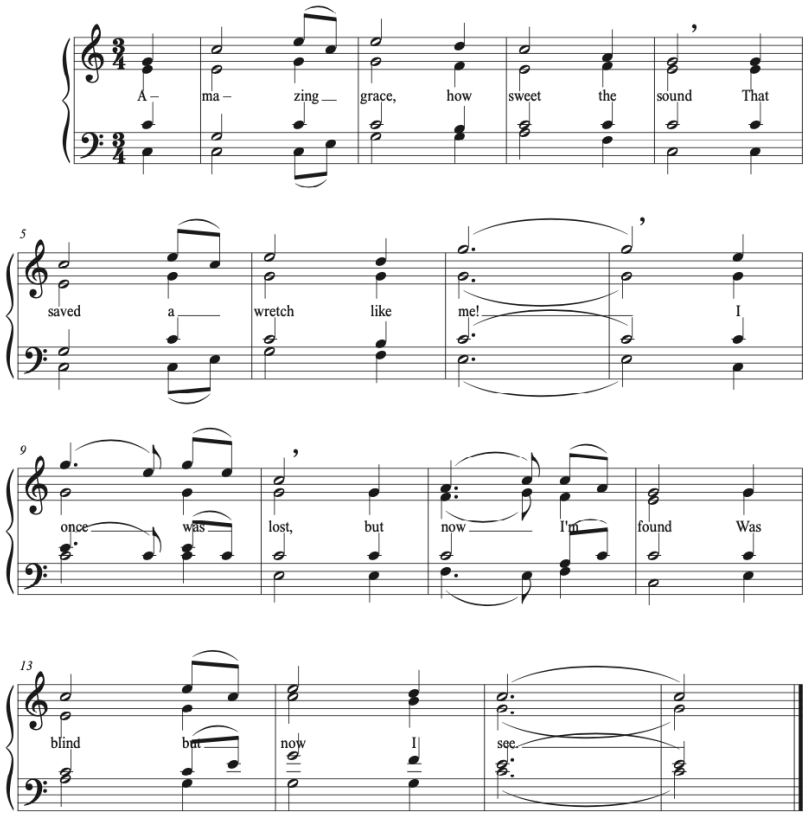


Transposition
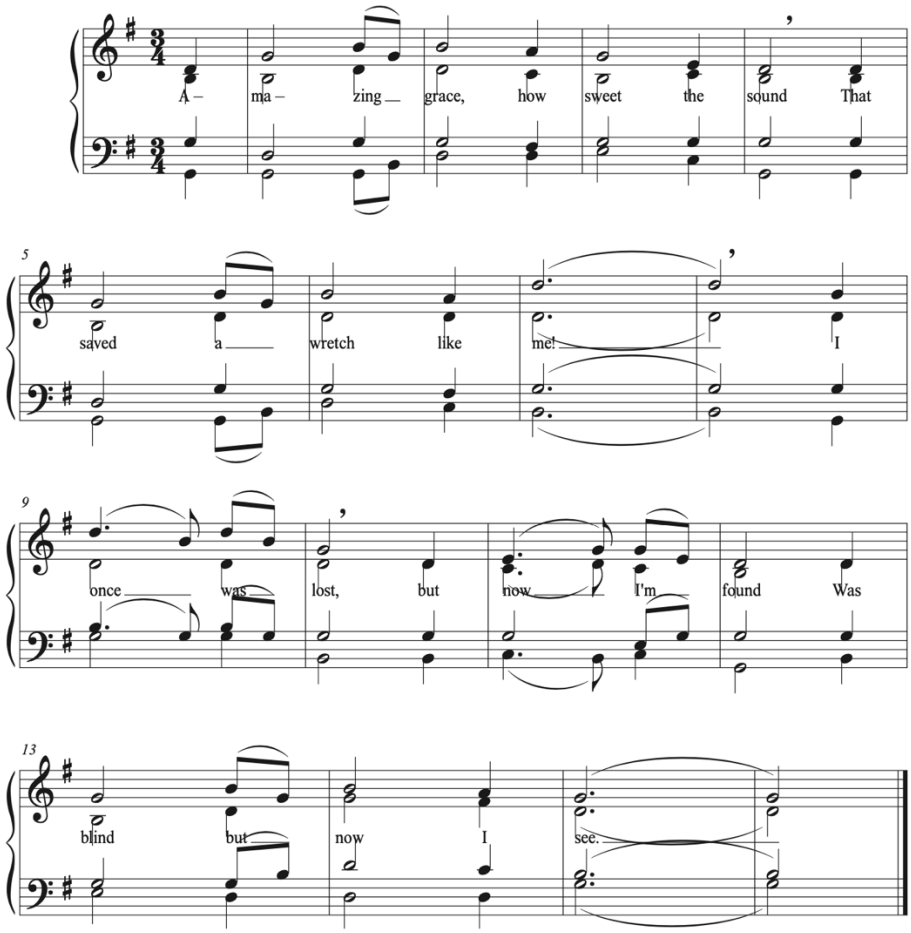
Transposition is the process of rewriting a piece in a different key from the one it was originally composed in. Often this is a practical decision. Perhaps a piece was written for violin, but a violist wants a version for their instrument. It will be easier to play if it is moved down a fifth to match the strings of the viola. Certain instruments are built in transpositions. If you grew up playing trumpet, you probably started on a Bb trumpet. This means that when you play a C on the trumpet, it sounds as a Bb. If a trumpet player is working with a flute player (whose instrument is not transposed) off of music written for one or the other, one part needs to be changed or they'll play a whole step off from each other.

Amazing Grace Revisited:

In Unit One we examined the melody to Amazing Grace. Below is the same version, fleshed out in SATB (Soprano, Alto, Tenor, Bass) writing. Notice that in each clef, notes for the higher voice (soprano and tenor) have stems going up, and stems for the lower voice (alto and bass) go down. Each instrument or group of instruments has traditional notation to keep in mind (you've been working with the piano grand staff, for instance).



We analyzed it in the key of C Major because we had yet to discuss different keys. The soprano line is high in their range but manageable; however the tenor line is out of many tenors' range. If it were all moved down an octave it would be too low. Consider the original purpose for this song: a hymn, meant for an amateur congregation. A different key would work much better by placing it more easily in typical vocal ranges. The version below is written in G Major, with the same melody and harmonies.



