

## MUSC 3A – Adduci – Final Exam Review Outline

- For this exam, you will be asked analytical questions about the scores included in your Final Exam Score Packet (*extra copies and recordings available on Canvas*). You must bring your score packet with you to the exam – I will not have extras available.
    - You may write anything you like (analysis, notes, etc.) on the score packet, including on the back of the last page. Everything must be handwritten by you, and you may not attach any additional materials to the packet. Deviation from these instructions will result in your exam grade being lowered.
    - The packet itself will not be graded – the idea is to give you time to sit down and look at the music when you are not pressured by the exam clock. This is recommended, but not required.
  - In addition to questions involving analysis of the scores as mentioned above, there will be short-answer questions about the different styles and techniques we have covered this semester. You will be asked to explain a particular technique and draw a simple musical example (if appropriate).
    - For example, if you are asked to explain the Neapolitan chord, you would write that it is a major chord with b2 as the root, usually appearing in first inversion, usually in minor keys, and usually resolving to V. You would then draw a four-part voicing of the chord and its resolution, following rules of good voice leading / part writing.
  - Below you will find an outline of the topics we have covered this semester. This is only intended as a guide to your own study – you will want to study your own notes and assignments in detail and refer to the Turek and Kostka texts (on reserve in the Library) as you prepare for the exam. The final exam is comprehensive – everything we have covered this semester may appear on the test, apart from our discussion of Wagner.
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### 1. MUSC 2A Review:

- Secondary dominants
- Secondary leading tones
- Tonicizing groups
- Diatonic pivot chord modulation
  - A very basic, smooth modulation – barely noticeable.
  - Closely related keys
    - Because the keys are closely related, there will be few or no accidentals. Look for persistence of accidentals.
  - Diatonic pivot chords.
    - Pivot chords are diatonic in both keys.
    - The pivot point must be before the cadence (cadence = 2 chords). Could be several possible pivot points.
  - Difference between 2o harmony and a modulation?
    - Modulations are confirmed by a cadence; tonicizing groups will have cadential motions but tend to occur in the middle of phrases. Following a tonicization the music immediately resumes in the original key, where a modulation would stay in the new key at least briefly before modulating again.

## 2. Modal Mixture.

- Borrowed chords: using a chord that exists in the parallel key. No other chords may be borrowed.
- Free mutation between parallel keys. Music that moves from C Major to c minor is not modulating, because the tonal center (C) has not changed. Therefore, a cadence is not required to confirm a mutation.
- Modal mixture gives us a wider definition of “closely-related” keys – all keys closely related to major and parallel minor are fair game. Could pivot from C major to F minor if you can make it work (both closely related to either C major or c minor).
  - This means that pivot chords no longer need to be diatonic in both keys – you could use a borrowed chord as a pivot. It is “diatonic” in a broader sense but not part of the key signature.
  - In older music, when in a minor key it was typical to modulate to the relative major. Now we tend to go to the parallel major instead.

## 3. Altered Pre-dominants

- Chromatically-changed versions of regular PD chords (2, or 4). Often approached from 6 or 1. These chords resolve to 5.
  - Neapolitan: Major chord built on Ra (b2). Usually in first inversion, so it sounds darker than a root-position major chord.
    - Voice leading – Ra Ti Do in one voice.
  - Augmented 6<sup>th</sup> chords: Contain the pitches Le (b6), Do (1) and Fi (#4), plus one “color note” that gives each chord type its name:
    - Italian: It. (double the root)
    - French: Fr. (add supertonic Re)
    - German: Gr. (add b3 – Me). German chord has a Mm sound.
  - Enharmonic spelling lets the German chord become a pivot chord to change to distant keys, or for chromatic modulation without a pivot chord.
    - This further expands definition of pivot modulation – pivot chord can be functional, not diatonic. Could use the German chord as a secondary dominant in the destination key, for example.

## 4. Transposition

- Transposing instruments – “C” instruments sound at concert pitch. Others sound higher or lower, and must be written differently to produce the same sound.
  - The pitch name of the instrument (for example, clarinet in Bb) tells you what pitch you hear when the performer plays a written C.
    - Bb clarinet – if you play a written “C” on the clarinet, you hear a sounding Bb. So, to hear a sounding C, the composer must write the clarinet part up a major 2<sup>nd</sup>, giving a written D in this case.
- When looking at a score, we are looking at written pitches, and must transpose to find the sounding pitches.
- When composing, we have a sounding pitch in mind, and must transpose in the opposite direction to figure out what written note to use.
- Some instruments involve an octave displacement instead of (or in addition to) a transposition.

