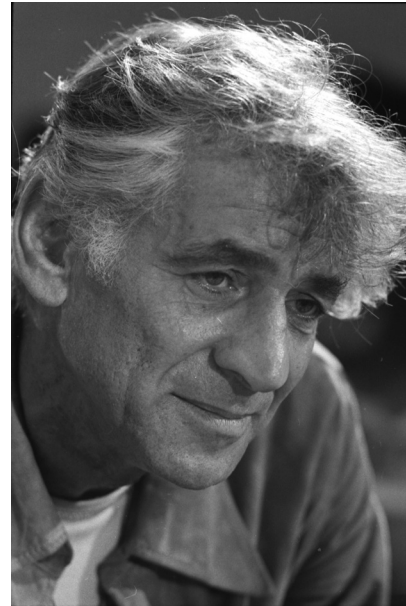


MODULATIONS IN CLASSICAL MUSIC

Artist in Residence: Leonard Bernstein



Chapter Objectives

- Define modulation
- Recognize pivot chord modulation within the context of a musical score
- Recognize chromatic pivot chord modulation within the context of a musical score
- Recognize direct modulation within the context of a musical score
- Recognize monophonic modulation within the context of a musical score
- Analyze large orchestral works in order to analyze points of modulation and type of modulation

Composed by Leonard Bernstein in 1957, *West Side Story* has been described by critics as “ugly,” “pathetic,” “tender,” and “forgiving.” The *New York Times* theater critic, Brooks Atkinson, said in his 1957 review, “Everything contributes to the total impression of wildness, ecstasy, and anguish. The astringent score has moments of tranquility and rapture, and occasionally a touch of sardonic humor.”

Watch the performance of “The Balcony Scene” from the musical *West Side Story*. In this scene, the melody begins in the key of B \flat major, but after eight bars the tonal center changes. And in a moment of passion and excitement, the tonal center changes again. By measure 16, the tonal center has changed four times. Talk about a speedy courtship!



Video
Track 26:
Bernstein,
The Balcony
Scene

Study the chord progression from the opening ten bars of “The Balcony Scene.”¹ What chords are chromatic, meaning not diatonic in the key? Can they be explained as secondary chords? Based on the chord progression, can you tell where the tonal center changes?

B \flat : F/C B \flat C7/B \flat B \flat C7/B \flat
 Tonight, tonight, It all began tonight,

 B \flat G-7 A- A \flat 7 D \flat
 I saw you and the world went away to - night.

A change in tonal center is called a **modulation**. For a modulation to occur, several things must appear in the music.²

- **Consistent accidentals.** In order for the tonal center to truly change, accidentals must be added or deleted to indicate the new key.
- **Strong cadence in the new key.** Typically the new tonal center is firmly established with an authentic cadence in the new key.

While the criteria above are certainly important, it is essential that you use your ear to determine if a modulation has occurred. Listen to “The Balcony Scene” again. Hum the opening tonic on the pitch B \flat out loud as long as you can. Did you notice that you began to feel less and less sure of your pitch? That is because the opening tonic is no longer applicable after measure 10. Although it is important to note that a modulation has occurred, it is even more crucial to understand how the effective modulation took place.

PIVOT CHORD MODULATION

The most common type of modulation is called a **pivot chord modulation**. In this type of modulation, a particular chord serves two functions, both in the original key and the key to which you are modulating.

Play the following progression on your guitar or on the keyboard. Be sure to account for the new accidental of E \sharp once the key modulates to F \sharp .

B: B B/D \sharp E F \sharp G \sharp
 I I⁶ IV V vi

ii	V	iii	Cad ₄ ⁶	V ⁷	I	
F :	G \sharp	C \sharp	A \sharp	F \sharp /C \sharp	C \sharp 7	F \sharp

So what chords can be used as pivot chords? Study the diatonic chords found in both B major and F \sharp major. Chords shared between the two keys include B major, F \sharp major, and G \sharp minor; any of these chords can be the pivot chord.

¹Many of the chords in the progression included added 2nds. They are not listed within the progression here.

