

Lesson NNN: Augmented Sixth Sonorities

Introduction:

The following excerpt from a Beethoven string quartet includes an intriguing chromatic sonority in m. 5:

Example 1 (L. Beethoven, String Quartet in G major, Op. 18, no. 2, Mvt. III, Trio, mm 1-8):



The musical score for Example 1 shows a chromatic progression from IV⁶ to V in C major. The progression is as follows:

Measure	Chord
4	IV ⁶
5	A ⁶
6	V

Following a IV⁶ chord in m. 4, the bass and treble expand outward to form an augmented sixth (A^b in the bass with F[#] in the treble). As the sonority moves to V in the following measure, we see that the outer voices both resolve outward by semitone to G.

A^b and F[#] natural can be thought of as dual leading tones, approaching scale degree $\hat{5}$ by semitone from above and below. Of course, this type of sonority could never occur diatonically. No two diatonic pitches will produce an augmented sixth. Nevertheless, chromatic sonorities containing an augmented sixth appear quite frequently.

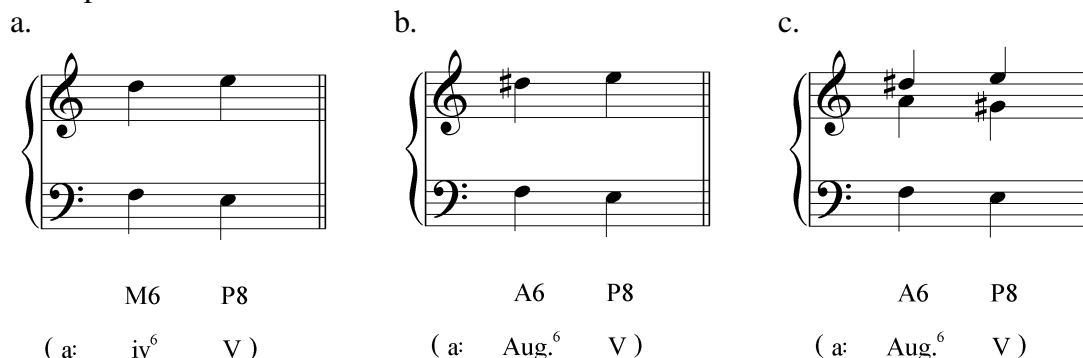
As you will see in this lesson, there are several chromatic sonorities characterized by the presence of an augmented sixth, appropriately referred to as *augmented sixth sonorities*. As seen in Example 1, augmented sixth sonorities characteristically function as pre-dominant chords and usually lead to dominant harmony. Like other chromatic sonorities, augmented sixths can have a striking effect that composers exploit in order to heighten dramatic tension or highlight important structural moments.

After discussing the general structure and derivation of augmented sixth sonorities, we will look at the three common types and their function in tonal music. We will then examine several complex uses of this type of sonority.

Structure and derivation:

Augmented sixth sonorities are derived by chromatically altering a common basic interval progression. (See Lesson 01 for more on how basic interval progressions lie at the base of all voice leading.)

Example 2:



The three examples show different chromatic alterations of the augmented sixth sonority:

Example	Chord	Interval
a.	M ⁶	P ⁸
(a: iv ⁶ V)		
b.	A ⁶	P ⁸
(a: Aug. ⁶ V)		
c.	A ⁶	P ⁸
(a: Aug. ⁶ V)		

Example 2a shows the familiar basic interval progression of a major sixth expanding to an octave, as it might appear in the common progression $iv^6 - V$ (in this case, in A minor). Here, the lower voice descends to $\hat{5}$ by semitone while the upper voice ascends by wholetone to the same scale degree. Raising scale degree $\hat{4}$, as in Example 2b, will produce the characteristic augmented sixth. Now both voices are only a semitone away from their respective destinations. Example 2c fills out the sonority with an inner voice. Augmented sixth sonorities invariably include scale degree $\hat{1}$ —a major third above the bass—which moves to the leading tone in the ensuing dominant harmony.

Note: Augmented sixth chords can also precede *applied* dominant chords. In such cases, the scale degrees mentioned in this lesson are those of the tonicized key, not the home key.

As Example 2 demonstrates, augmented sixth sonorities arise from chromatic alterations of pre-dominant chords. They retain that function and most commonly lead to the dominant. In Example 2, for instance, we see that raising the root of a iv^6 chord creates an augmented sixth with the bass. The tritone between $\hat{1}$ and $\sharp\hat{4}$ is another characteristic dissonance of all augmented sixth sonorities. Rather than undermine the function of the iv chord, the chromatic pitch in fact intensifies the pre-dominant function. The dual contrary-motion voiceleading by semitone to $\hat{5}$, combined with the dual contrary-motion resolution of the tritone between $\hat{1}$ and $\sharp\hat{4}$, also by semitone, drives augmented sixth sonorities powerfully to V .

Augmented sixth sonorities also occur in major contexts. There, they require an extra accidental to lower scale degree $\hat{6}$, moving it to within a semitone of $\hat{5}$. Example 3 reproduces Example 2b in A major. As you can see, the augmented sixth requires an accidental to lower the $F\sharp$ ($\hat{6}$ in A major) to F natural, a semitone above $\hat{5}$:

Example 3:



A6 P8

(A: Aug.⁶ V)

(For the sake of consistency, we will here use “ $\flat\hat{6}$ ” to generically refer to the pitch a semitone above $\hat{5}$, even though minor keys require no additional accidental and sometimes a natural sign is used in major keys.)

