

The Logic of Six-Based Minor for Harmonic Analyses of Popular Music

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Virtual

Minor Tonic = i

“Down Under” (Men at Work), Verse

0:11 Bm A Bm G A Bm A Bm G A

Tra vel lin'in a fried out com bie,
On a hip pie trail, head full of zom - bie.
i bVII i bVI bVII i bVII i bVI bVII

(Doll 2011)

Minor Tonic = i

“Down Under” (Men at Work), Verse

0:11

Bm A Bm G A Bm A Bm G A

Tra vel lin'in a fried out com bie, On a hip pie trail, head full of zom - bie.
i \flat VII i \flat VI \flat VII i \flat VII i \flat VI \flat VII

“Down Under” (Men at Work), Chorus

0:29

D A Bm G A D A Bm G A

Do you come from a land down un der? Where wo men glow and men plun der?
I V vi IV V I V vi IV V

(Doll 2011)

Minor Tonic = i

“Down Under” (Men at Work), Verse

0:11

Bm A Bm G A Bm A Bm G A

Tra vel lin'in a fried out com bie, On a hip pie trail, head full of zom - bie.

i \flat VII i \flat VI \flat VII i \flat VII i \flat VI \flat VII

“Down Under” (Men at Work), Chorus

0:29

D A Bm G A D A Bm G A

Do you come from a land down un der? Where wo men glow and men plun der?

I V vi IV V I V vi IV V

(Doll 2011)

Minor Tonic = vi

“Down Under” (Men at Work), Verse

0:11

Bm A Bm G A Bm A Bm G A

Tra vel lin'in a fried out com bie,
vi V vi IV V vi On a hip pie trail, head full of zom - bie.
V vi IV V

“Down Under” (Men at Work), Chorus

0:29

D A Bm G A D A Bm G A

Do you come from a land down un der?
I V vi IV V I Where wo men glow and men plun der?
V vi IV V

Nashville Chart

“Down Under” (Men at Work)

Vg) 6- 5 6- 4 5 6- 5 6- 4 5

6- 5 6- 4 5 6- 5 6- 4 5

Ch) 1 5 6- 4 5 1 5 6- 4 5

1 5 6- 4 5 1 5 6- 4 5

Tonal Ambiguity: The “Axis” Progression

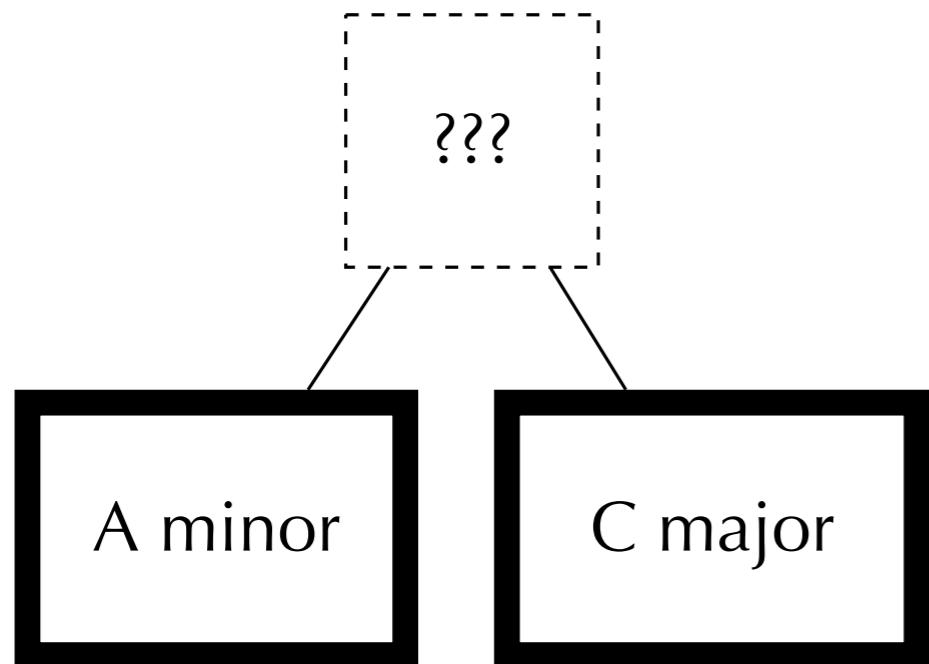
A musical score for a single melodic line. The time signature is common time (C). The key signature has one sharp (F#). The melody consists of eighth and sixteenth notes. The lyrics are: "I'm an ocean in your bed-room, make you feel warm, make you want to resume._". The score includes labels for chords: A5, F5, C5, and G5.