²Often a modulation will move to a closely related key. A closely related key is any key adjacent on the circle of fifths. Another way to think of this is to think of adding or removing a sharp or flat. For instance, if the original key is E major, removing a sharp will create the key of A major and adding a sharp will create the key of B major. The keys of A major and B major (and their relative minor keys of F \sharp , G \sharp , and C \sharp minor) are all closely related keys to E major.

B: C#- D#- E F# G#- A#0

F#:

The fifth chord in the progression functions both as a submediant chord in the key of B major and a supertonic in the key of F# major. The sixth chord in the progression introduces the new pitch of E#, the leading tone of the new key of F# major. Once the E# is established in the C# major chord, the tonal center of B is no longer valid. The strong cadential pattern at the conclusion of the progression solidifies the new key of F# major.

PIVOT CHORD MODULATION IN CONTEXT

Study the chorale harmonization of Mozart's *Abendruhe* while playing through the example. The introduction of the E# is our first clue that something has occurred in terms of tonality. Is it a secondary chord? Trust your ears. Has the tonic changed?

Complete a lead sheet and Roman numeral analysis for both measures 7 and 8. What type of cadential pattern is found here? The cadence in F major is solidified with the cadential six-four. So, where is the pivot chord? There are several options; however, the chord before the cadential pattern would function as a I in the key of Bb major and the IV in the key of F major. How does Mozart eventually return to the key of Bb major? An analyzed score of *Abendruhe* is found on the next page.



Mozart, *Abendruhe*

Langsam Mozart

Soprano
Alto

Tenor
Bass

1 2 3 4

5 6 7 8 9

p *f* *p*

Mozart, *Abendruhe* (continued)

Mozart, *Abendruhe* (analyzed score)

Langsam Mozart

Soprano
Alto

Tenor
Bass

Bb: I V₃⁴ I V⁶ V₅⁶ I

I V₃⁴ I V⁶ I E:IV Cad₄⁶ V⁷ I I

10 11 12 13 14 15

16 17 18 19 20

ii_2^4 V^7 I_4^6 V_5^6/vi vi ii^6 Cad_4^6 V^7

$Bb: vi_2^4$

I I IV_4^6 V^7/IV IV Cad_4^6 V^7 I

(Ped)

When the E_b returns in measure 11 (along with the F^7 chord), it is clear that the tonal center has returned to B_b major. The chord in measure 10 can be explained in both the key of F major and B_b major; therefore, the G minor seventh chord is our pivot point back to B_b major.

ARTIST IN RESIDENCE

Music's Monarch: Leonard Bernstein (1918–1990)

Leonard Bernstein has been called “Music’s Monarch” for his incredible impact as a composer, conductor, educator, and philanthropist. Born in Massachusetts in 1918, “Lenny” was trained on the piano for countless hours as a youth. It was at Harvard that he began to study composition seriously with well known teachers including Walter Piston and A. Tillman Merritt. His earliest musical influences were Gershwin, Copland, and Stravinsky. Bernstein considered it of utmost importance to be a performing composer and worked extensively to educate and inspire young artists and performers.

In Bernstein’s obituary, *New York Times* writer Donal Henahan states the following:



“It was Mr. Bernstein’s fate to be far more than routinely successful, however. His fast-burning energies, his bewildering versatility and his profuse gifts for both music and theater coalesced to make him a high-profile figure in a dozen fields, among them symphonic music, Broadway musicals, the ballet, films, and television.”

At the age of forty, Bernstein was appointed as the conductor of the New York Philharmonic, the youngest person to ever hold such a prestigious post. His early conducting style was edgy, energetic, and emphasized rhythm, while he later conducted performances using only his face with little hand or arm movement. Take a minute to watch Bernstein’s conducting of Rossini’s *William Tell Overture* at the Young Person’s Concert (1958) and *Candide* (1989). Discuss the differences in the conducting style in the thirty-year time span.



Video
Track 28:
Bernstein
conducting
William Tell
Overture



Video
Track 29:
Bernstein
conducting
Candide



Video
Track 30:
Mozart,
Symphony
No. 25 in G
Minor, I

Written in 1773 by Wolfgang Amadeus Mozart, *Symphony No. 25 in G minor, K. 183*, has been used extensively in movies and commercials. It might sound very familiar to you as it was even used in the opening title to the movie *Amadeus*. Take a minute to view the performance by the Wiener Philharmoniker, conducted by Bernstein.