Activity NNN.01:

Augmented sixth sonorities arise from chromatic alterations of predominant chords. Alter one of the pitches in each of the following progressions to change the sub-dominant chord to an augmented sixth sonority. (Remember, two accidentals are needed for augmented sixths in major keys.)

Exercise NNN.01a

Alter the pitches as necessary in the following “ $iv^6 - V$ ” progression in D minor to transform the predominant chord into an augmented sixth sonority.



d: iv⁶ V

[Answer: G → G[#]. Response if correct: “Correct! G[#] forms an augmented sixth above the bass.” Response if incorrect: “Incorrect. (Hint: Scale degree $\hat{4}$ needs to be raised to form an augmented sixth with the bass.)”]

Exercise NNN.01b

Alter the pitches as necessary in the following “iv⁶ – V” progression in B minor to transform the predominant chord into an augmented sixth sonority.



b: iv⁶ V

[Answer: E → E[#]. Response if correct: “Correct! E[#] forms an augmented sixth above the bass.” Response if incorrect: “Incorrect. (Hint: Scale degree $\hat{4}$ needs to be raised to form an augmented sixth with the bass.)”]

Exercise NNN.01c

Alter the pitches as necessary in the following “iv⁶ – V” progression in E^b major to transform the predominant chord into an augmented sixth sonority.



E^b: iv⁶ V

[Answer: A^b → A natural and C → C^b. Response if correct: “Correct! An augmented sixth in a major key requires that $\hat{6}$ be lowered and $\hat{4}$ be raised.” Response if partially correct: “That’s partially correct. Remember, augmented sixths in major keys require two accidentals.” Response if incorrect: “Incorrect. (Hint: Scale degrees $\hat{4}$ and $\hat{6}$ need to be adjusted to form the augmented sixth.)”]

Exercise NNN.01d

Alter the pitches as necessary in the following “iv⁶ – V” progression in A major to transform the predominant chord into an augmented sixth sonority.



A: iv⁶ V

[Answer: $F^\sharp \rightarrow F$ natural and $D \rightarrow D^\sharp$. Response if correct: “Correct! An augmented sixth in a major key requires that $\hat{6}$ be lowered and $\hat{4}$ be raised.” Response if partially correct: “That’s partially correct. Remember, augmented sixths in major keys require two accidentals.” Response if incorrect: “Incorrect. (Hint: Scale degrees $\hat{4}$ and $\hat{6}$ need to be adjusted to form the augmented sixth.)”]

Raised scale degree $\hat{4}$ ($\#4$) appears in other chromatic harmonies as well, most notably in applied chords. (See Lesson 10 for more on applied chords.) In V^7/V , for example, $\#4$ acts as a temporary leading tone to $\hat{5}$. But $\#4$ never appears in conjunction with $b\hat{6}$ in an applied chord to V , nor should you interpret the presence of $\#4$ in an augmented sixth as tonicizing V . Augmented sixth sonorities, as chromatic pre-dominants, emphasize the arrival of the dominant but do not tonicize it.

Augmented sixth sonorities usually appear with $b\hat{6}$ in the bass, often with $\#4$ in the treble to emphasize the chromatic expansion to the octave. Other positions are possible, but occur less frequently. That said, augmented sixth sonorities with other scale degrees in the bass should not be considered “inversions” since $b\hat{6}$ is not a “root” in the same sense as the root of a triad or seventh chord.

Activity NNN.02:

In each of the following progressions, identify the pre-dominant chord as either an augmented sixth sonority or an applied chord.

Exercise NNN.02a

In the following progression in D minor, is the chord marked with a question mark an augmented sixth sonority or an applied chord?

d: ? V

[Answer: augmented sixth sonority. Response if correct: “Correct!” Response if incorrect: “Incorrect. Remember, the presence of an augmented sixth indicates an augmented sixth sonority.”]

Exercise NNN.02b

In the following progression in D minor, is the chord marked with a question mark an augmented sixth sonority or an applied chord?

G: ? V

[Answer: applied chord. Response if correct: “Correct!” Response if incorrect: “Incorrect. (Hint: Does the chord in question include an augmented sixth? What does that tell you?”)]

Exercise NNN.02c

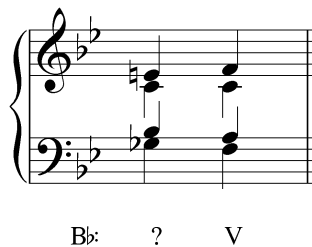
In the following progression in D minor, is the chord marked with a question mark an augmented sixth sonority or an applied chord?



[Answer: applied chord. Response if correct: “Correct!” Response if incorrect: “Incorrect. (Hint: Does the chord in question include an augmented sixth? What does that tell you?”]

Exercise NNN.02d

In the following progression in D minor, is the chord marked with a question mark an augmented sixth sonority or an applied chord?



[Answer: augmented sixth sonority. Response if correct: “Correct!” Response if incorrect: “Incorrect. Remember, the presence of an augmented sixth indicates an augmented sixth sonority.”]

Types of augmented sixth sonorities:

There are three varieties of augmented sixth sonorities, each containing a different “filling,” so to speak, within the framework of the augmented sixth. These varieties are identified with geographical names—Italian, French, and German—none of which is historically or geographically justifiable. The names are widely used, however, and we will use them here since they permit easy identification.

It is important to remember that augmented sixths are embellishing sonorities, not structural chords. They cannot be constructed purely from diatonic notes and therefore cannot be goals of modulation. Like auxiliary sonorities—another type of chord arising from voiceleading procedures—augmented sixths are a combination of simultaneous melodic embellishments. The different types listed below occur with enough frequency to merit discussion, but their differences arise from combinations of nonharmonic tones. Though the inner-voice filling may vary, it is the augmented sixth between $b6$ and $\#4$ that gives the sonority its aural signature and requires the most attention.