A = 1 i **bVI** **bIII** **bVII**

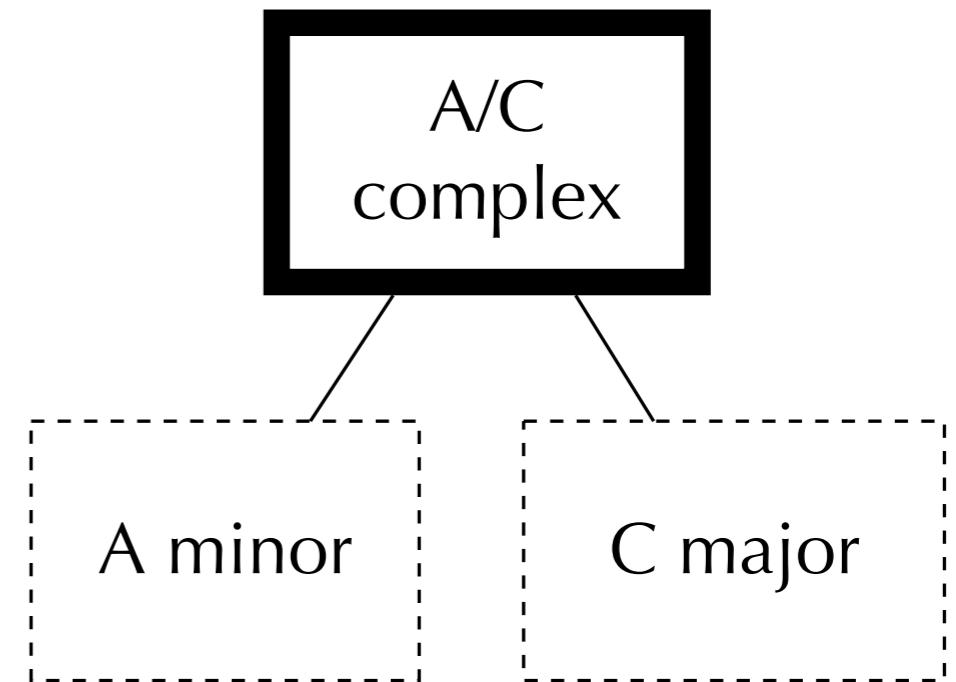
C = 1 vi IV I V

“Don’t Forget Me” (Red Hot Chili Peppers)

Tonal Ambiguity



Double-Tonic Complex



Nobile (2020)

Aeolian-Ionian Complex

	Am	C	Dm	Em	F	G
A minor	T	T	S	D	S	D
C major	T	T	S	D	S	D

Double-Tonic Complex (Nobile 2020)

A musical score for a single melodic line. The key signature is common C, indicated by a 'C' and a 'G' with a circle. The time signature is common time, indicated by a '4'. The tempo is marked as '0:15'. The melody consists of eighth and sixteenth notes, primarily on the A, D, E, and G strings of a guitar. The lyrics are: 'I'm an ocean in your bed-room, make you feel warm, make you want to resume.' The chords are labeled above the staff: A5, F5, C5, and G5.

A = 1 i **bVI** **bIII** **bVII**

C = 1 vi IV I V

“Don’t Forget Me” (Red Hot Chili Peppers)

Double-Tonic Complex (Nobile 2020)

0:15 A⁵ F⁵ C⁵ G⁵

I'm an o - cean in your bed - room, make you feel warm, make you want to re - sume._

1 i II III VII

C = 1 vi IV I V

“Don’t Forget Me” (Red Hot Chili Peppers)

A Few Other Double-Tonic Complex Loops

:	vi	I	V	IV	:
:	vi	V	I	IV	:
:	vi	I	IV	V	:
:	vi	IV	I	iii	:
:	vi	I	V	iii	:
:	vi	I	V	ii	:
:	ii	vi	I	V	:

A Few Other Double-Tonic Complex Loops

- “Jar of Hearts” (Christina Perri)
- “Set Fire to the Rain” (Adele)
- “Prayer in C” (Lilly Wood and the Prick)

Shifting Between Relative Tonal Centers

“Down Under” (Men at Work), Verse

0:11 Bm A Bm G A Bm A Bm G A

The musical notation shows a melody in G major (two sharps) over a harmonic progression in E minor (one sharp). The progression is: vi - V - vi - IV - V - vi - V - vi - IV - V. The lyrics are: "Tra vel lin' in a fried out com bie," and "On a hip pie trail, head full of zom - bie."