## 5. Compositional tricks involving the way chords function and resolve.

- Delayed Resolutions
  - Normally, a chord with some sort of resolution tendency moves immediately to its chord of resolution (for example, V/V resolves immediately to V).
  - A chord's resolution may be delayed by adding additional chords in between the tendency chord and its chord of resolution (for example, V/V – I – V). This resolution should be indicated by an arrow in the music showing where the chord resolves, and could also be labeled “delayed.”
  - The longer the resolution is delayed, the weaker that resolution becomes, unless the additional chords also have a tendency to resolve to the same place (this is very common): for example, V/V – viio/V – It. – I6/4 – V. In this example, each chord has its own tendency to move to V, so by the time you actually arrive on the dominant the resolution is particularly powerful. This specific technique is called prolongation.
- Embellishing Chords.
  - Definition: A set of pitches that seems to sound like a recognizable chord, but is not actually participating in the harmony of the phrase. “Passing chords.”
  - Properties:
    - Non-functional/embellishing chords can be in or out of the key.
    - These chords are usually created by voice leading – introduction of passing notes to smooth out melodic lines. Sometimes these notes create new chords that are non-functional.
    - These chords are usually outside of the harmonic rhythm.
    - These chords may have tendency notes that do not resolve or a clear function that is not being obeyed.
  - Analysis:
    - If you decide that a harmony exists and want to acknowledge it more strongly than by labeling a collection of NHT, then put the embellishing chord's root and quality in brackets [DMm].
  - Most obvious example – an off-beat pickup chord in a Bach chorale that could be analyzed with a Roman numeral, or as a collection of NHT. Doesn't fit within the harmonic rhythm, so we shouldn't analyze it functionally even if it has a possible Roman numeral.
  - Often used to embellish an existing harmony – inserting a non-functional harmony within a longer chord – like changing the chord's inversion over time, this is a way to make the chord more interesting.
- Deceptive Resolutions – similar to the way a deceptive cadence works (two of the notes in the V chord go to notes in the I chord as expected, but the root moves up by step to vi instead).
  - A deceptive resolution is any resolution (not just at a cadence) where the tendency note resolves correctly (other chord notes may also resolve correctly), but a portion of the chord goes somewhere else, creating a new, unexpected harmony and resolution.
    - Example: the chord progression C: I – ii – viio/iii – I6
      - The viio/iii (D#d) should resolve to iii (Em). Instead, it resolves to CM, which contains two notes of Em (the E and the G). So the tendency note, D#, still resolves correctly to E, but the resultant harmony has been altered.
  - These resolutions are not embellishing/non-functional, and should not be analyzed with brackets. Label them as “deceptive,” with an arrow leading to the resolution chord.

- “Backward-looking” Chords – sometimes a chord appears to not resolve, when in fact it actually came from its own resolution. For example, a secondary dominant (V/V) is used properly when it moves V/V – V. If instead it moves V – V/V, we would say that it is a “backward-looking” dominant: it is preceded by its own resolution.

## 6. Advanced Modulations

- Revisions to the definition of traditional pivot chord modulation:
  - Any chord that is functional in both keys can be used as a pivot chord.
    - Make sure that the pivot moves forward in the new key. For example, if V/iii is pivot’s function in the new key, it should go to iii in the new key. When leaving the old key, the pivot could be unresolved – if V/iii is the pivot’s function in the old key, it doesn’t have to resolve in the old key because you’ve moved to a new key.
  - Keys do not need to be closely related.
  - Enharmonic spellings (especially of the Gr. Chord and the dd 7<sup>th</sup> chord) can create new pivot chords to distantly related keys. Remember to consider possible enharmonic spellings when analyzing modulations!
    - The augmented-sixth chord can also be used to confirm the new key after a pivot, because of its strong tendency towards V.
    - Any viio7 (fully dim) can be turned into a Mm7 by lowering any note by a half step. This lets the chord resolve as a dominant (down by 5<sup>th</sup>) instead of as a leading tone (up by m2). Often creates a deceptive resolution.
- Phrase modulation.
  - Phrase 1 ends in one key, Phrase 2 begins immediately in another key with no preparation.
  - Common in “sectional,” repetitive forms like Minuet/Trio.
  - Sounds best when closely related, but can be any two keys.
- Common tone modulation.
  - Similar to a pivot chord modulation, but it uses only one note as the pivot.
  - Usually the note is diatonic in both keys, but it could be chromatic as long as it is functional (part of an allowed chromatic harmony in the key).
  - Usually the note is established as part of a certain chord / function, then the note is sustained alone (helpful but not required), then a new chord containing that note is played. The two chords are often related by third.
  - Like all modulations, after the pivot point the new key must be confirmed by a cadence.
  - The chord after the common tone does not have to be I in the new key.