Italian augmented sixths:

The simplest type of augmented sixth sonority is the Italian. In addition to $\#4$ and $b6$ forming the augmented sixth framework, this sonority contains one other pitch a diatonic major third above the bass (scale degree $\hat{1}$), as seen in Example 2c. The Italian augmented sixth sonority is sometimes referred to as the augmented $\frac{6}{3}$. This does not imply that the chord is a triad in first inversion. Rather, it simply indicates the presence of a third and a sixth above the bass.

Note: You may occasionally see augmented sixths indicated by a bass figure six with a slash through it:

Example 4:



a: $\frac{6}{3}$ V

This is a common figured bass convention. The slash indicates that the sixth above the bass should be raised by a semitone: in this case requiring F \sharp instead of F natural.

The following example shows an Italian augmented sixth sonority in musical context:

Example 5 (F. Mendelssohn, Song Without Words, Op. 30, no. 4, mm. 55-60):



b: i

VI

It⁶

V

In this excerpt from Mendelssohn, we find an arpeggiation of a VI chord in mm. 56-58. We expect this pattern to continue in m. 59, but encounter there an E \sharp where the arpeggiation of G-major harmony in mm. 56-58 points toward a G. The substitution of E \sharp (scale degree $\sharp\hat{4}$) for G creates a dissonant augmented sixth with the bass G (scale degree $\hat{6}$). The sonority is filled in with a B in the tenor (a major third above the bass) and all three voices resolve, as expected, to a dominant in m. 60: $\flat\hat{6}$ and $\sharp\hat{4}$ move to $\hat{5}$ while the tritone formed by $\hat{1}$ and $\sharp\hat{4}$ resolves outward to a minor sixth. The harmonic effect, though brief, is striking and emphasizes the arrival of the dominant in a way that a diatonic chord can not.

Now consider the following example:

Example 6 (W. Mozart, Piano Sonata, K 332, Mvt. I, mm. 119-126):

119

d: i⁶ V₃⁶ i It⁶

123

V

Here, the Italian sixth appears directly after a root-position tonic. The inner-voice D in the tonic remains stationary while the outer voices expand to form the augmented sixth, B \flat -G \sharp . All three voices move as expected to the V chord at the beginning of m. 123.

Textures with four or more voices always double the third above the bass (scale degree $\hat{1}$). Note that the inner voices move in contrary motion to one another, and also in contrary motion to their registral companions:

Example 7:

a: It⁶ V

As you can see in Example 7, the doubled scale degree $\hat{1}$ moves to both the leading tone and to scale degree $\hat{2}$ in the ensuing V chord. $\sharp\hat{4}$ and $\flat\hat{6}$ are never doubled since doing so would lead to parallel octaves as a result of their strong tendency to resolve to $\hat{5}$. The following excerpt from a Bach chorale shows an Italian sixth in four voices (note that, despite the key signature, this passage begins in G minor):

Example 8 (J.S. Bach, BWV 351, “Ich hab mein Sach Gott heimgestellt,” mm. 1-2):

g: i It⁶ V i⁶

On the second beat of the first full measure, we find an Italian sixth: $b\hat{6}$ in the bass, $\hat{1}$ in the soprano and tenor, and $\sharp\hat{4}$ as a chromatic lower neighbor to the D from the preceding i chord. Again, all four voices resolve as expected to the pitches of the V chord.

Activity NNN.03:

Create Italian augmented sixths and resolve them in various keys.

Exercise NNN.03a

Write a four-voiced Italian augmented sixth sonority in D minor.

[Answer: d: It⁶ (answers may vary, provided B \flat is in the bass and G \sharp and two Ds appear in the upper voices). Response if correct: “Correct!” Response if incorrect: “Incorrect. (Hint: In a minor key, an Italian augmented sixth will have $\hat{6}$ in the bass with $\sharp\hat{4}$ and two $\hat{1}$ s in the upper voices.)”]

[Follow-up exercise:]

Resolve this Italian sixth to a dominant triad using proper voiceleading.

[Answer: d: It⁶ V (answers may vary, provided B \flat and G \sharp both move to A and the two Ds move to C \sharp and E). Response if correct: “Correct!” Response if incorrect: “Incorrect. (Hint: Remember, the voices forming the augmented sixth will expand outward to octave $\hat{5}$ s and the two $\hat{1}$ s will move to the leading tone and $\hat{2}$.)”]

Exercise NNN.03b

Write a four-voiced Italian augmented sixth sonority in B minor.



[Answer: $b: It^6$ (answers may vary, provided G is in the bass and E \sharp and two Bs appear in the upper voices). Response if correct: "Correct!" Response if incorrect: "Incorrect. (Hint: In a minor key, an Italian augmented sixth will have $\hat{6}$ in the bass with $\sharp\hat{4}$ and two $\hat{1}$ s in the upper voices.)"]

[Follow-up exercise:]

Resolve this Italian sixth to a dominant triad using proper voiceleading.



[Answer: $b: It^6 V$ (answers may vary, provided G and E \sharp both move to F \sharp and the two Bs move to A \sharp and C \sharp). Response if correct: "Correct!" Response if incorrect: "Incorrect. (Hint: Remember, the voices forming the augmented sixth will expand outward to octave $\hat{5}$ s and the two $\hat{1}$ s will move to the leading tone and $\hat{2}$.)"]

Exercise NNN.03c

Write a four-voiced Italian augmented sixth sonority in E \flat major.