Similarly, my example composition is too high for me to sing comfortably. It would be much easier taken down a couple of notes. Experimenting, I found A Major and F# Minor are comfortable.
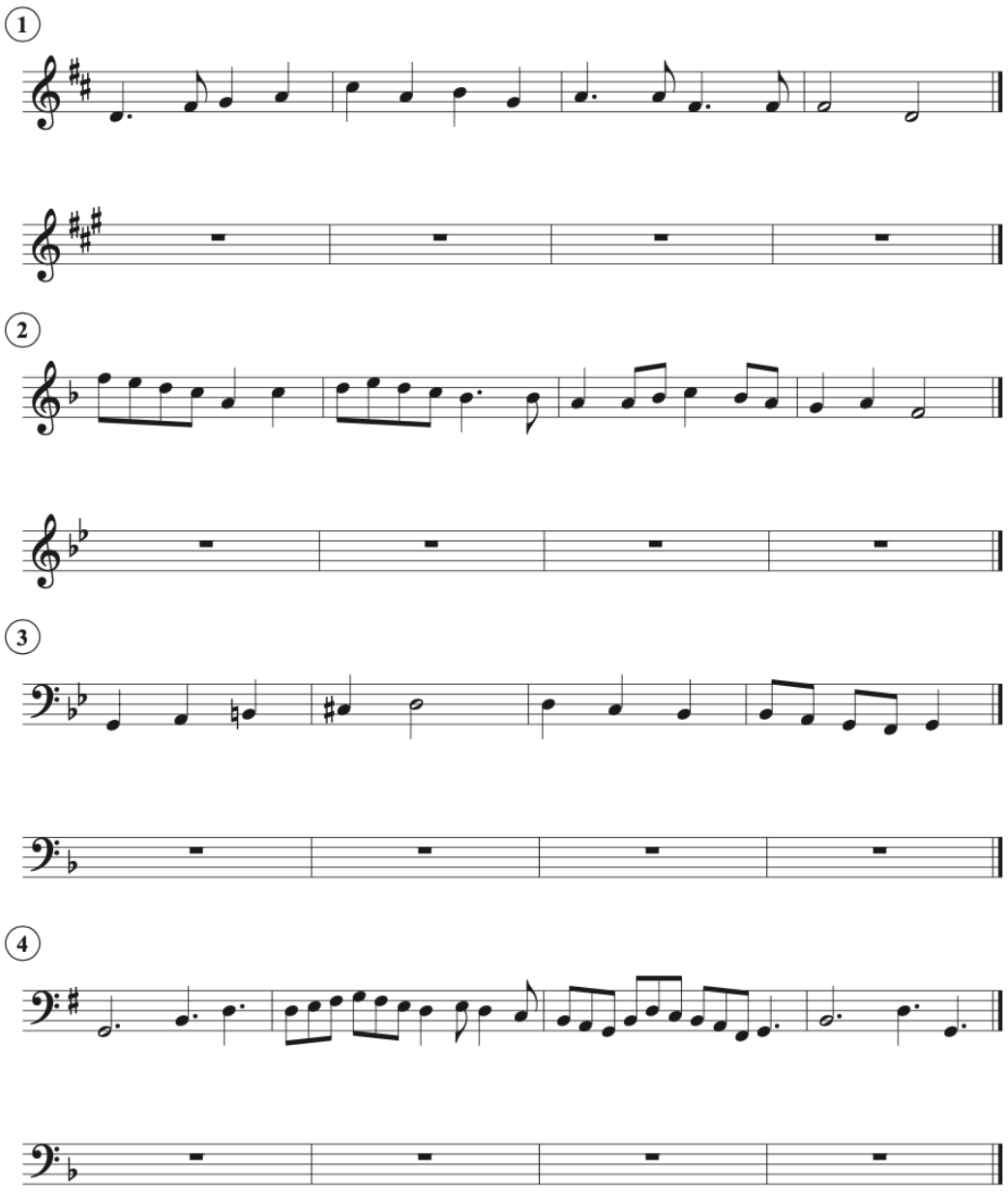
Following are two ways to transpose: the first is to move every note by exactly how many note names and half steps it needs to move. The second is to think about scale degrees in the new key. Set up a document with the new key signature. Instead of thinking of the note C moving down seven half steps to G, think in scale degrees. C is 1, the first scale degree, in the old key. In the transposed version, G is scale degree 1 instead. To make life even easier, a software program such as MuseScore or Finale will transpose for you. No need to do the math yourself or even think about key signatures. To put my version in G Major in Finale, I

went to Tools, chose Key Signature, and changed it to G Major. The program moved it up, even further out of range, so I then went to Utilities, chose Transpose, and moved it down an octave. MuseScore and other notation software will do similar things, and a quick internet search can guide you as to where these tools are in an individual program.

Transposition Practice:

Complete the following steps for each example below:

1. Identify the key, using the key signature and first and last notes.
2. Write scale degrees under each note (in the key of C Major, C is scale degree one).
3. Identify the key signature in the blank line below. The mode hasn't changed (keep major examples major and minor examples minor).
4. Write the corresponding scale degrees in the new key to transpose the example (if transposing from C Major to F Major, F is now scale degree one).



Key Ideas and Terms to Know

- **Modulation is the process of moving from one key area to another within a piece.**
- **Closely related keys have the same key signature (relatives) or are only one accidental different from each other.**
- **Transposition means moving an entire piece from one key to another, typically for playability on different instruments.**

Chapter 23

Building Chord Progressions

Music works because certain harmonies want to move to certain places. The tension or instability of certain chords followed by the resolution or stability of others creates interest and flow. Ultimately, we want to get back to I or i after a journey to other harmonies.

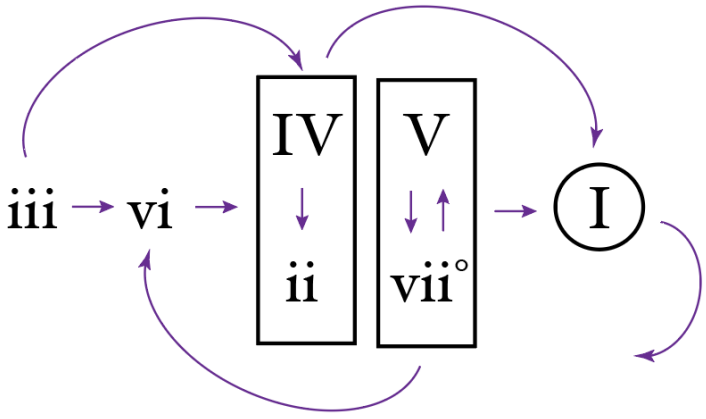
The basic phrase model is I – V – I or i – V - i. The V chord wants to go home to I or i.

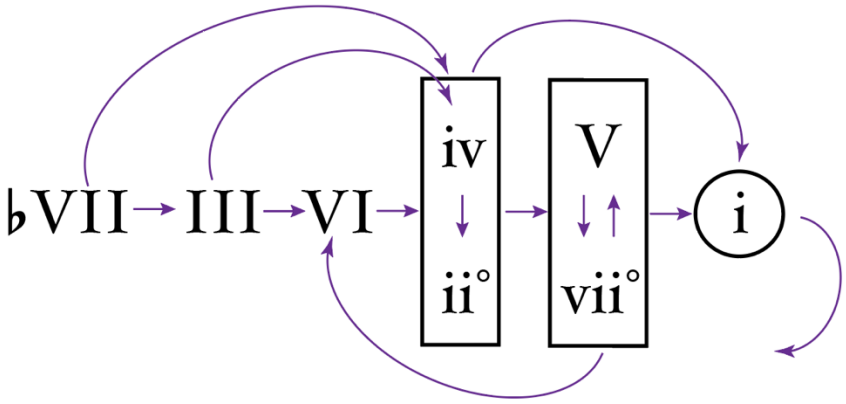
To make it slightly more interesting, we can add IV or iv. This chord wants to move to V (I, IV, V, I).

The charts below show the places chords want to go in traditional harmony.

The I or i chord can go anywhere (it's the only chord that can). Every other chord has limited options. Commonly, harmonic motion is one chord per measure. Phrases are usually four measures long. This boxes you in to some extent: the first measure and the eighth measure (second phrase) will probably be I chords. The fifth measure, if not a I chord, is often a V chord. V leads to I, so the seventh measure is often a V chord. It's fascinating that even within this strict structure there is a lot of room for creativity. Humans like recognizable patterns, but with a few twists.

Not all music follows these rules. For example, EDM uses largely non-functional harmonies, in which the chords aren't being used to get to V or I but instead become part of a sequence for color purposes. If you do not follow a functional harmonic model, you should be able to explain how your music is working.





The Air That I Breathe, Creep, and *Get Free*

Generally, chord progressions aren't copyrighted. There are only so many that work, and millions of songs written. However, the other components of songs with similar chord progressions must be unique. One famous dispute involved Lana del Rey's song *Get Free*, which Radiohead argued used their progression from the song *Creep*. They may have been hyper-vigilant about that progression because they had in turn been accused of copying *The Air That I Breathe,* covered by The Hollies in 1974. In fact, Albert Hammond and Mike Hazlewood, authors of the song *The Air That I Breathe* won the argument and received a writer's credit on the album. They earn a percentage of every publishing dollar *Creep* makes. It turned out well for them…

You may use a chord progression from a song that you like as a place to start, but yours should not be a reference to the other song or bring it to your audience's mind. Keep rhythm, melody, instrumentation, etc. unique.