At the conclusion of the first section in the first movement, the tonal center shifts from B♭ major to G minor. This is achieved by a pivot chord modulation. The outlining of the fully diminished seventh chord in measure 82 can be analyzed as a $vii^{\circ 6}$ in the key of G minor and a $vii^{\circ 7}$ chord (with an enharmonic G♭/F♯) in the key of B♭ major. This chord functions as a seamless harmonic shift between the two relative keys. When the F♯ is added on the last beat of measure 82, the function of the chord as a leading tone to the new key of G minor is clear.

Mozart, *Symphony No. 25 in G minor, K. 183, Mvt. I*

Mozart

77

Oboi

Corni in B

Corni in G

Violino I

Violino II

Viola

Violoncello
Basso

B♭:

a 2.

a 2.

vii^{°7}

G min: vii^{°7}

Allegro con brio.

1 a 2.

Ob.

Cor. in B

Cor. in G

Vln. I

Vln. II

Vla.

Vc.

f

f

f

f

G min:

BACKSTAGE PASS

Make Our Garden Grow: The Transition to Broadway and Television

Called the “Savior of the American Musical,” Bernstein composed some of the best known musicals of the 1950s, including *West Side Story* (1957), *Candide* (1956), and *Trouble in Tahiti* (1952). This was all during a time of darkness on the American Stage, before the hits of Lerner and Loewe and after the success of composers such as Rodgers and Hammerstein. Bernstein wanted to bring music to the masses, whether that be on the American musical stage or the new invention of the television. Bernstein was able to reach audiences in the late 1950s with the *Omnibus* program, followed by the New York Philharmonic's Emmy Award–winning *Young People's Concerts*. Study the YouTube excerpt from the 1958 show. How would this particular program engage a group of school children?

CHROMATIC PIVOT CHORD MODULATION

Similar in function to the pivot chord modulation, the **chromatic pivot chord modulation** also uses a chord that functions in both keys; however, at least one of the pivot chords is not diatonic. Study the example “I Feel Pretty” from the Musical *West Side Story*. The opening measures are in the key of F major and alternate between the tonic and the dominant harmony. At measure 157, the 7th is added to the tonic triad, creating a secondary



Video
Track 31:
Bernstein,
I Feel
Pretty

dominant chord, the V^7/IV in the key of F major. The chord does in fact resolve to the subdominant of $B\flat$. However, the $B\flat$ chord in measure 158 does not sound like a subdominant; it sounds like the new tonic!

The $E\flat$ is consistent until measure 160, and our ear is telling us that the music has moved back to F major by 166, if not even sooner. There are two choices for pivot measures, measure 162 or 164. F major and $B\flat$ major are both diatonic chords in both keys. The choice is yours, but do you hear the $B\flat$ in measure 162 as the subdominant or the new tonic?³

Leonard Bernstein, "I Feel Pretty" from *West Side Story*

The musical score is presented in three systems. The first system (measures 145-148) shows the vocal line for Maria and the piano reduction. Chord symbols above the vocal line are C, F, C+, F, C+, F, F/A, and C/G. The piano part includes a *p sub.* dynamic marking. The second system (measures 149-158) continues the vocal line with lyrics: "And so pret-ty That I hard-ly can be -lieve I'm real. See the pret-ty". Chord symbols above include D-, B \flat /G, C7, F, F F7 C/E F, F7, and B \flat . The piano part features a *f* dynamic marking and a V^7/IV chord symbol with $B\flat: V^7$ below it. The third system (measures 159-166) continues the vocal line with lyrics: "girl in that mir-ror there: Who can that at - trac-tive girl be? Such a pret-ty face, Such a pret-ty dress, Such a pret-ty". Chord symbols above include C-, F/A B \flat , F/A, F/C, A-/E, E7 *cresc.*, and A-. The piano part includes a *cresc.* dynamic marking and chord symbols I (F: IV) and V 6 (F: I 6) below it.

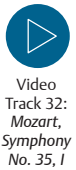
³Modulations are typically longer in length than the four measures presented in this excerpt. However, the melodic descent to the new tonic and the accompanying cadence solidify the new tonal center of $B\flat$ in this phrase.