[Answer: $Eb: It^6$ (answers may vary, provided C \flat is in the bass and A natural and two Eb's appear in the upper voices). Response if correct: "Correct!" Response if incorrect: "Incorrect. (Hint: In a major key, an Italian augmented sixth will have $b\hat{6}$ in the bass with $\sharp\hat{4}$ and two $\hat{1}$ s in the upper voices.)"]

[Follow-up exercise:]

Resolve this Italian sixth to a dominant triad using proper voiceleading.



[Answer: $Eb: It^6 V$ (answers may vary, provided C \flat and A natural both move to B \flat and the two Eb's move to D and F). Response if correct: "Correct!" Response if incorrect: "Incorrect. (Hint: Remember, the voices forming the augmented sixth will expand outward to octave $\hat{5}$ s and the two $\hat{1}$ s will move to the leading tone and $\hat{2}$.)"]

Exercise NNN.03d

Write a four-voiced Italian augmented sixth sonority in E major.



[Answer: E: It⁶ (answers may vary, provided C natural is in the bass and A[#] and two Es appear in the upper voices). Response if correct: “Correct!” Response if incorrect: “Incorrect. (Hint: In a major key, an Italian augmented sixth will have $b\hat{6}$ in the bass with $\#4$ and two $\hat{1}$ s in the upper voices.)”]

[Follow-up exercise:]

Resolve this Italian sixth to a dominant triad using proper voiceleading.



[Answer: E: It⁶ V (answers may vary, provided C natural and A[#] both move to B and the two Es move to D[#] and F[#]). Response if correct: “Correct!” Response if incorrect: “Incorrect. (Hint: Remember, the voices forming the augmented sixth will expand outward to octave $\hat{5}$ s and the two $\hat{1}$ s will move to the leading tone and $\hat{2}$.)”]

French augmented sixths:

The Italian sixth is relatively thin in texture, containing only three unique members. The French sixth, by contrast, adds an augmented fourth above the bass (scale degree $\hat{2}$) and produces significantly more dissonance among the voices. It is sometimes referred to as an augmented $\frac{4}{3}$ chord, though again this is not to imply that it is a seventh chord in second inversion. Example 9 illustrates:

Example 9:



a: Fr⁶ V

We can see the voiceleading already familiar to us from the Italian sixth: $\#4$ and $b\hat{6}$ resolve outward by semitone to $\hat{5}$, and the third above the bass (scale degree $\hat{1}$) steps down to the leading tone. Instead of doubling $\hat{1}$, as in the Italian sixth, we’ve added a fourth voice: B ($\hat{2}$). Since scale degree $\hat{2}$ is also the fifth of the dominant chord, it is commonly retained when the French sixth resolves to V.

The incorporation of $\hat{2}$ into the French sixth leads to yet another tritone, this time with the bass. The presence of two tritones ($\hat{1}-\sharp\hat{4}$ and $\flat\hat{6}-\hat{2}$) gives the French sixth its characteristically piercing sound. The added dissonance adds an even greater urgency to the sonority, further activating its tendency to resolve to V.

Observe the voiceleading in the following example:

Example 10 (L. Beethoven, Piano Sonata No. 8, Op. 13 (“Pathétique”), Mvt. III, mm. 44-47):

Example 10 shows a French sixth chord in measure 46. The chord is an augmented sixth chord with notes $\flat\hat{6}$ (Cb), $\hat{2}$ (D), $\hat{3}$ (Eb), and $\hat{4}$ (F). The bass line is $\flat\hat{6}$ (Cb), and the treble line is $\hat{2}$ (D). The chord is labeled as V_2^4 , I^6 , IV^6 , Fr^6 , and V .

In the second half of m. 46 we find a clear example of a French augmented sixth. As you can see, the outer voices come about as chromatic passing tones: $\flat\hat{6}$ (Cb) steps down to $\hat{5}$ (Bb) and $\sharp\hat{4}$ (A-natural) steps up to $\hat{5}$. Scale degree $\hat{1}$ is held over from the preceding IV^6 chord while $\hat{2}$, completing the two-tritone make-up of the French sixth, is introduced in anticipation of the V chord.

Example 11 shows another instance of a French augmented sixth in a Beethoven sonata:

Example 11 (L. Beethoven, Piano Sonata No. 4, Op. 7, mm. 72-74):

Example 11 shows a French sixth chord in measure 73. The chord is an augmented sixth chord with notes $\hat{1}$ (C), $\sharp\hat{4}$ (F#), $\flat\hat{6}$ (Ab), and $\hat{2}$ (G). The bass line is $\hat{1}$ (C), and the treble line is $\sharp\hat{4}$ (F#), $\flat\hat{6}$ (Ab), $\hat{2}$ (G). The chord is labeled as C: I, IV (I_4^6), vii^{66}/V , Fr^6 , V_4^6 , V_7^6 , and I.

Here, the dissonant augmented sixth is introduced gradually. An applied vii^{66}/V chord follows an auxiliary passing $\frac{6}{4}$ chord in m. 73, introducing the temporary leading tone F# ($\sharp\hat{4}$). (Were the F left natural, the harmony would have followed the common IV – (I_4^6) – IV^6 progression.) The bass then steps down chromatically to Ab, forming an augmented sixth with $\sharp\hat{4}$. The tonic pitch is sustained throughout, and in the highest voice we find $\hat{2}$, completing the French sixth sonority.