Key Ideas and Terms to Know

- **Chords move in predictable ways through the phrase.**
- **When using a chord progression from someone else's song, make the rest of the song unique. It shouldn't be recognizable as anyone else's material.**

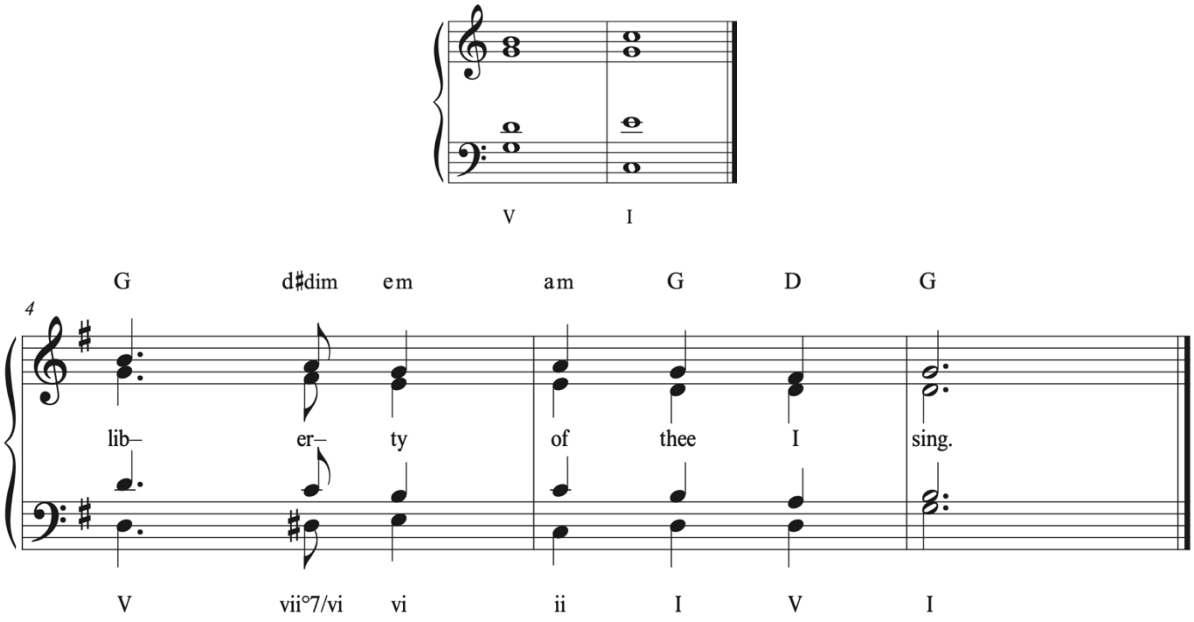
Chapter 24

Cadences

Phrases end in cadences; the places where the music and the performer breathe. They create musical punctuation: a comma, period, or question mark. Cadences can be **conclusive** (they sound finished) or **inconclusive** (the music needs to go on). Following are some common cadence types (they occur in both major and minor).

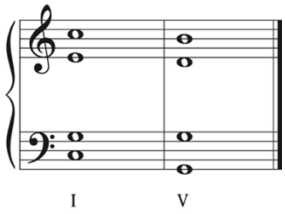
Authentic Cadence (AC)

Phrases that end in V – I or V – i. The strongest version is root position V to root position I, with scale degrees 5-1 in the lowest voice. vii° can be substituted for V as a weaker version of the cadence.



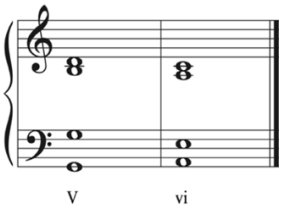
Half Cadence (HC)

These cadences end in V, either I – V or IV – V (or i – V or iv – V) and create a musical question mark and are not final.

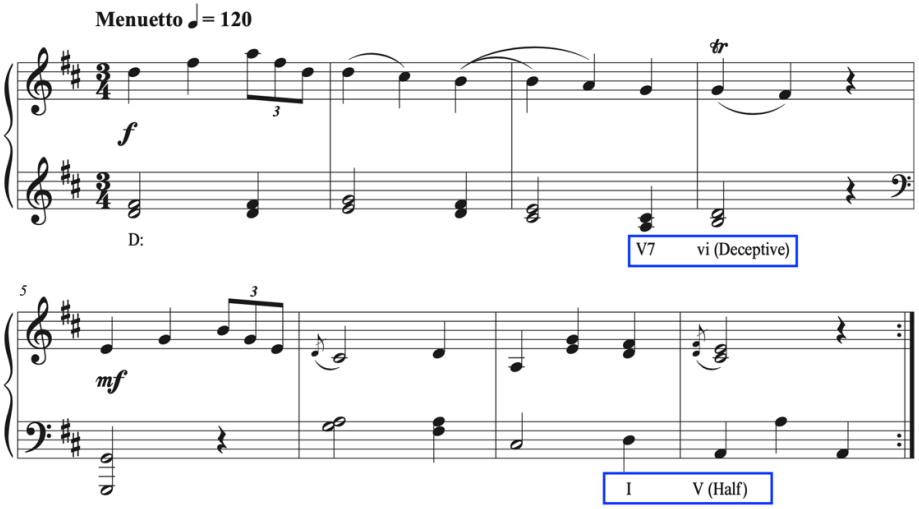


Deceptive Cadence (DC)

The audience expects a V – I authentic cadence and instead hear V – vi.

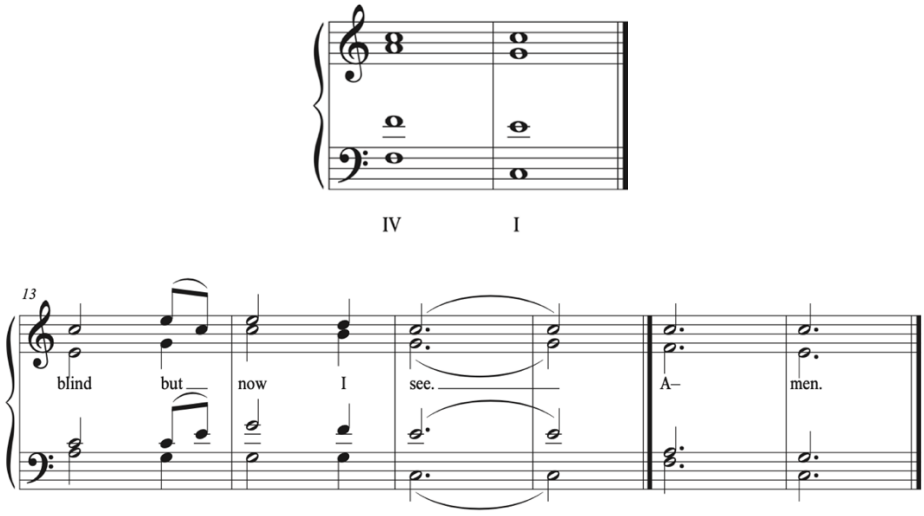


These aren't used to end a phrase but create anticipation by extending it. They are "fixed" later. Below is an excerpt from *Piano Sonata No. 4, II* by Joseph Haydn. In the key of D Major, A is scale degree V. The V7 chord is missing an E, but because we have the root (A), the third (C#), and the 7th (G), we still hear it as a seventh chord. The next chord is delayed in the right hand, but on beat two we end up with B, D, F# (vi). In the second phrase, the I chord is missing the fifth (if any note is left out it's this one), but we have D and F#, and then on beat one of the last measure A, C#, E (V).



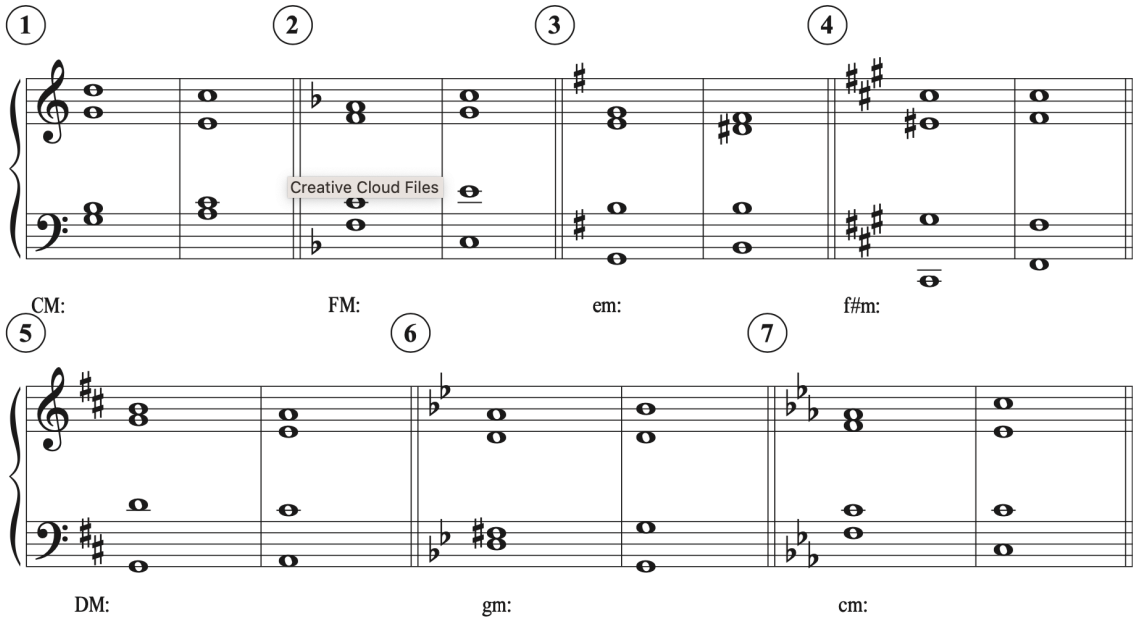
Plagal Cadence (PC)

Nicknamed the “amen cadence,” these are often used after an authentic cadence in hymns.