### *Material covered since the midterm exam:*

- Sequential modulation.
  - Sequence: a musical idea or fragment, repeated at different pitch levels. Useful for circle progressions or other types of functional root movement.
    - Tonal vs. Real sequence: a tonal sequence stays in one key, so the exact interval qualities of the sequential pattern are not preserved. A real sequence moves exactly by a certain interval, so the music does not stay in one key but the interval pattern of the sequence is preserved exactly.

- Tonal sequence example: sequence up by step in C Major. E-D-C-E-G / F-E-D-F-A / G-F-E-G-B
  - Real sequence example: sequence up by M2. E-D-C-E-G / F#-E-D-F#-A / G#-F#-E-G#-B
    - A sequence requires three iterations of the subject material to be perceived as a sequence.
- Not all sequences result in a modulation, but it is a useful tool for key changes – all you have to do is sequence until you get to the desired pitch level, then alter the end of the sequence to produce a cadence in the new key. This works with tonal and real sequences.
- Final notes on modulation:
  - Distant modulations are the same as closely-related ones – the new accidentals are consistent and persistent, and point to notes in the new key (Ti or Fa to Do or Mi)
  - Look for chromatic voice leading, particularly series of chromatic steps in one voice.
  - Look for chords that do not resolve as expected (but be aware of deceptive / delayed resolution).
  - Look for chords with an enharmonic function.
  - Look for chords that are hard to identify, that may be altered predominants in a new key.

## 7. Altered Dominants.

- Dominant chords with chromatic alteration; function is unchanged. Adds more dissonance/color to the V chord. Best to analyze with a capital V and then show any alterations.
  - Options:
    - Raise the 5<sup>th</sup>: V<sup>#5</sup> (“augmented V”)
      - Usually a triad only.
      - Usually not in minor keys.
    - Lower the 5<sup>th</sup>: V<sup>b5</sup>
      - Usually a 7<sup>th</sup> chord: V<sup>7</sup><sub>b5</sub> (“French V” – sounds like a Fr chord)
    - Lower the 5<sup>th</sup> and 3<sup>rd</sup>: V<sup>b5</sup><sub>b3</sub> (“diminished V”)
      - Usually a half-dim. 7<sup>th</sup> chord (V<sup>7b5</sup><sub>b3</sub>); could also be a triad (V<sup>b5</sup><sub>b3</sub>).
      - No fully-dim. 7<sup>th</sup> chords: would sound like vii<sup>o7</sup> / bVI.
  - In C Major: V = GBD; V<sup>#5</sup> = GBD#; V<sup>7</sup><sub>b5</sub> = GBDbF; V<sup>7b5</sup><sub>b3</sub> = GBbDbF
  - Function:
    - Usually in root position.
      - Always analyze in root position – the alteration is more important than the inversion. However, you may see the inversion in parenthesis: V<sup>7</sup><sub>b5</sub> (<sup>6</sup><sub>5</sub>)
    - V still goes to I. Resolve the altered tone in the direction of alteration; 7<sup>th</sup> down.
      - This often looks like a chromatic passing line (PT).
    - Can be used as 2<sup>o</sup> dominants, but the triad usually stays major (no lowered 3<sup>rd</sup>).
    - (Rarely) can be used with extended dominant chords (9<sup>th</sup>, 11<sup>th</sup>, or 13<sup>th</sup> chords).
- Use of altered dominants in modulation:
  - Augmented chords have no root – can be enharmonically respelled.
    - C: V<sup>#5</sup> (GBD#) = Ab: V<sup>#5</sup> (EbGB) = E: V<sup>#5</sup> (BD#Fx)
  - V<sup>7</sup><sub>b5</sub> sounds like French chord
    - C: V<sup>7</sup><sub>b5</sub> (GBDbF) = F: Fr (Db F B, and G is Re)