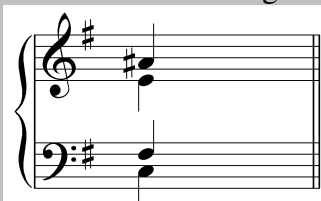
In this case, the augmented sixth sonority does not resolve directly to the dominant. Instead it introduces a cadential $\frac{6}{4}$ chord. (Note: The doubling of $\flat\hat{6}$ in Example 11 appears to lead to parallel octaves as the French sixth moves to the cadential $\frac{6}{4}$. This is the result of Beethoven’s doubling of the bass line at the octave. True parallel octaves occur between two independent voices. These octaves simply arise from doubling, which Beethoven uses here to create a thick texture.)

Activity NNN.04:

Create French augmented sixths and resolve them in various keys.

Exercise NNN.04a

Write a four-voiced French augmented sixth sonority in E minor.



[Answer: e Fr⁶ (answers may vary, provided C is in the bass and F#, E, and A# appear in the upper voices). Response if correct: "Correct!" Response if incorrect: "Incorrect. (Hint: In a minor key, a French augmented sixth will have $\hat{6}$ in the bass with $\#4$, $\hat{1}$, and $\hat{2}$ in the upper voices.)"]

[Follow-up exercise:]

Resolve this French sixth to a dominant triad using proper voiceleading.



[Answer: e Fr⁶ V (answers may vary, provided C moves to B, E moves to D#, A# moves to F# and F is sustained). Response if correct: "Correct!" Response if incorrect: "Incorrect. (Hint: Remember, the voices forming the augmented sixth will expand outward to octave $\hat{5}$ s, while $\hat{1}$ moves to the leading tone and $\hat{2}$ is sustained.)"]

Exercise NNN.04b

Write a four-voiced French augmented sixth sonority in G minor.



[Answer: g Fr⁶ (answers may vary, provided Eb is in the bass and A, G, and C# appear in the upper voices). Response if correct: "Correct!" Response if incorrect: "Incorrect. (Hint: In a minor key, a French augmented sixth will have $\hat{6}$ in the bass with $\#4$, $\hat{1}$, and $\hat{2}$ in the upper voices.)"]

[Follow-up exercise:]

Resolve this French sixth to a dominant triad using proper voiceleading.



[Answer: g Fr⁶ V (answers may vary, provided Eb moves to D, G moves to F#, C# moves to D and A is sustained). Response if correct: "Correct!" Response if incorrect:

“Incorrect. (Hint: Remember, the voices forming the augmented sixth will expand outward to octave $\hat{5}$ s, while $\hat{1}$ moves to the leading tone and $\hat{2}$ is sustained.)”]

Exercise NNN.04c

Write a four-voiced French augmented sixth sonority in A major.



[Answer: A: Fr⁶ (answers may vary, provided F natural is in the bass and B, A, and D# appear in the upper voices). Response if correct: “Correct!” Response if incorrect: “Incorrect. (Hint: In a major key, a French augmented sixth will have $b\hat{6}$ in the bass with $\#4$, $\hat{1}$, and $\hat{2}$ in the upper voices.)”]

[Follow-up exercise:]

Resolve this French sixth to a dominant triad using proper voiceleading.



[Answer: A: Fr⁶ V (answers may vary, provided F natural moves to E, A moves to G#, D# moves to E and B is sustained). Response if correct: “Correct!” Response if incorrect: “Incorrect. (Hint: Remember, the voices forming the augmented sixth will expand outward to octave $\hat{5}$ s, while $\hat{1}$ moves to the leading tone and $\hat{2}$ is sustained.)”]

Exercise NNN.04d

Write a four-voiced French augmented sixth sonority in E minor.



[Answer: Ab: Fr⁶ (answers may vary, provided F \flat is in the bass and B \flat , A \flat , and D natural appear in the upper voices). Response if correct: “Correct!” Response if incorrect: “Incorrect. (Hint: In a major key, a French augmented sixth will have $b\hat{6}$ in the bass with $\#4$, $\hat{1}$, and $\hat{2}$ in the upper voices.)”]

[Follow-up exercise:]

Resolve this French sixth to a dominant triad using proper voiceleading.



[Answer: $A\flat$ $F\flat$ V (answers may vary, provided $F\flat$ moves to $E\flat$, $A\flat$ moves to G , D natural moves to $E\flat$ and $B\flat$ is sustained). Response if correct: "Correct!" Response if incorrect: "Incorrect. (Hint: Remember, the voices forming the augmented sixth will expand outward to octave $\hat{5}$ s, while $\hat{1}$ moves to the leading tone and $\hat{2}$ is sustained.)"]

German augmented sixths:

German augmented sixth sonorities—the most commonly used variety—consist of the same augmented sixth filled in with a major third (scale degree $\hat{1}$) and, instead of an augmented fourth, now with a perfect fifth ($\flat\hat{3}$ in major, $\hat{3}$ in minor). It is sometimes referred to as an augmented $\frac{6}{5}$ chord. Because $\flat\hat{3}$ forms a perfect fifth above $\flat\hat{6}$, the resolution of the German sixth can lead to parallel fifths:

Example 12:



a: Gr^6 V
(parallel fifths)

Example 13:



a: Gr^6 V_4^6 $\frac{5}{3}$

Example 12 shows the parallel fifths that arise when moving from a German sixth directly to V. Composers generally avoid this by including an intervening $\frac{6}{4}$ chord before the V. The $\frac{6}{4}$ is shown in Example 13 where the perfect fifth in the left hand (F and C) is mediated obliquely by a minor sixth (E and C) before arriving at the perfect fifth of the V chord (E and B):

Another interesting property of the German sixth is that the sonority is enharmonically equivalent to a dominant seventh chord. If the $D\sharp$ in Example 12 were respelled as $E\flat$, the chord (F, A, C, and $E\flat$) could be interpreted as V^7 in the key of $B\flat$. Composers often take advantage of that enharmonic equivalence as a modulatory device. We will return to that device momentarily.