“Down Under” (Men at Work), Chorus

0:29 D A Bm G A D A Bm G A

The musical notation shows a melody in G major (two sharps) over a harmonic progression in D major (one sharp). The progression is: I - V - vi - IV - V - I - V - vi - IV - V. The lyrics are: "Do you come from a land down un der?" and "Where wo men glow and men plun der?"

From Minor (Verse) to Relative Major (Chorus)

VR)	6-	4	6-	4
	6-	4	6-	4

PRE)	5	5^{2-3}	4	4^{2-3}
	5	5^{2-3}	4	<u>4 5</u>

CH)	6-	4	1	5
	6-	4	1	$\frac{5}{7}$

“Innocence”
(Avril Lavigne)

From Minor (Verse) to Relative Major (Chorus)

C♯m

VR)	6-	4	6-	4
	6-	4	6-	4

PRE)	5	5 ²⁻³	4	4 ²⁻³
	5	5 ²⁻³	4	<u>4 5</u>

CH)	6-	4	1	5
	6-	4	1	$\frac{5}{7}$

“Innocence”
(Avril Lavigne)

From Minor (Verse) to Relative Major (Chorus)

C♯m

VR)	6-	4	6-	4
	6-	4	6-	4

PRE)	5	5 ²⁻³	4	4 ²⁻³
	5	5 ²⁻³	4	<u>4 5</u>

CH)	6-	4	1 E	5
	6-	4	1	$\frac{5}{7}$

“Innocence”
(Avril Lavigne)

From Minor (Verse) to Relative Major (Chorus)

C♯m

VR)	6-	4	6-	4	
	6-	4	6-	4	

PRE)	5	B	5 ²⁻³	4	A	4 ²⁻³
	5		5 ²⁻³	4		<u>4 5</u>

CH)	6-	4	1	E	5
	6-	4	1		$\frac{5}{7}$

“Innocence”
(Avril Lavigne)

0:24

Bm

A

Vr) 

5 G

A



9 G

Bm

A

Pre) 

13 G



17 G * Bm * A * Bm

Ch) 

21 G

Bm

A



“Miss Americana....”
 (Taylor Swift)

0:24

Vr) Bm A

5 G A

9 G Bm A

Pre) 8 No cam-era's catch my pag-eant smile; I coun-ten days, I coun-ten miles

13 G

17 G * Bm * A * Bm

Ch) 8 It's you and me,_ that's my whole world. They whis-per in the hall-way,"She's a bad, bad girl."

21 G Bm A

“Miss Americana....”
(Taylor Swift)

0:24

Vr) Bm A

5 G A

9 G Bm A

Pre) 8 No cam-era's catch my pag-eant smile; I coun-ted days, I coun-ted miles

13 G

17 G * Bm * A * Bm

Ch) 8 It's you and me,_ that's my whole world. They whis-per in the hall-way,"She's a bad, bad girl."

21 G Bm A

“Miss Americana....”
(Taylor Swift)

0:24

Vr) Bm A

5 G A

9 G Bm A

Pre) 8 No cam-era's catch my pag-eant smile; I coun-ted days, I coun-ted miles

13 G

17 G * Bm * A * Bm

Ch) 8 It's you and me,_ that's my whole world. They whis-per in the hall-way,"She's a bad, bad girl."

21 G Bm A

“Miss Americana....”
(Taylor Swift)

Double-Parallel Tonics

0:12

Vocal

The musical score consists of two staves of music. The top staff is labeled "Vocal" and shows lyrics: "Night falls and I'm a- lone." The bottom staff shows lyrics: "Skin, yeah, chilled me to the bone." Above the music, harmonic analysis is provided: D⁵, C(add2) G/B, D⁵, C(add2) G/B in the first section; and D⁵, C(add2) G/B, D⁵, C(add2) G/B in the second section. Below the music, Roman numerals indicate the harmonic progression: I / i, bVII IV⁶, I / i, bVII IV⁶.