Cadence Practice:

Write the Roman Numerals under each chord and identify the following cadences as Authentic (V – I), Half (- V), Deceptive (V – vi) or Plagal (IV – I). If it is helpful, write out the scale, add the chords, and put Roman Numerals underneath as a reference. Often a note is doubled in the chord. Occasionally a note is omitted (usually the fifth, so the chord is identifiable by the root and whether it is major or minor).



Key Ideas and Terms to Know

- **Phrases end in cadences.**
- **Cadences can be conclusive (final) or inconclusive (not final).**
- **Authentic cadence: V – I**
- **Plagal Cadence: IV – I**
- **Deceptive Cadence: V – vi**
- **Half Cadence: ends in V (I – V, IV – V, etc.)**

Chapter 25
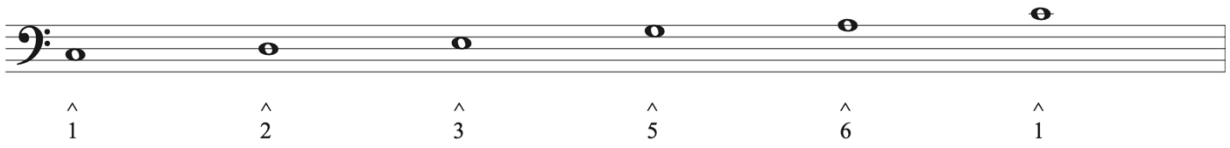
Modes other than Major and Minor

Major and Minor are the most common scales (also known as modes) used in the Western world, but there are several others.

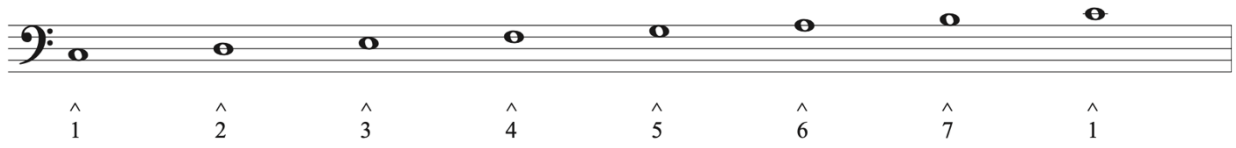
Amazing Grace is in a major key, but notice the melody (only melody, not harmony) only uses five notes of the scale. It does not use the fourth scale degree (C), nor does it use the seventh (F#). The term for this mode is **Major Pentatonic.**

Major Pentatonic:

Scale degrees relate to C Major. Notice the fourth and seventh are missing.



Compare to C Major:



Songs in Major Pentatonic:
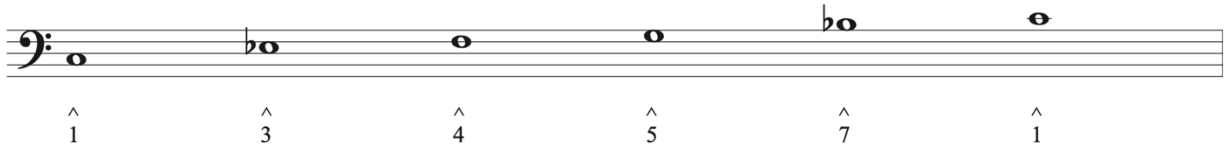
Kimono (Submotion Orchestra)

https://open.spotify.com/track/5BWBKCfklyNcgFeviBnMvO?si=2bb60bf5b4254e94
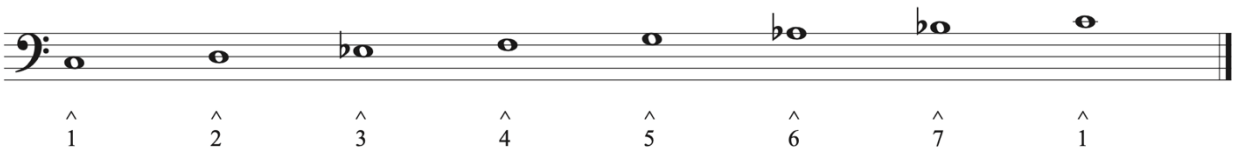
Melody from *Amazing Grace* (trad.)

Minor Pentatonic:

Notice the second and sixth scale degrees are missing.



Compare to Minor:
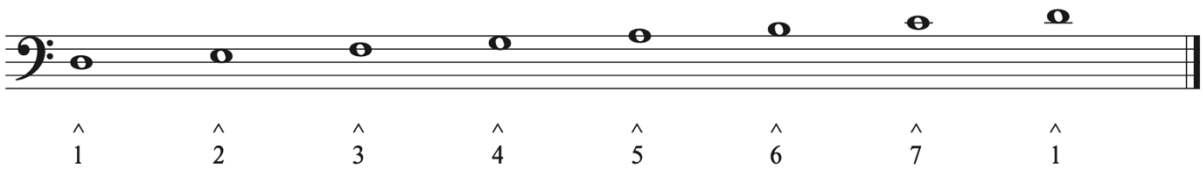


Songs in Minor Pentatonic:

Ganga Dev (Cheb i Sabbah)

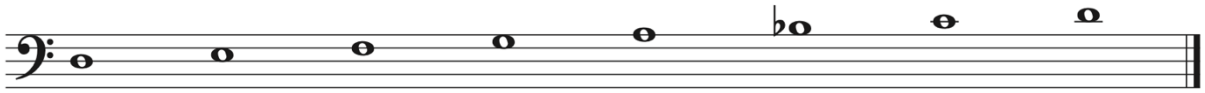
https://open.spotify.com/track/0QTVZXxvTJpZcybgXHovHO?si=7a43907d999a42a5

Dorian Mode

D Dorian: This mode is similar to minor; the only difference is the raised sixth note.



Compare to D Minor:



Songs in Dorian:

Purple Haze (Jimi Hendrix)

https://open.spotify.com/track/0wJoRiX5K5BxlqZTolB2LD?si=af3bfa5581894d12

Wicked Game (Chris Isaac)

https://open.spotify.com/track/7w5AOd6HrDIHewHfpABEss?si=a1cd3ef0e1e0448e

Eleanor Rigby (Lennon-McCartney)

https://open.spotify.com/track/5GjPQ0eI7AgmOnADn1EO6Q?si=2ef793d8d98b4b1b

Royal March of the Lion from *Carnival of the Animals* (Camille Saint-Saëns)

https://open.spotify.com/track/7wu08CuKKurbOOhvlH8u7t?si=ddf8ae12505047ec

Around the Fire: Elder Scrolls (Jeremy Soule)