The following excerpt provides a clear example of the German augmented sixth:

Example 14 (L. Beethoven, Piano Sonata No. 8, Op .13 (“Pathétique”), Mvt. III, mm. 5-8):

c: i⁶ Gr⁶ V⁶ $\frac{6}{4}$ i

In m. 6, the presence of F[#] makes a German augmented sixth out of what would otherwise be heard as VI. As expected, the resolution of the augmented sixth is delayed by a cadential $\frac{6}{4}$ chord, offsetting the parallel fifths from A^b and E^b to G and D.

Example 14 illustrates a very common treatment of the German sixth, but there are other treatments. The following example shows an alternative:

Example 15 (W. Mozart, Piano Sonata, K. 284, Mvt. I, mm. 15-17):

D: IV⁶ Gr⁶ V

In this excerpt from a Mozart sonata the German sixth resolves directly to V in m. 17. The parallel fifths are concealed since F natural does not move directly to E. Instead, E appears in an upper voice, coming out of D in the alto voice.

As we’ve seen, there are a variety of ways to approach an augmented sixth sonority. Augmented sixths are often prepared by a subdominant chord in first inversion (IV⁶; iv⁶ in minor), as seen in Examples **Error! Reference source not found.**, 10, and 15. This approach is widely used since the bass note (6̂) is already in place. In these cases, #4̂ arises as a chromatic passing tone, making the augmented sixth a chromatic elaboration of subdominant harmony. The submediant (VI) is another common approach (Example 5), as is the tonic triad—either in root position (Examples 6 and 8) or in first inversion (Example 14).

Activity NNN.05:

Create German augmented sixths and resolve them in various keys.

Exercise NNN.05a

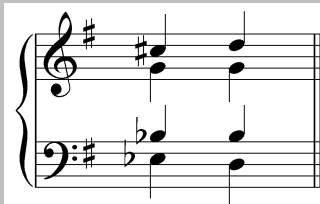
Write a four-voiced German augmented sixth sonority in G major.

[Answer: G: Gr⁶ (answers may vary, provided E^b is in the bass and B^b, G, and C[#] appear in the upper voices). Response if correct: “Correct!” Response if incorrect: “Incorrect.”

“Incorrect. (Hint: In a major key, a German augmented sixth will have $\flat\hat{6}$ in the bass with $\sharp\hat{4}$, $\hat{1}$, and $\flat\hat{3}$ in the upper voices.)”]

[Follow-up exercise:]

Resolve this German sixth to a cadential $\frac{6}{4}$ chord using proper voiceleading.



[Answer: G: Gr⁶ V⁶₄ (answers may vary, provided E \flat moves to D, C \sharp moves to D, and B \flat and G are sustained). Response if correct: “Correct!” Response if incorrect: “Incorrect. (Hint: Remember, the voices forming the augmented sixth will expand outward to octave $\hat{5}$ s, while $\hat{1}$ and $\flat\hat{3}$ are sustained.)”]

Exercise NNN.05b

Write a four-voiced German augmented sixth sonority in B \flat major.



[Answer: B \flat : Gr⁶ (answers may vary, provided G \flat is in the bass and D \flat , B \flat , and E natural appear in the upper voices). Response if correct: “Correct!” Response if incorrect: “Incorrect. (Hint: In a major key, a German augmented sixth will have $\flat\hat{6}$ in the bass with $\sharp\hat{4}$, $\hat{1}$, and $\flat\hat{3}$ in the upper voices.)”]

[Follow-up exercise:]

Resolve this German sixth to a cadential $\frac{6}{4}$ chord using proper voiceleading.



[Answer: B \flat : Gr⁶ V⁶₄ (answers may vary, provided G \flat moves to F, E natural moves to F, and D \flat and B \flat are sustained). Response if correct: “Correct!” Response if incorrect: “Incorrect. (Hint: Remember, the voices forming the augmented sixth will expand outward to octave $\hat{5}$ s, while $\hat{1}$ and $\flat\hat{3}$ are sustained.)”]

Exercise NNN.05c

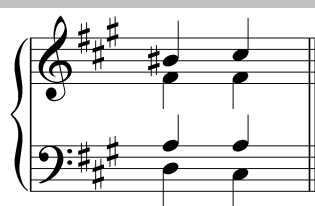
Write a four-voiced German augmented sixth sonority in F \sharp minor.



[Answer: f#: Gr⁶ (answers may vary, provided D is in the bass and A, F#, and B# appear in the upper voices). Response if correct: "Correct!" Response if incorrect: "Incorrect. (Hint: In a minor key, a German augmented sixth will have $\hat{6}$ in the bass with # $\hat{4}$, $\hat{1}$, and $\hat{3}$ in the upper voices.)"]

[Follow-up exercise:]

Resolve this German sixth to a cadential $\frac{6}{4}$ chord using proper voiceleading.



[Answer: f#: Gr⁶ V₄⁶ (answers may vary, provided E \flat moves to D, C# moves to D, and B \flat and G are sustained). Response if correct: "Correct!" Response if incorrect: "Incorrect. (Hint: Remember, the voices forming the augmented sixth will expand outward to octave $\hat{5}$ s, while $\hat{1}$ and $\hat{3}$ are sustained.)"]

Exercise NNN.05d

Write a four-voiced German augmented sixth sonority in F minor.