169

D dim/A^b *f* E^o7 B^b/C Gm7 E^o7/C B^b/D E^o7 C *p sub.* F

smile, Such a pret - ty me! I feel stun - ning

Many of the great symphonies use pivot chord modulations to change tonal centers between sections. Study the score below taken from *Symphony No. 35* by Mozart in which a chromatic pivot chord modulation occurs between the closely related keys of D major and A major. The G[#]7 chord functions both as a secondary leading tone chord in the key of D major and the leading tone chord in the newly established key of A major.



Mozart, Symphony No. 35 in D major, K. 385, Mvt. I

41 42 43 44 45

Flute I, II *f*

Oboe I, II *f*

Clarinet in A I, II *f*

Bassoon I, II *f*

Horn in D *f*

Trumpet in D *f*

Timpani (D, A) *f*

Violin I *f*

Violin II *f*

Viola *f*

Violoncello and Bass *f*

D: I V⁶ A: vii^o6/V I A: vii^o6

Mozart, Symphony No. 35 in D major, K. 385, Mvt. I (continued)

Now, let's look back at the song that opened this chapter. The score of "The Balcony Scene" is shown below along with the first point of modulation. The new tonal center is labeled in the score. What type of modulation is used in this excerpt? On the first beat of measure 59, one might think that the chord will function as a borrowed chord built on the lowered 7th. However, the chord is actually functioning as the dominant seventh chord in the new key of D \flat major.



Video
Track 26:
Bernstein,
Balcony
Scene

Bernstein, "Balcony Scene" from *West Side Story*

55 C7/B \flat 56 B \flat 57 G-7/A G-7 58 A-

night, I saw you and the world went a - way.

59 A \flat 7 60 D \flat 61 62 63

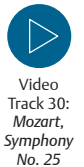
To - night, to - night There's on - ly you to

D \flat :

DIRECT MODULATION

The **direct modulation** is just that; a modulation that occurs directly after the cadence in the previous key. In this type of modulation, there is no transition or pivot chord and a new section of music immediately begins in a new key.

Listen again to the first movement of Symphony No. 25 in G minor performed by the Wiener Philharmoniker under the baton of Bernstein. In measure 29, there is a shift in tonal center from G minor to B \flat . The final chord in measure 28 is a dominant chord in the key of G minor, creating a strong half cadence in the key of G minor. The new melody that appears in measure 29 is clearly in the key of B \flat major, solidified by dominant seventh chords in measure 31 and 32. The alternation between tonic to dominant harmonies also helps to solidify the key. While this section is transitional in nature, the movement from G minor to B \flat major is direct.



Mozart, Symphony No. 25 in G minor, K. 185, Mvt. I

Mozart

Oboi 21 22 23 24 25 26

Corni in B

Corni in G

Violino I

Violino II

Viola

Violoncello

Basso

g min:

dim.

Mozart, Symphony No. 25 in G minor, K. 185, Mvt. I (continued)

27 28 29 30 31 32 33

Ob. *pp* *f*

Cor. in B *f*

Cor. in G *pp* *f*

Vln. I *pp* *f*

Vln. II *pp* *f*

Vla. *pp* *f*

Vc. *pp* *f*

V B \flat :I V⁷ V⁴/₂

Half Cadence

PIVOT TONE MODULATION

Similar to the modulation by pivot chord, the **pivot tone modulation** includes one pitch that functions in both keys. Often the pivot pitch stands by itself, with little, if any, accompaniment. The pitch is held over from the cadence in the original key and changes function as a new harmony is played underneath the pitch.

Have one student sing the following melody line while she/he is accompanied on a guitar or keyboard instrument. The pitch F \sharp in measure 6 is the pivot tone to the new key of F \sharp major.