https://open.spotify.com/track/0JP97EPP5NkoemtNNjQYPR?si=2c2eb677a3af4d3a

Scarborough Fair (trad.)
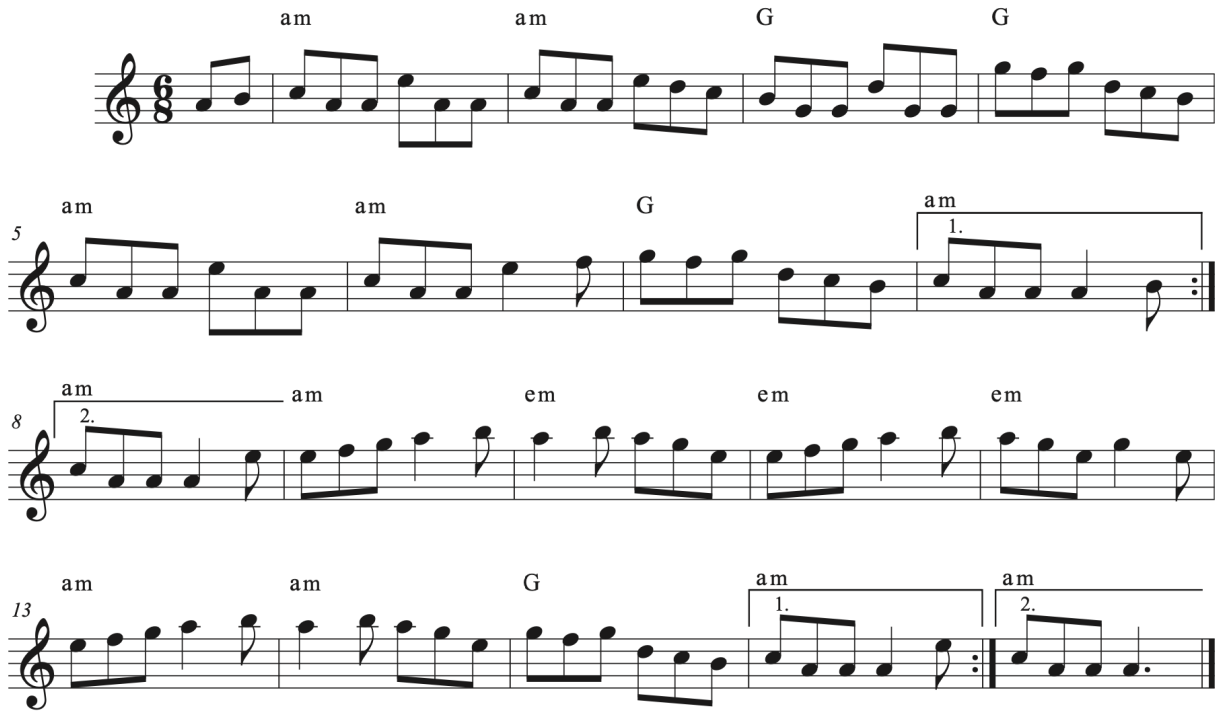
https://open.spotify.com/track/3g2fYZW5v2od8KIF7VktT0?si=484dd48f6b1f4f43

Dorian and Mixolydian are the two most used modes. Many folk songs are in these modes, including the following example.

Look at *Swallowtail Jig* below while you listen to a recording:
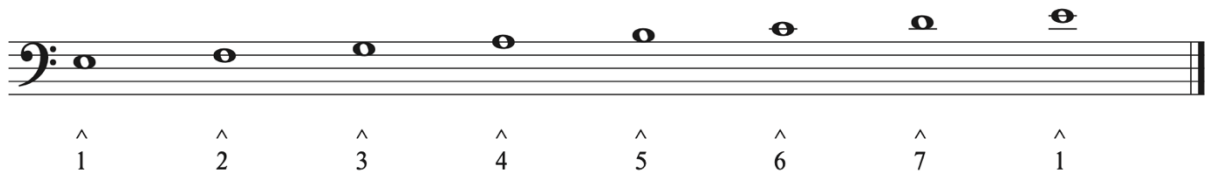
1. Notice that the piece is in two halves (AB form): there is a repeat sign after measure 8 that takes you back to the beginning (marked first ending). The second time don't play the first ending but take the second ending. This ending propels the piece into the B section. This section is also repeated (take the first ending the first time and the second ending the second time).
2. Instead of one high point, this piece reiterates an important note in each half.

https://open.spotify.com/track/4EECDz5XgnYuusqeHIy10d?si=0ec2cff7f32844fc

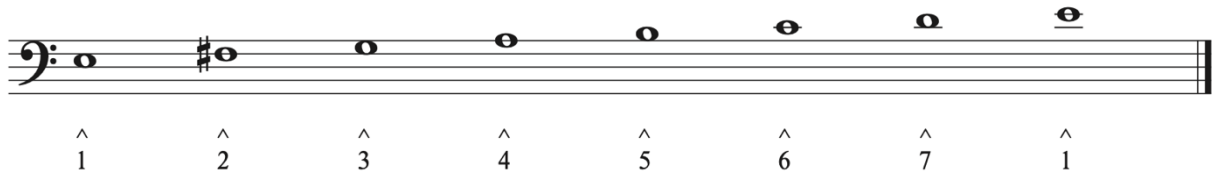


Phrygian Mode:

E Phrygian: this is like minor but with a lowered second scale degree.



Compare to E Minor:



Songs in Phrygian Mode:

Rumores de la Caleta (Isaac Albéniz)
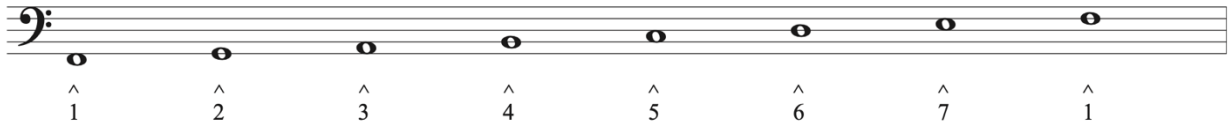
https://open.spotify.com/track/4VbrfjodQrYnapcIvJWEZx?si=42a5b83f99a84d14

Solea (Gil Evans)
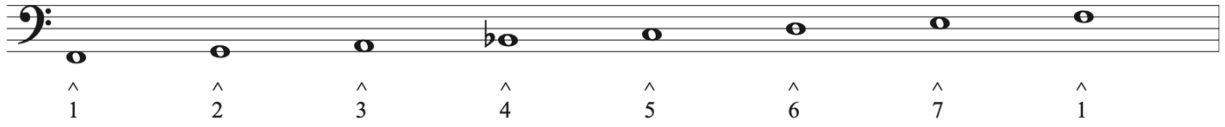
https://open.spotify.com/track/07EI4s3foxxuMdQTkk6MZA?si=601a999dbca240d9

Lydian Mode:

F Lydian: Similar to major but with a raised fourth scale degree.



Compare to F Major:
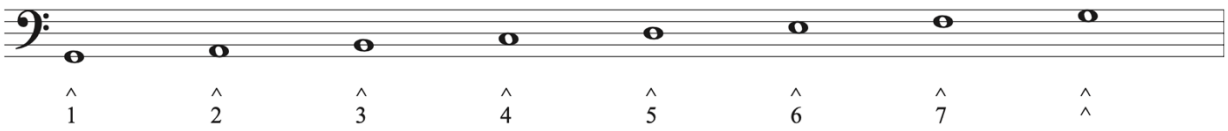


Songs in Lydian Mode

Simpsons Theme (Danny Elfman)
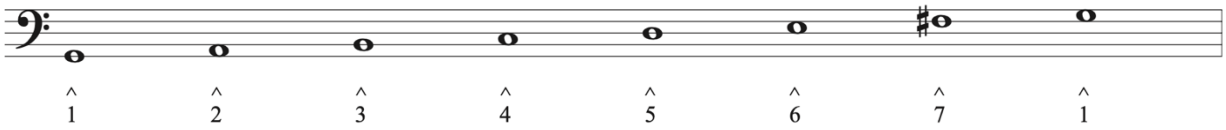
https://open.spotify.com/track/7CD8O3gZ5NB7jkfO5cv0WD?si=3c8704e01a0046c5

Mixolydian Mode:

Similar to major but with a lowered seventh scale degree.