[Answer: f: Gr⁶ (answers may vary, provided D \flat is in the bass and A \flat , F, and B natural appear in the upper voices). Response if correct: "Correct!" Response if incorrect: "Incorrect. (Hint: In a minor key, a German augmented sixth will have $\hat{6}$ in the bass with # $\hat{4}$, $\hat{1}$, and $\hat{3}$ in the upper voices.)"]

[Follow-up exercise:]

Resolve this German sixth to a cadential $\frac{6}{4}$ chord using proper voiceleading.



[Answer: f: Gr⁶ V₄⁶ (answers may vary, provided D \flat moves to C, B natural moves to C, and A \flat and F are sustained). Response if correct: "Correct!" Response if incorrect: "Incorrect. (Hint: Remember, the voices forming the augmented sixth will expand outward to octave $\hat{5}$ s, while $\hat{1}$ and $\hat{3}$ are sustained.)"]

Other uses of augmented sixth sonorities:

So far, the augmented sixth sonorities we have examined have been relatively straightforward. In each case the augmented sixth acted as a simple pre-dominant chord that added dramatic tension to a cadential phrase. Augmented sixth sonorities can function in other ways as well. We will now look at how they can be used to prolong harmonies, and how they can act as agents of modulation.

Consider the following example:

Example 16 (F. Mendelssohn, Song Without Words, Op. 102, no. 3, mm. 22-28):

The musical score for Example 16 shows measures 22 through 28. Measures 22-24 are dominated by a prolongation of the dominant (V) in E minor, with the cadential $\frac{6}{4}$ chord alternating with the dominant. Measure 25 introduces an Italian augmented sixth (It⁶) in the treble, which resolves to the dominant (V) in measure 26. The progression then repeats in measures 27 and 28.

This excerpt is comprised of an extended prolongation of dominant harmony in E minor. In mm. 22-24, the dominant alternates with the cadential $\frac{6}{4}$ chord. In m. 25, the bass moves to its upper neighbor (C) while the treble steps down to $\sharp\hat{4}$ (A \sharp). This forms an Italian augmented sixth with the alto (E). (Note that the melodically embellished bass of the Italian sixth is motivically connected to the treble in m. 24.) The sonority resolves as expected in m. 26 and the progression repeats. In this context, the augmented sixth adds chromatic flavor to an otherwise routine dominant prolongation.

You may encounter other types of auxiliary sonorities that contain an augmented sixth, as in the opening measures of Schubert's "Am Meer":

Example 17 (F. Schubert, "Am Meer" from *Schwanengesang*, D. 957, mm. 1-3):

The musical score for Example 17 shows measures 1 through 3. The key signature is C major. Measure 1 features a C major triad (C). Measure 2 features a first inversion C major triad (I). Measure 3 features a C major triad (C). The lyrics "Das Meer er-glänz-te" are written above the vocal line.

Like the augmented sixths in Example 16, the sonority that opens this piece expands a functional reference harmony. In this case, however, a I chord is prolonged: $A\flat$, D^\sharp , and F^\sharp are neighbors to members of the tonic triad while C is sustained in the bass. $A\flat$ and F^\sharp —the pitches forming the augmented sixth—both resolve normatively to G, the fifth of the tonic. The result resembles a German augmented sixth— $b\hat{3}$ appears here as $\sharp\hat{2}$ (D^\sharp), underscoring the neighbor function—but the chord does not have the usual pre-dominant function. Auxiliary sonorities of this sort are generally referred to as common-tone augmented sixth chords.

Example 18 contains another common-tone augmented sixth:

Example 18 (H. Wolf, “In der Frühe,” mm. 1-2):

The musical score for Example 18 (H. Wolf, “In der Frühe,” mm. 1-2) is presented in three staves. The top staff is the vocal line in treble clef, the middle staff is the piano accompaniment in bass clef, and the bottom staff is the piano accompaniment in bass clef. The key signature is one flat (B-flat) and the time signature is common time (C). The vocal line has the lyrics: “Kein Schlaf noch kühlt das Au - ge mir,”. The piano accompaniment features a common-tone augmented sixth chord in the second half of beat two, which is prolonged. The chord consists of the notes B-flat, E, and G-sharp in the upper voices, and D in the bass. The chord resolves outward to an octave on the fifth of the tonic triad. Below the piano accompaniment, the Roman numeral notation is given as: d: i $\sharp\frac{6}{2}$ i vii $\frac{4}{3}$ /V V i.

In this song from Hugo Wolf, the chord on the second half of beat two prolongs the initial tonic harmony. $B\flat$, E, and G^\sharp are neighbors to members of the initial tonic while D is sustained in the bass. Just as before, the augmented sixth resolves outward to an octave on the fifth of the tonic triad. Here, the result resembles a French augmented sixth, but like Example 17, the function is prolongational, not pre-dominant.

Augmented sixths are also used to facilitate modulations. Consider the following excerpt from the same piece where Mendelssohn modulates from A minor to E minor, the minor dominant:

Example 19 (F. Mendelssohn, Song Without Words, Op. 102, no. 3, mm. 11-17):

11

a: i Gr⁶ V

15

i i⁶ Gr⁶ V

e: iv iv⁶

In mm. 11-12 we find a typical progression with a German sixth resolving to the dominant. The same progression is heard in m. 16, transposed down by a perfect fourth to the key of E minor. The unique sound of an augmented sixth resolving is still fresh in our ears from m. 12. Because the German sixth in m. 16 is so closely associated with the dominant, it invites us to retroactively reinterpret the tonic triad in m. 15 as a pivot chord, where “i = iv,” effecting a modulation to E minor.