D G E A C \sharp dim D $\hat{3}$ F \sharp $\hat{1}$ C⁷ F \sharp D \flat B F \sharp

D: I IV ii V vii I F \sharp : I V⁷ I vi IV I

Commissioned in 1965 for the Southern Cathedrals' Festival at Chichester Cathedral, the world premiere of Bernstein's *Chichester Psalms* occurred in the New York Philharmonic Hall on July 15, 1965, with Bernstein conducting. The example shown is from the middle section of the second movement of the *Chichester Psalms*. The soprano voices create a brief interlude for the soloist at this point. You may notice that the modality seems to shift between A major and A minor. Remember that a shift in modality is not a modulation! At measure 47, the soprano voices conclude with a unison on the pitch A, solidifying the key of A (major or minor). The open fifth harmony here prevents us from identifying the actual mode. The pitch A is sung by the soprano 1 voices; however, this time the A is not the tonic, but the dominant pitch of the new key of D major.



Video
Track 33:
Bernstein,
*Chichester
Psalms*

Soprano 1

Soprano 2

Score Reduction

A maj/min:

41 42 43 44 45

Lo, lo i - ra ra, Ki A - tah i - ma -

Lo, lo i - ra ra, Ki A -

8^{va}

46 47 48 49 50 51

A:1̂ 5̂:D

S1 di Shiv' - t' - cha u - mi - sha - n' - te - cha

S2 tah i - ma

(8^{va})

MONOPHONIC MODULATION

In this particular style of modulation, one line acts as a transition to the new key. The line is simply a single melodic line serving as transition between the two keys. Study the example below. The unison line beginning in measure 70 serves as a transition to the brief modulation to F major.



Video
Track 34:
Haydn,
Symphony
No. 98

Joseph Haydn, Symphony No. 98 in B \flat major, Mvt. III

Haydn

The musical score is presented in two systems. The first system covers measures 67 to 72. It includes staves for Oboe 1 & 2, Bassoon 1 & 2, Violin I, Violin II, Viola, and Cello & Bass. A double bar line with the instruction 'zu 2' above it is placed at measure 69. The second system covers measures 73 to 80. It includes staves for Oboe (Ob.), Bassoon (Bsn.), Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), and Cello (Vc.). The key signature changes from B \flat major to F major at measure 73.

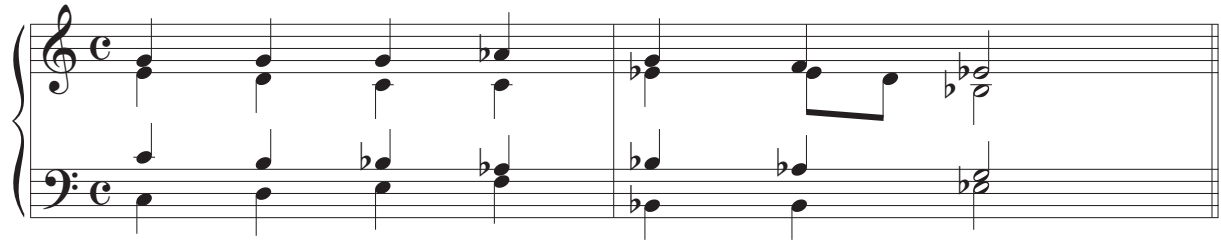
Review Chapter Objectives

- Define modulation (page OL3-2)
- Recognize pivot chord modulation within the context of a musical score (pages OL3-2, OL3-6)
- Recognize chromatic pivot chord modulation within the context of a musical score (pages OL3-8, OL3-11)
- Recognize direct modulation within the context of a musical score (page OL3-11)
- Recognize monophonic modulation within the context of a musical score (page OL3-14)
- Analyze large orchestral works in order to analyze points of modulation (pages OL3-19, OL3-23)

ANALYSIS

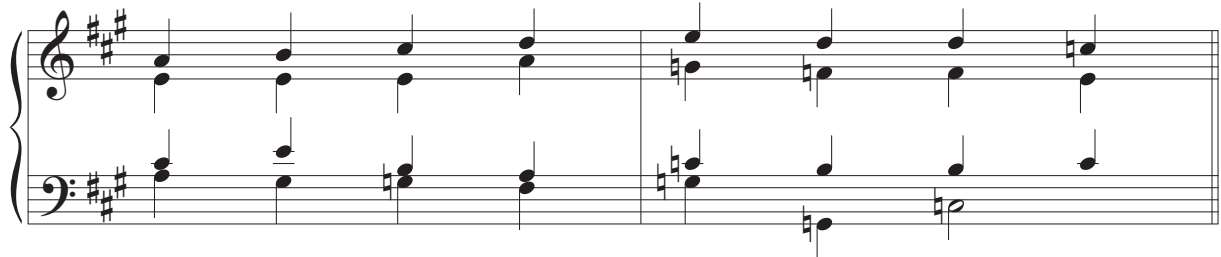
Complete a Roman numeral analysis of the following excerpts and identify all non-chord tones. You might find it easier to list each chord with lead sheet symbols and then try to determine the function. Look for consistent accidentals in order to find the point of modulation. Identify the type of modulation after you have completed the analysis (pivot chord, chromatic pivot chord, pivot tone, direct, monophonic)