Compare to G Major:



Songs in Mixolydian Mode:

Clocks Coldplay

https://open.spotify.com/track/0BCPKOYdS2jbQ8iyB56Zns?si=e32c11137d1a463e

All Blues (Miles Davis)

https://open.spotify.com/track/5o3DSHw1ORhM3lWxqGRvEf?si=35468c344af347e1

Dark Star Grateful Dead

https://open.spotify.com/track/2AF1drAUmMi8ZX0U97UJLw?si=9c1edcecfb904677

Sweet Child O'Mine (Guns N' Roses)

https://open.spotify.com/track/7snQQk1zcKl8gZ92AnueZW?si=1ac228731e654693

All Apologies (Nirvana)

https://open.spotify.com/track/1Ic9pKxGSJGM0LKeqf6lGe?si=714d2433b611434d

Concerto in modo misolidio Ottorino Respighi

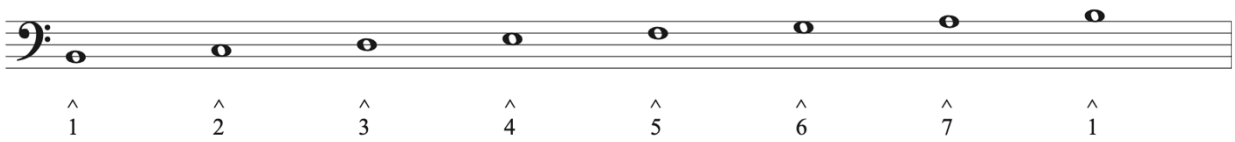
https://open.spotify.com/track/2YJvBujMhuCaxw1na6W2MT?si=78bb1693ee514dc6

Sweet Home Alabama Lynyrd Skynyrd

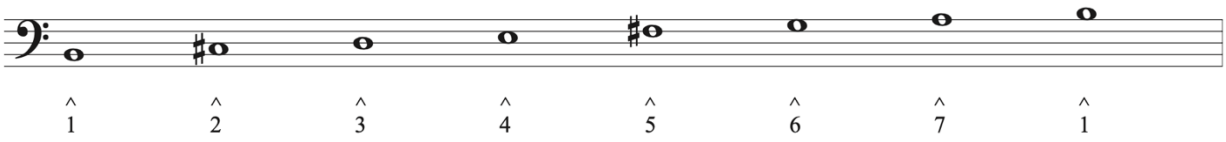
https://open.spotify.com/track/7e89621JPkKaeDSTQ3avtg?si=c37fa6f34be14e0a

Locrian Mode:

Locrian is the least familiar sounding mode. It is closest to minor, but not only does it have a lowered second scale degree like Phrygian, it also has a lowered fifth scale degree. This means the chord built on the first note of the scale, which should be a stable home, is diminished. There is no stability in this key.



Compare to B Minor:

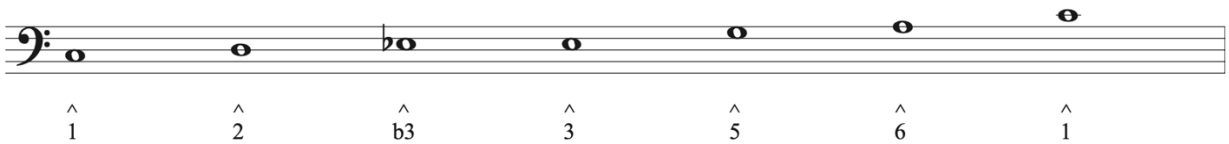


Songs in Locrian
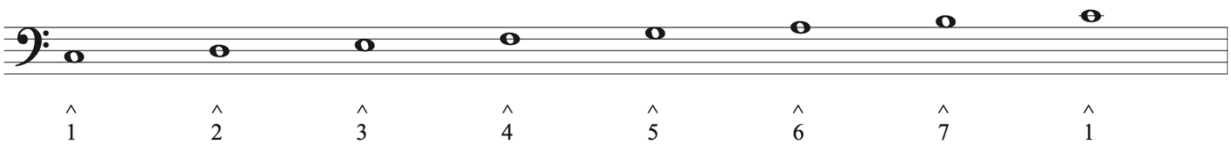
Dust to Dust (John Kirkpatrick)

https://open.spotify.com/track/3SPOp5WGpvAZSUPvSYCYG4?si=e94f6aa17fdd4c10
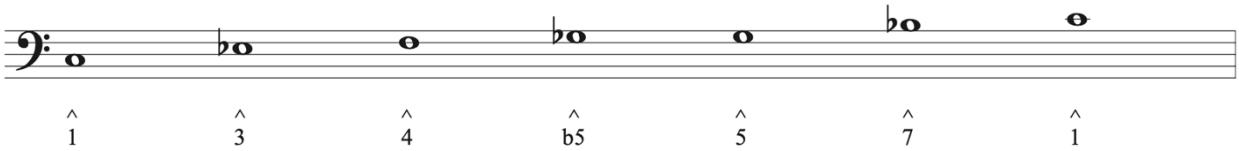
Major 6 Note Blues Scale:
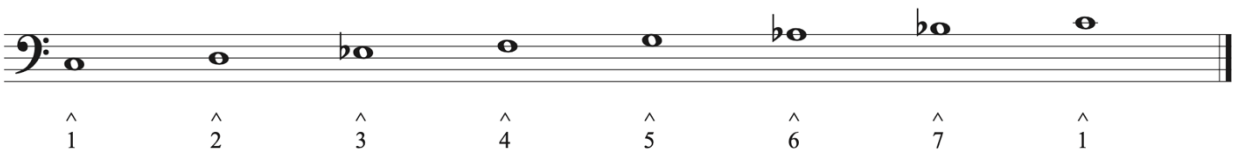


Compare to C Major:



Minor 6 Note Blues Scale:



Compare to C Minor:



Key Ideas and Terms to Know

- **There are many modes other than major or minor.**
- **Each mode has a certain character and can be categorized as close to minor or close to major.**
- **Music from certain regions and time periods utilizes certain modes.**

Chapter 26

Sonata Form

A sonata is a multi-movement piece (movements are like chapters; connected but with different content). Piano sonatas are written for one instrument, but most other sonatas are written for that instrument plus piano (violin sonatas are typically for violin and piano).

Sonatas became popular in the Classical Period (1750-1827) and are still composed today. The first movement of a sonata is typically in Sonata form. This has a predictable structure and is very similar to what you probably studied in an English class when discussing the form of a novel.

Exposition:

This is where you meet your characters and learn the plot. In music, one hears a primary and then a contrasting secondary theme. Usually the primary theme is bold while the second theme lyrical and sweet. Often the exposition ends with a repeat sign (it is performed twice).

Development:

Often called *rising action* in a book, this is where trouble happens. Musically, it might modulate to strange key areas. Musical problems might be set up.

Recapitulation:

This is the *resolution* or *denouement.* Problems are solved, we return to the home key, and it ends with finality.
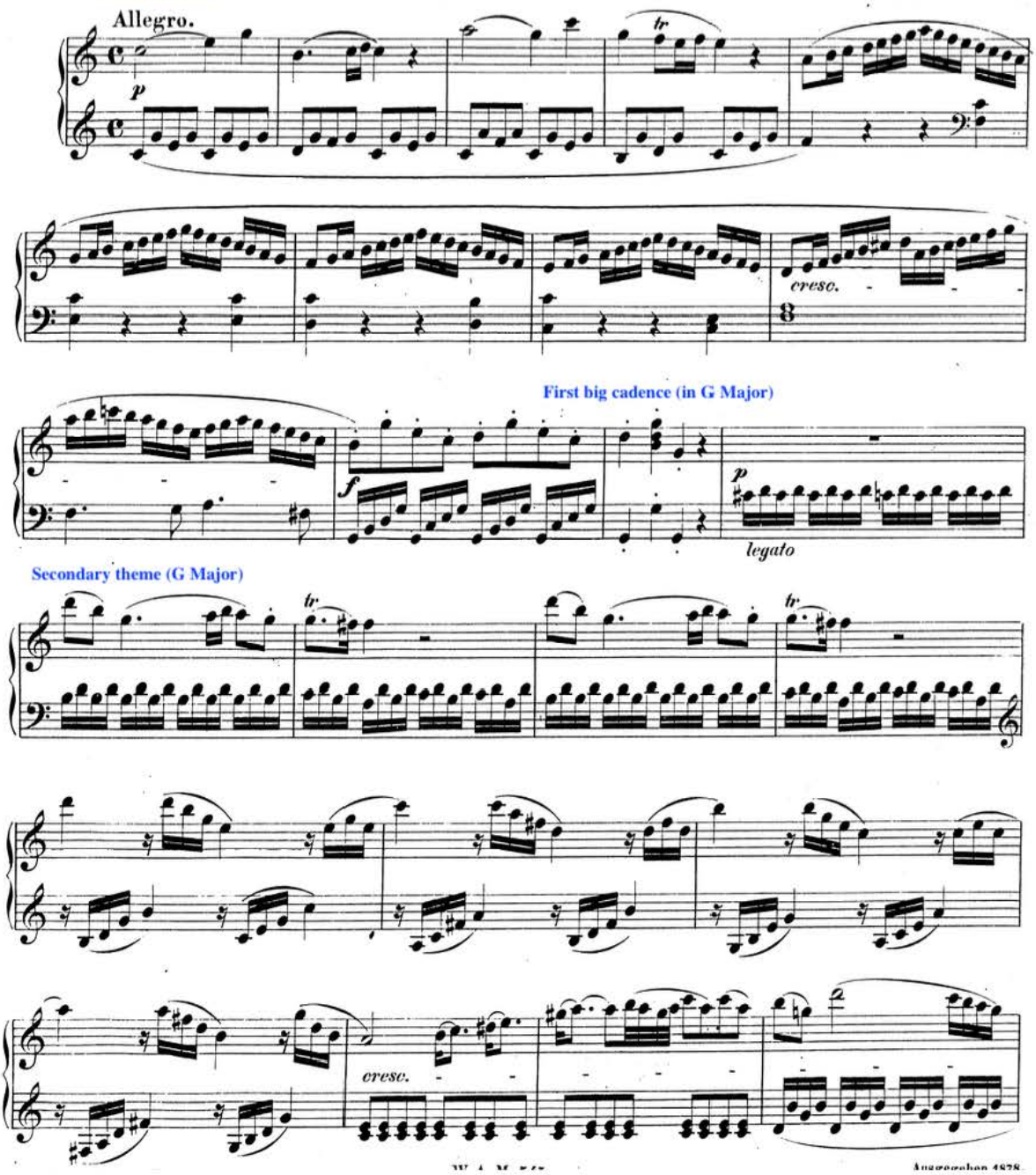
Sonata K. 545, First Movement (W.A. Mozart)
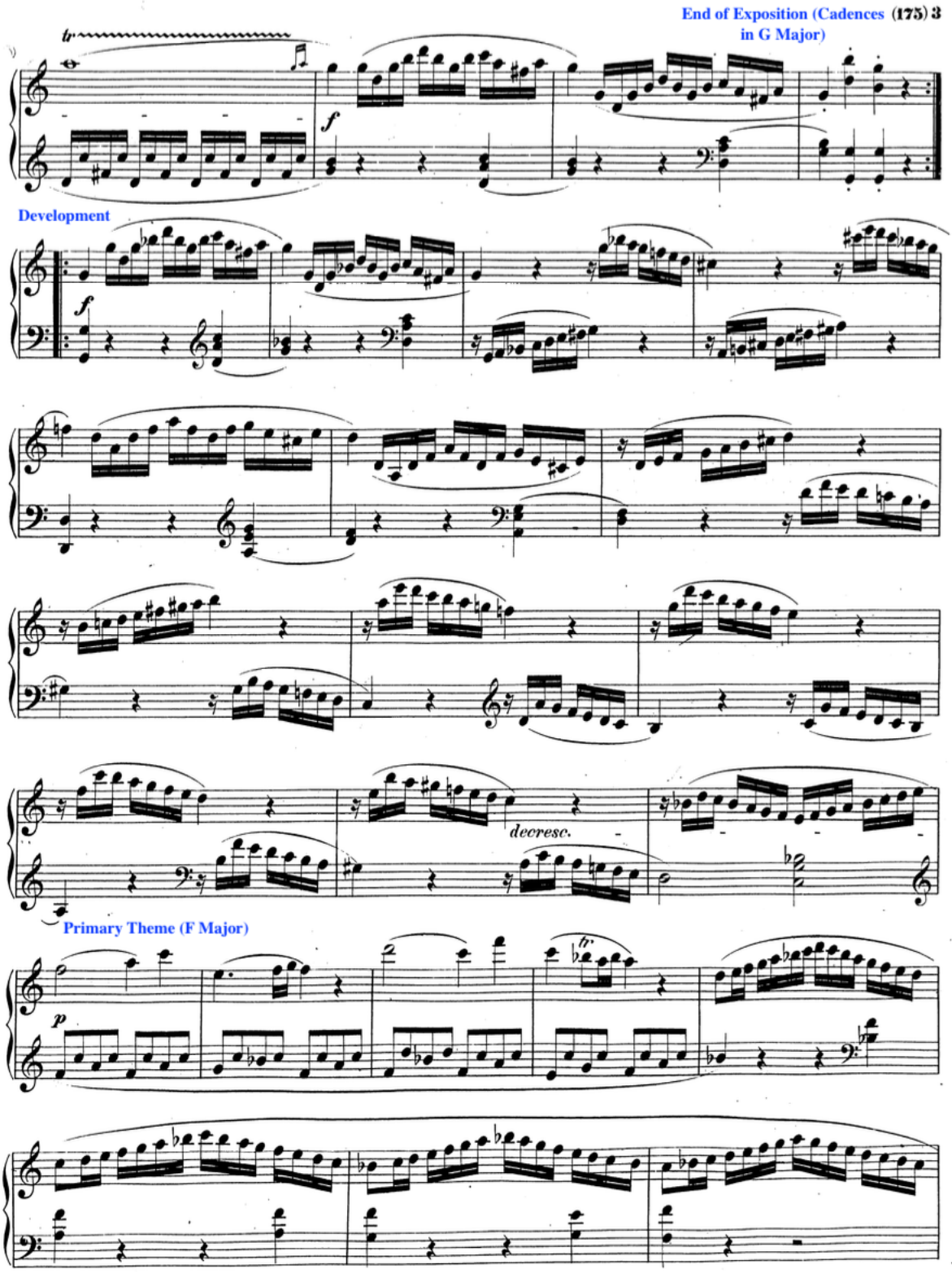
https://open.spotify.com/track/51xHvAUYQfhY29GcGlBM0n?si=5fa56a8398b84e7c

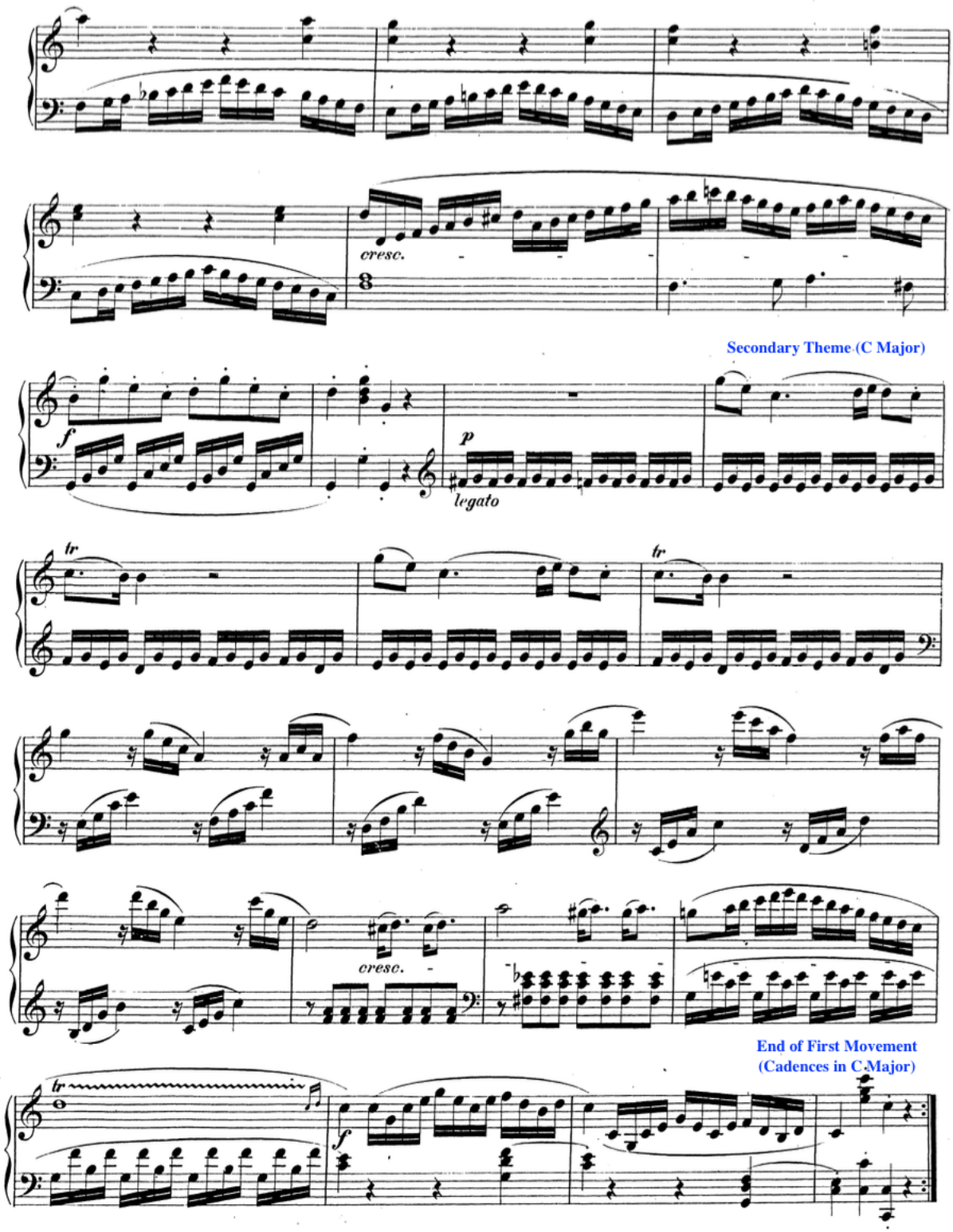
Listen to the first movement of Mozart's C Major Piano Sonata, K. 545. K stands for "Köchel," the person who catalogued Mozart's music. This is 545th piece he wrote. Mozart only lived from 1756-1791…