Beethoven does something similar thing in the following example.

Example 20 (L. Beethoven, Piano Sonata No. 21 (“Waldstein”), Op. 53, mm. 20-23):

20

C: vi⁶ vi⁶

e: iv⁶

22

It⁶ V

After two full bars of vi in mm. 20-21, the “tenor” voice steps up to a chromatic passing tone (A[#]). That chromatic alteration transforms the chord into an Italian sixth, leading us to retroactively reinterpret the preceding vi⁶ as iv⁶ in E minor. Similar examples may be cited of augmented sixths being used to modulate back to the tonic.

As mentioned above, the German sixth is particularly useful in modulations because of its enharmonic equivalence with a dominant seventh chord. Schubert takes advantage of that very property in the following excerpt from a piano sonata:

Example 21 (F. Schubert, Sonata in A minor, Op. 42, Mvt. I, mm. 21-27):

Figured bass notation below the staff:

Bb: V⁶ - $\frac{7}{4} - \frac{5}{3}$ - $\frac{6}{4} - \frac{5}{3}$ - $\frac{6}{4} - \frac{7}{3}$

a: Gr⁶ V⁶ - - 5 3 i

Example 21 begins with a prolongation of dominant harmony in B^b major. V is prolonged with a series of cadential $\frac{6}{4}$ chords. The third time through, however, E^b is respelled as D[#]. The change in notation, producing an augmented sixth sonority over F, paves the way to a cadential $\frac{6}{4}$ chord in A minor and the new tonic in m. 26. In other words, V⁷ in B^b major, spelled with E^b, is enharmonically reinterpreted as a German sixth in A minor, spelled with D[#]. The effect is startling—particularly after the prolongation of V in mm. 21-23—and calls attention to the modulation and cadence in A minor.

Activity NNN.06:

German augmented sixth sonorities are enharmonically equivalent to dominant seventh chords. For each of the following exercises, respell the German sixth as a dominant seventh and identify the key to which it belongs.

Exercise NNN.06a

Respell one of the pitches in the following German augmented sixth to create a dominant seventh chord:

G: Gr⁶

[Answer: C[#] → D^b. Response if correct: “Correct!” Response if incorrect: “Incorrect. Try again.”]

[Follow-up question:]

To which key does this dominant seventh belong?

[Answer: A^b. Response if correct: “Correct! A German sixth in G major is enharmonically equivalent to V⁷ of A^b.” Response if incorrect: “Incorrect. (Hint: if E^b is $\hat{5}$, what is $\hat{1}$?)”]

Exercise NNN.06b

Respell one of the pitches in the following German augmented sixth to create a dominant seventh chord:



[Answer: A# → B \flat . Response if correct: "Correct!" Response if incorrect: "Incorrect. Try again."]

[Follow-up question:]

To which key does this dominant seventh belong?

[Answer: F. Response if correct: "Correct! A German sixth in E minor is enharmonically equivalent to V⁷ of F." Response if incorrect: "Incorrect. (Hint: if C is \hat{S} , what is \hat{I} ?)"]

Exercise NNN.06c

Respell one of the pitches in the following German augmented sixth to create a dominant seventh chord:



[Answer: B natural → C \flat . Response if correct: "Correct!" Response if incorrect: "Incorrect. Try again."]

[Follow-up question:]

To which key does this dominant seventh belong?

[Answer: G \flat . Response if correct: "Correct! A German sixth in F major is enharmonically equivalent to V⁷ of G \flat ." Response if incorrect: "Incorrect. (Hint: if D \flat is \hat{S} , what is \hat{I} ?)"]

Exercise NNN.06d

Respell one of the pitches in the following German augmented sixth to create a dominant seventh chord:



[Answer: G# → A \flat . Response if correct: "Correct!" Response if incorrect: "Incorrect. Try again."]

[Follow-up question:]

To which key does this dominant seventh belong?

[Answer: $E\flat$. Response if correct: “Correct! A German sixth in D minor is enharmonically equivalent to V^7 of $E\flat$.” Response if incorrect: “Incorrect. (Hint: if $B\flat$ is $\hat{5}$, what is $\hat{1}$?)”]

Conclusion:

Augmented sixth sonorities feature a dissonant, augmented interval between $\flat\hat{6}$ ($\hat{6}$ in minor) and $\sharp\hat{4}$. Those scale degrees act as dual leading tones that expand outward, wedge-like, and resolve by semitone to $\hat{5}$. In doing so, augmented sixths function as chromatic pre-dominant chords and thus fall into the same category as the Neapolitan (see Lesson MMM), which also involves chromatic alterations. The presence of $\sharp\hat{4}$ links them to dominant harmonies, but should not be considered as a tonicization of V. Because of their unique, striking quality, they are often used to signal important structural cadences.

The interval formed by $\flat\hat{6}$ and $\sharp\hat{4}$ is the defining trait of these sonorities, but they usually occur with one of three combinations of other notes. The Italian augmented sixth includes a major third above the bass (scale degree $\hat{1}$, routinely doubled), while the French sixth includes a major third and augmented fourth above the bass (scale degrees $\hat{1}$ and $\hat{2}$). The German sixth, the most common of the three varieties, includes a major third and perfect fifth above the bass (scale degrees $\hat{1}$ and $\flat\hat{3}$, $\hat{3}$ in minor) and has the richest texture.

Augmented sixths can also be useful in prolongations and modulations. Because they are closely tied to V, they can be used to efficiently mark the new dominant of a modulatory destination. Furthermore, the enharmonic equivalence between a German sixth and a dominant seventh chord make the German sixth a handy means of modulating to distantly-related keys.