1. Chorale Settings



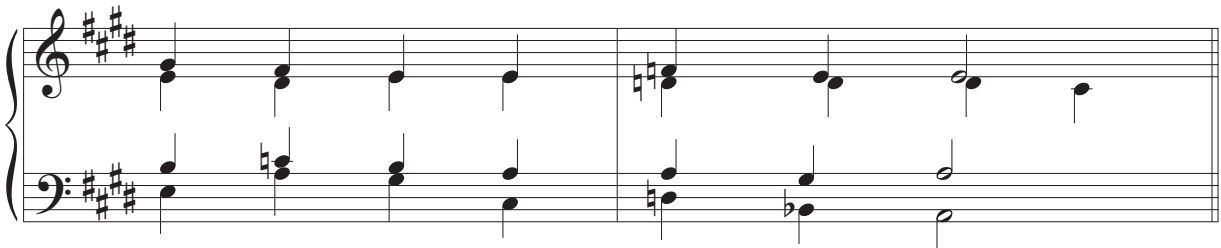
Musical notation for C major. The key signature has no sharps or flats. The time signature is common time (C). The music consists of two staves, treble and bass clef, with a grand staff brace. The melody in the treble clef starts on C4, moves to E4, G4, F4, E4, D4, C4. The bass line starts on C3, moves to E3, G3, F3, E3, D3, C3. The second measure shows a modulation to C minor, with a key signature change to two flats (Bb, Eb).

C:



Musical notation for A major. The key signature has three sharps (F#, C#, G#). The time signature is common time (C). The music consists of two staves, treble and bass clef, with a grand staff brace. The melody in the treble clef starts on A4, moves to C#5, E5, D#5, C#5, B4, A4. The bass line starts on A3, moves to C#3, E3, D#3, C#3, B2, A2. The second measure shows a modulation to A minor, with a key signature change to no sharps or flats.

A:



Musical notation for E major. The key signature has four sharps (F#, C#, G#, D#). The time signature is common time (C). The music consists of two staves, treble and bass clef, with a grand staff brace. The melody in the treble clef starts on E4, moves to G#4, B4, A4, G#4, F#4, E4. The bass line starts on E3, moves to G#3, B3, A3, G#3, F#3, E3. The second measure shows a modulation to E minor, with a key signature change to two sharps (F#, C#).

E:



Musical notation for f major. The key signature has two flats (Bb, Eb). The time signature is common time (C). The music consists of two staves, treble and bass clef, with a grand staff brace. The melody in the treble clef starts on F4, moves to Ab4, C5, Bb4, Ab4, G4, F4. The bass line starts on F3, moves to Ab3, C3, Bb3, Ab3, G2, F2. The second measure shows a modulation to f minor, with a key signature change to three flats (Bb, Eb, Ab).

f:

Chorale Settings (continued)

Bb:

F:

D:



Video
Track 35:
Crosby,
Winter
Wonderland

2. Felix Bernard, "Winter Wonderland"

35 He sings a love song, 36 as we go a - long, 37 walk-in' in a win-ter won-der - land! 38

39 In the mead-ow we can build a 40 snow-man, 41 then pre-tend that he is Par-son 42 Brown. —

43 44 45 46 47 48

He'll say, "Are you mar-ried?" We'll say, "No, man! But you can do the job when you're in town!" Lat - er on, we'll con -

3. Camille Saint-Saëns, "Le cygne" from *Le carnaval des animaux*

Andantino grazioso

Cello

Piano 1

Piano 2

Vc.

Pno. 1

Pno. 2

Vc.