Night falls and I'm a- lone.

Skin, yeah, chilled me to the bone.

D⁵ C(add2) G/B D⁵ C(add2) G/B

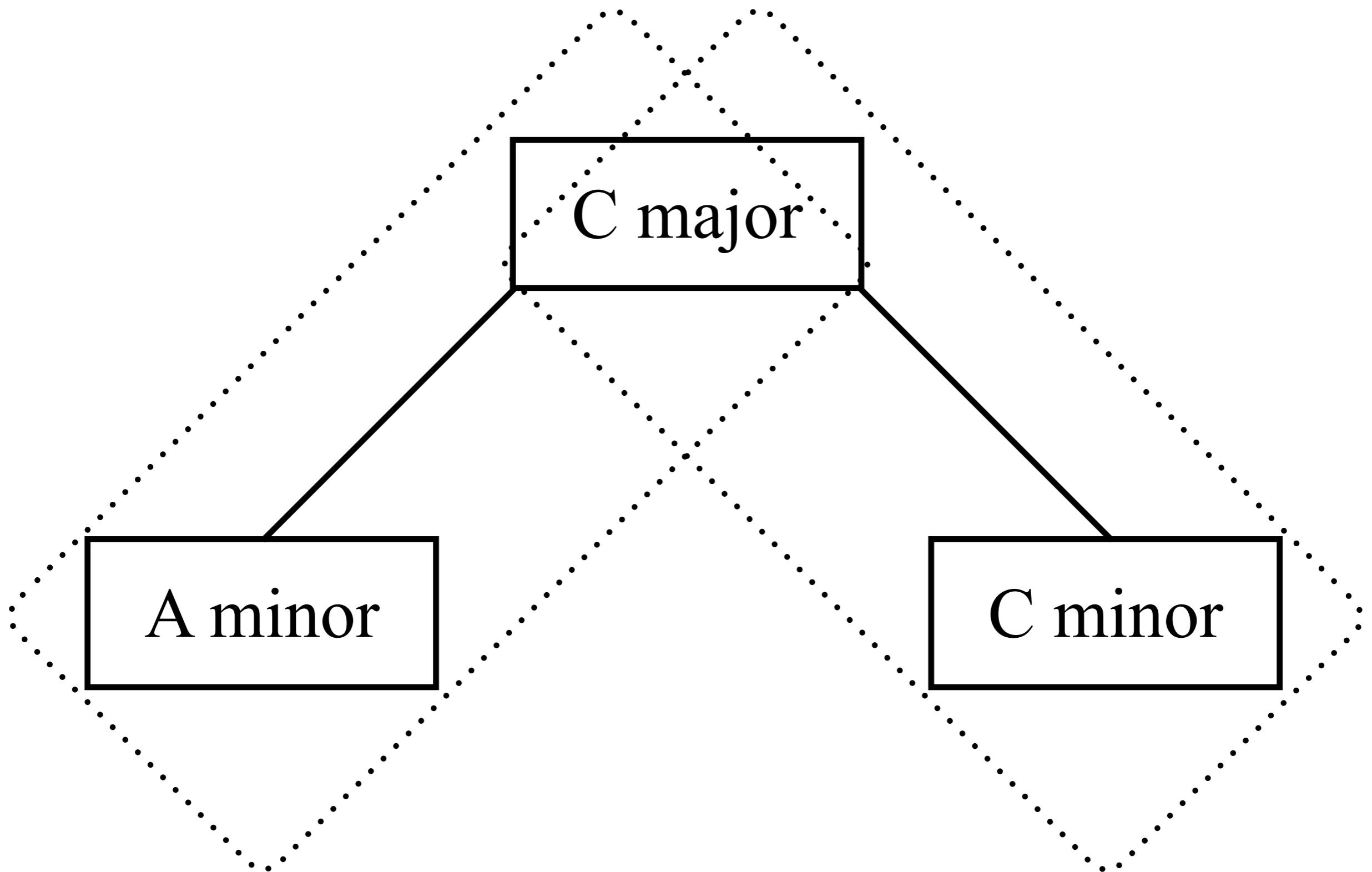
D⁵ C(add2) G/B D⁵ C(add2) G/B

I / i bVII IV⁶ I / i bVII IV⁶

“Blue on Black”