## 8. Extended (“Tall”) Chords.

- Structure.
  - Contain compound intervals above the root – 9ths, 11ths, 13ths.
    - Must be that distance above the root – not reduced to 2nds, 4ths, 6ths.
      - If not, they sound like “Add note” chords (add2, add6)
    - No “10<sup>th</sup>” or “12<sup>th</sup>” chords – those notes are already part of the triad.
    - The 15<sup>th</sup> is a doubling of the octave – not used in Common Practice. In the 20<sup>th</sup> century it appeared as a chromatic note to give a “split” feel to the root.
  - Most often in root position. Can be inverted, but the root needs to stay below the extension.
  - Can be completely diatonic, or can have chromatic notes.
- Nomenclature.
  - Chord quality – show the root, then the quality of the triad, 7<sup>th</sup>, 9<sup>th</sup>, 11<sup>th</sup>, and 13<sup>th</sup>.
    - CEGbDFA (C13) = C MmMPM. F: V<sup>13</sup>. If any notes are missing, use a \_\_.
    - 9ths are M or m. 11ths are P, A or d. 13ths are M or m.
  - Roman numerals – the R.N. shows triad function and quality.
    - The number shows the tallest extension only - no notation of inversions.
      - Use figured bass – style accidentals to show chromatic notes. (e.g., V<sup>9</sup><sub>#5</sub>)
    - As usual, numbers are assumed to be diatonic (in the key).
      - Example: V<sup>9</sup> (“dominant 9<sup>th</sup> chord”) could have a M9 or a m9:
        - In a major key, V<sup>9</sup> is a “dominant-major” chord, G: V<sup>9</sup> = DF#ACE (MmM)
        - In a minor key, V<sup>9</sup> is a “dominant-minor” chord, g: V<sup>9</sup> = DF#ACEb (Mmm).
        - These are both diatonic, and both use “V<sup>9</sup>” for their Roman numeral.
        - Dominant-minor 9<sup>th</sup> chord in a major key: V<sup>b9</sup>
  - Common-Practice Usage.
    - Chords larger than 7ths “first” used in the late Romantic period.
      - Bach and contemporaries used extensions but thought of them as melodic dissonances, not as part of the harmony.
      - Even in classical/romantic music the extension tends to be treated melodically, and often resolves like an appoggiatura: down by step. It can be hard to spot.
    - Usually dominant chords are extended. However, any M or m 7<sup>th</sup> chord can be extended (avoid extending A/dd/dm chords). Altered and secondary dominants can be extended (usually only to the 9<sup>th</sup>).
    - Adding extensions to a chord doesn’t change its function. V<sup>9</sup> still goes to I; ii<sup>9</sup> still goes to V. However, extended chords tend to “collapse” to 7<sup>th</sup> chords before resolving.
    - In four voice texture, the extended chord must have AT LEAST the root, 7<sup>th</sup>, and the highest extended note (9<sup>th</sup>, 11<sup>th</sup>, or 13<sup>th</sup>).
      - Start by dropping the 5<sup>th</sup>. 9<sup>th</sup> chords are commonly R379; 11<sup>th</sup> chords are R3711 or R7911 (more dissonant); 13<sup>th</sup> chords are usually R7913.

## 9. Tritone Substitution.

- Replacing any chord with another chord whose root is a tritone away from the original chord root.
  - Usually the quality of the original chord and substituted chord are the same.
  - The goal is to replace the downward fifth motion of the circle progression with a downward, stepwise, chromatic motion – smoother and less “traditional” sounding.