Pno. 1

Pno. 2



Camille Saint-Saëns, "Le cygne" from *Le carnaval des animaux* (continued)

Musical score for "Le cygne" from *Le carnaval des animaux*, measures 8-10. The score includes a Violin (Vc.) part and two piano parts (Pno. 1 and Pno. 2). The Vc. part has a melodic line with a slur over measures 9 and 10. The piano parts provide a rhythmic accompaniment with chords and moving lines.



Video
Track 37:
Schubert,
Pause

4. Franz Schubert, "Pause" from *Die schöne Müllerin*

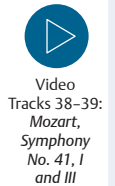
Die schöne Müllerin is an extended song cycle for solo voice and piano on poems by Wilhelm Müller. The cycle follows the story of a young man in love. "Pause" is the twelfth of twenty songs in the cycle. Give a Roman numeral analysis of the entire excerpt, which begins in the key of C \flat major. Be sure to circle and identify non-chord tones. There is a modulation at the end of the excerpt.

Musical score for "Pause" from *Die schöne Müllerin*, measures 34-38. The score includes a vocal line and a piano accompaniment. The lyrics are: "Ei, wie groß ist wohl mein es Glückes Last, daß kein Klang auf — Erd en es in — sich faßt, daß kein Klang auf —". The piano accompaniment features dynamic markings *ff* and *pp*.

39 40 41 42

Erden es in sich faßt,

The next three pieces are all symphonic scores composed by Mozart. Challenge yourself to analyze the complete orchestral score, paying careful attention to the transposition of the instruments. Piano reductions for each score are available online at IMSLP (imslp.org)



5. Mozart, Symphony No. 41 in C Major, K. 551, Mvt. I

39

Flute

Oboes I, II

Bassoon I, II

Horns (C) I, II

Trumpets (C) I, II

Timpani

Violin I

Violin II

Viola

Violoncello & Bass

C:

Mozart, Symphony No. 41 in C Major, K. 551, Mvt. I (continued)

The image displays a page of a musical score for Mozart's Symphony No. 41 in C Major, K. 551, first movement. The score is divided into two systems, with the first system starting at measure 45 and the second system starting at measure 51. The instruments included are Flute (Fl.), Oboe (Ob.), Bassoon (Bsn.), Horns (Hns.), Trumpets (Tpts.), Timpani (Timp.), Violin I (Viol. I), Violin II (Viol. II), Viola (Vla.), and Violoncello & Bass (Vc. & Bass). The notation is in standard musical notation with various clefs and time signatures. The first system (measures 45-50) shows the flute playing a melodic line, while the other instruments provide harmonic support. The second system (measures 51-56) continues the orchestral texture, with the violins and violas playing more active parts. A dynamic marking of *p* (piano) is visible in the second system.

6. Mozart, Symphony No. 41 in C Major, K. 551, Mvt. III

Allegretto.

Flute
Oboes I, II
Bassoon I, II
Horns (C) I, II
Trumpets (C) I, II
Timpani
Violin I
Violin II
Viola
Violoncello & Bass

C:

Fl.
Ob.
Bsn.
Hns.
Tpts.
Timp.
Viol. I
Viol. II
Vla.
Vc. & Bass

7. Mozart, Symphony No. 41 in C Major, K. 551, Mvt. I

118

Flute

Oboes I, II

Bassoon I, II

Horns (C) I, II

Trumpets (C) I, II

Timpani

Violin I

Violin II

Viola

Violoncello & Bass

G:

p

pizz.

p

125

Fl.

Ob.

Bsn.

Hns.

Tpts.

Timp.

Viol. I

Viol. II

Vla.

Vc. & Bass

p

p

8. Mozart, Symphony No. 35 in D Major, K. 385, Mvt. III



Video
Track 40:
Mozart,
Symphony
No. 35

17

Oboe I, II *f*

Bassoon I, II *f* *p*

Horn in D *f* *p*

Trumpet in D *f* *p*

Timpani (D, A) *f*

Violin I *f* *p* *p*

Violin II *f* *p* *p* *pp* *pp*

Viola *f* *p* *p*

Violoncello and Bass *f* *p* *p*