(Kenny Wayne Shepherd Band)

The Triple-Tonic Complex



A Triple-Tonic Complex

“Gorilla” (Bruno Mars), Chorus

0:54 D C(add9) G B♭ C

Ooh oooh yeah You and me, ba-by, mak-in' love like go-ril las...
I bVII IV bVI bVII

A Triple-Tonic Complex

“Gorilla” (Bruno Mars), Chorus

0:54 D C(add9) G B♭ C
I bVII IV bVI bVII

Ooh_____ ooh_____ yeah_____ You and me, ba-by, mak-in' love like go-ril las_

The musical score shows a 4/4 time signature with a key signature of two sharps. The progression starts at D (I), moves to C add 9 (bVII), then G (IV), then B♭ (bVI), and finally C (bVII). The lyrics "Ooh_____" and "ooh_____" align with the first two chords, "yeah_____" with the third, and the final part of the phrase with the last two. The vocal line consists of eighth-note patterns.

“Gorilla” (Bruno Mars), Verse

0:06 Bm D/A Gmaj7 B♭ C
D = 1 vi I 6/4 IV bVI bVII
B = 1 i bIII 6/4 bVI VII or bVI/bIII bVII/bIII

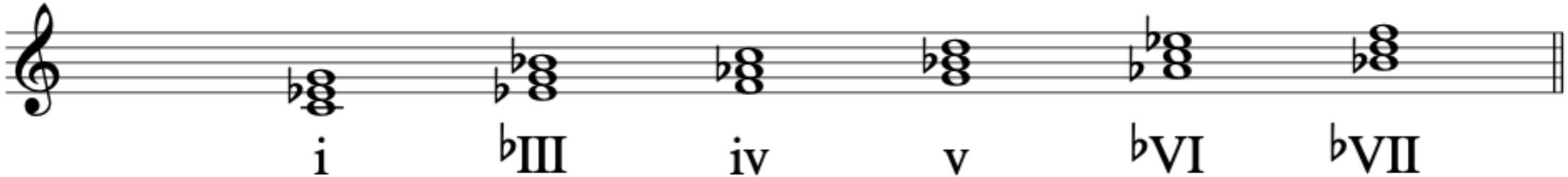
Ooh____ I got a bot-tle full of liq-uer with a co-caine kick-er and I'm feel-ing like I'm thir-ty feet tall,_____ so lay it down, lay it down.

The musical score shows a 4/4 time signature with a key signature of one sharp. The progression starts at Bm (vi), moves to D/A (I 6/4), then Gmaj7 (IV), then B♭ (bVI), and finally C (bVII). The lyrics "Ooh____ I got a bot-tle full of liq-uer with a co-caine kick-er and I'm feel-ing like I'm thir-ty feet tall,_____ so lay it down, lay it down." are provided. Below the staff, Roman numerals indicate the chords. A box contains options for the next chord: VII or bVI/bIII and bVII/bIII.

Three Harmonic Palettes

Stephenson (2002)

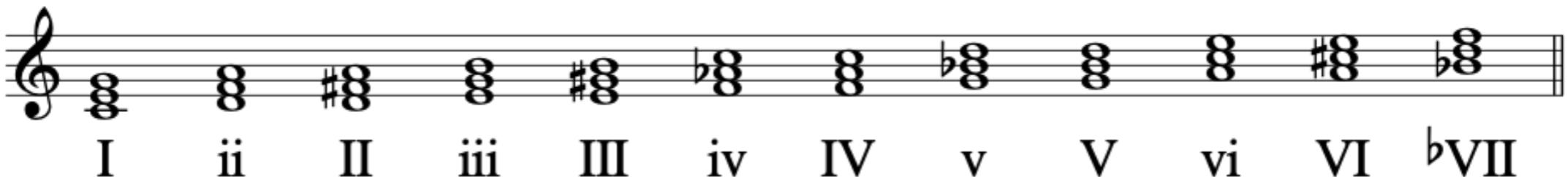
Natural Minor (One-Based)