The basic outline of the movement is marked in blue. Notice how the primary and secondary themes are different, what the overall character of the piece is, and the journey of the movement.

Exposition (C Major)
Primary Theme




End of Exposition (Cadences in G Major) (175) 3
Development
decresc.
Primary Theme (F Major)


cresc.
Secondary Theme (C Major)
f
p
legato
tr
tr
cresc.
End of First Movement
(Cadences in C Major)
tr
f

Key Ideas and Terms to Know

- **Sonatas have more than one movement.**
- **The first movement of a sonata is written in sonata form.**
- **Sonata form contains an exposition with two contrasting themes, development, and recapitulation.**

Chapter 27: Lessons From Writer's Block

Most authors and composers have encountered writer's block at some point or another. Sometimes ideas come easily, and sometimes it feels like trudging through the mud to make any progress.

One of the most common pieces of advice is to write what you know. Instead of inventing someone else's story, write your own.

Sting

The artist Sting sold over 100 million records and singles as part of the band The Police. Born Gordon Sumner, Sting grew up in Newcastle, England in the shadow of a shipyard. He escaped that life and became a world-famous artist, then hit writer's block that lasted for years.

Eventually, he started telling the stories of the people he grew up with, and out came the album "The Last Ship."

In his words,

"It's ironic that the landscape I'd worked so hard to escape from and the community I'd more or less abandoned and exiled myself from should be the very landscape and very community that I would have to return to to find my missing muse," said Sting, now 62. "And as soon as I did that, as soon as I decided to honour the community I came from and tell their story, the songs started to come thick and fast. I've described it as a kind of projectile vomiting; a torrent of ideas, of characters and voices. Verses, couplets, entire songs almost formed whole materialized in front of me as if they'd been bottled up inside of me for many years."

Sting talks about this in his Ted Talk, "Sting: How I started writing songs again."

https://www.ted.com/talks/sting_how_i_started_writing_songs_again?subtitle=en

Camille Saint-Saëns

In Unit Two we explored the melodic line of *The Swan.* This piece is part of a larger work by Camille Saint-Saëns. The French composer was staying in a small Austrian village, trying to work on his Third Symphony. He found himself working instead on *The Carnival of the Animals:* a fanciful rendition of different animals. He considered it frivolous and refused to have it published during his lifetime. He gave in only for *The Swan,* which was published as a version for cello and piano in 1887.

Saint-Saëns wrote in his will that he wanted the piece published only after his death. It has since become arguably his most famous work.

The lesson: quit judging ourselves so harshly! What we write has merit, even if it isn't the work we intended to put out into the world.

Making it Your Own:

Final Project Requirements and Rubric

The primary purpose of the final project is to give you the opportunity to use your musical knowledge in a way that is personally meaningful. Students will have their own individual musical motivation in fulfilling this assignment. The focus is to encourage the pursuit of your musical goals.

While a wide variety of projects will fulfill the requirements, make sure you can honestly answer the following questions in the affirmative before pursuing your project:

1. Does it mean enough to you that you would enjoy spending at least 15 hours working on it?
2. Does it have educational value: will you learn something from your work on the project?

You will present your final project to your classmates in class via a recording or live performance. The recording can be of you performing, MuseScore or some other program. Bear in mind that each class member is striving to reach a highly individualized goal based on their own experience, and the rest of us are there to give support and encouragement. This gives each project an equal amount of validity. Think of this presentation not as a talent show, but as an occasion where we share and celebrate our learning experiences in a relaxed atmosphere. You will present a brief spoken description of your project and your reason for choosing it. This spoken information is necessary to adequately prepare your audience for a genuine appreciation of your project. **Unless there are extreme circumstances, you must be in class for all presentations (yours and colleagues'). Unexcused absences result in application of the late policy to your own project.**

You will submit the following to the assignment folder and introduce in class.

1. Recording (MP3, MP4, WAV only)
2. Musical Score (PDF)
3. Reflective Paper (PDF or Word)

The final project will be an original composition started after the beginning of the semester, specifically for this class. You may compose an original melody to an already existing chord progression (but may not cover an existing song).

Almost any idea can work. However, read through the requirements before you get too far, to avoid any frustration.

Composition (100 points)

Music serves many purposes. It can inspire emotion, provide witness and commentary for global events, and reflect on personal experience. Using one of these or different inspiration, write a 3-5 minute piece and a reflective paper based in research.

Performance (15)

- Recorded on physical or electronic instruments.

Instrumentation

- Any instrument or combination of instruments.

Score and Setup (40)

- Full score (not individual parts) that reflect all melody, harmony, rhythm (not tablature or lead sheets).
- Check number of beats per bar, that stems go the correct way, key signature and accidentals correctly placed, double bar at the end, parts bracketed together, etc.
    - If using Ableton Live, Logic, FL Studios, etc., check score for clarity and fix any issues. There are ways to define parameters such as the smallest note value used. A clear and correctly formatted score is required.

Length and Form (15)

- 3-5 minutes of original music.
- Form can be organized in many ways: AB, ABA, ABBA, through composed, blues, etc.
- Melodic and harmonic material can (and usually should) be reused throughout the composition. However, there should be melodic variation each time it returns (use of non-chord tones, rhythmic variation, etc.).

Major, Minor, Pentatonic, Blues, or Church Mode (15)

- Key signature and pitch set used must align.
- Piece may change keys (modulate). An easy way to do this is to make the verse (A) minor and the chorus (B) major, or vice versa, using the same key signature (relative keys).

Harmony (15)

- Use strong progressions (from the charts in this unit) or if using non-functional harmony, explain what makes the music work.
- If writing for a solo instrument that is not chordal, there is still implied harmony.

Paper (100 points)

Each genre has its own traditions, characteristics, form and recognizable components. As you write your own original composition, do some research about what goes into the genre of your choice. Is it a soundtrack? Does it use traditional harmony, or non-functional harmony? If it uses non-functional harmony, what are the things that tie it together? How does it work?

Most likely, the composition will have cross-over elements. Perhaps it's a bit of classical from your years in orchestra in middle school, mixed with pop, mixed with bluegrass. Everything we do is influenced by what's around us, and identifying those musical elements is helpful in creating the sound we want.

Reflect on your compositional process in a 4-5 page double-spaced paper (1,000-1,250 words). The word count does not include a cover page or citations. Cite any sources. Include commentary on the creative process, and include discussion of each of the following points:

- Performance
- Instrumentation
- Score and Setup
- Length and Form
- Mode
- Harmony

Analyze your project:

- What genre is your piece?
- What is the history of this genre? Include time periods, important artists, new instruments, etc.
- What tradition or traditions does the genre come from?
- How does your piece follow these traditions, and/or how does it deviate? Is the form and harmonic language typical?

Summarize and review the process of your work on the project, from beginning to end. Did the project change during the compositional process? Which ideas worked and which did not? Summarize what you learned from working on the project.

Do not use the assistance of any writing bot or plagiarize an existing paper.

Give an honest estimate of the number of hours you spent working on your project.

Include a word count.