- The most commonly substituted chord type is the Mm7, and the V<sup>7</sup> in particular. This creates stepwise motion when using a circle progression: ii<sup>7</sup>-V<sup>7</sup>-I becomes ii<sup>7</sup>-bII<sup>7</sup>-I (in C: Dmm-DbMm-CM). This works because the GMm and DbMm chords contain the same tritone (B-F), enharmonically spelled.
- In Common Practice, any chord (not just V<sup>7</sup> or Mm7) could be replaced with a tritone substitute. The technique is used less frequently in classical music than in jazz.
  - Either the old chord will be entirely replaced, or the old root will be retained in the bass under the new substitute chord.

## 10. Linear Chromaticism.

- Definition: gradual “mutation” of a chord, one note at a time, to create new progressions.
  - In chromatic passages, esp. stepwise passages, the stepwise motion may be the primary goal (linear focus – foreshadowing the 20<sup>th</sup> century).
  - This may create/use recognizable chords with a functional tendency in ways that do not obey that chord’s resolution tendency (w/o regard for their traditional function).
- Analysis: the resulting chords may give a series of bizarre roman numerals, but functional tendency is not important in this context.
  - When you identify that linear chromaticism is in use, label it as such and switch to root/quality notation.
  - The technique can’t continue forever, at some point the music will return to functionality in some key. At that point, you can switch back to Roman numeral analysis again.
  - Can be used as a form of modulation to get to a new key by gradual mutation of a chord until you get where you want. A great way to avoid cadences as you move to your destination.
- **IMPORTANT:** the presence of chromatic lines does not automatically mean linear chromaticism is being used. Remember that the addition of a secondary dominant also produces chromatic voice leading – sometimes chromaticism is functional, not linear. Linear chromaticism is a late-Romantic technique.

## 11. Chromatic Mediants.

- Mediant relationships: Harmonic movement by thirds becomes very common in the Romantic period (individual chords, and also key relationships). Beethoven and Dvořák are noted for their mediant relationships. These become more chromatic as time moves forward.
- A chromatic mediant is actually a three-chord event: a M or m diatonic chord, then its chromatic mediant, and then the same diatonic chord again.
  - Only Major or minor diatonic chords can have a chromatic mediant. The chords will have the same quality, with roots a 3<sup>rd</sup> apart (two letter names in common).
    - One of the common tones in the second chord has been altered so that the chord qualities are the same.
      - For example, CEG and ACE are diatonic (normal) mediants; CEG and AC#E are chromatic mediants.
  - Enharmonic spellings are ok.
  - Any inversion is ok, R.P. is the most common.
  - Can be used as seventh chords.
    - Chromatic mediant 7<sup>th</sup> chords can have two tones in common.
    - No fully-dim. seventh chords.

- For any chord, there are four possible chromatic mediant (two a third above, and two a third below). Some of them may have an alternate explanation (BC, for example) – it depends on how they are used.
- Doubly-chromatic mediant:
  - Both of the common tones are altered.
  - Chords do not have the same quality.
  - Examples: CEbG (Cm) and EG#B (EM)
- Function:
  - Usually based on tonic (but can occur anywhere), are surrounded by tonic on both sides.
    - Embellishments of an existing chord progression, or a chromatic substitution for a chord with a similar root.
    - Can be a chromatic pivot chord.
  - Analysis: use a Roman numeral expressing the correct chord root and quality, and label the chord as either (CM) [*chromatic mediant*] or (DCM) [*doubly-chromatic mediant*].
    - For example – bVI (CM) or biii (DCM), etc.
    - If the chord could have some other function (borrowed or secondary chord), indicate that instead, but only if that function is obeyed.
      - Example: in G Major, the chords GM and EM. The EM chord could be V/ii, but it should then resolve to ii (Am). If it is a chromatic mediant, it returns to I (GM) instead.
  - A typical passage containing a chromatic mediant would look like this: CM – EM – CM. in C Major, the analysis would be C: I – III (CM) – I.
- Common tone modulations are often mediant gestures, exploiting the two common tones between triads with roots a third apart.
  - Sometimes they are chromatic mediants, for example:
    - Batman Begins – Dm to BbM (diatonic mediant)
    - Beethoven 9: AM to FM (chromatic mediant)
  - In terms of movement/key relationships in a symphony:
    - Beethoven 5: movement 1 in C minor, movement 2 in Eb Major – relative major.
    - Beethoven 9 movement 2 in D Major, movement 3 in Bb Major (III) – CM.
    - Dvořák 8 goes from G Major (I) to Eb Major (II) – CM.