Chromatic Minor



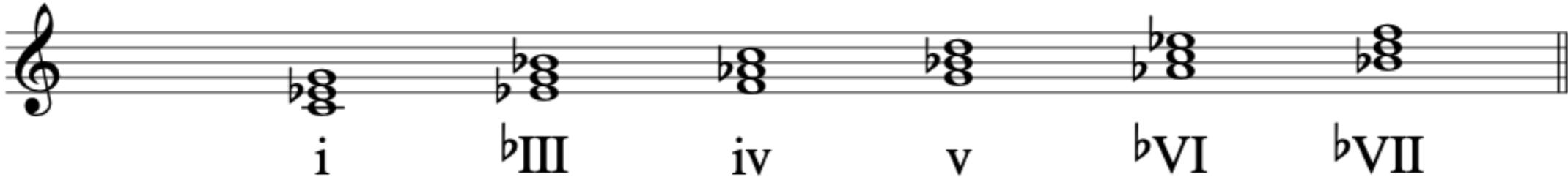
Major



Three Harmonic Palettes

Stephenson (2002)

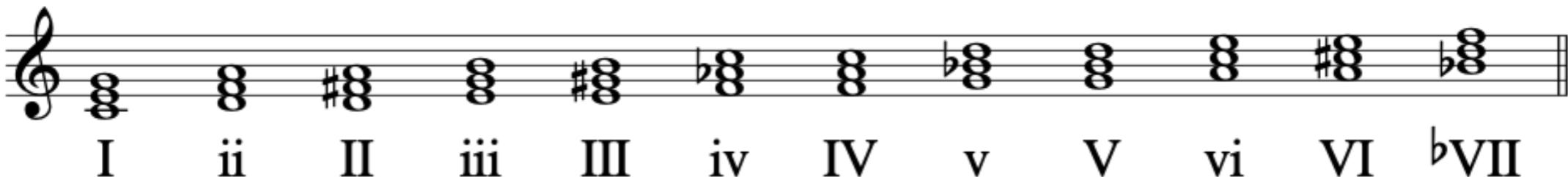
Natural Minor (One-Based)



Chromatic Minor



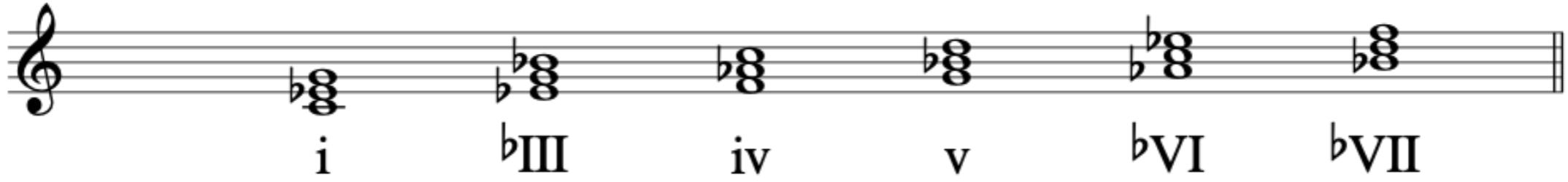
Major



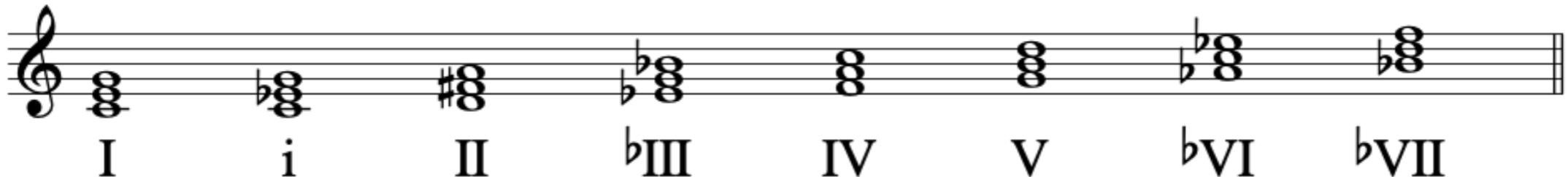
Three Harmonic Palettes

Stephenson (2002)

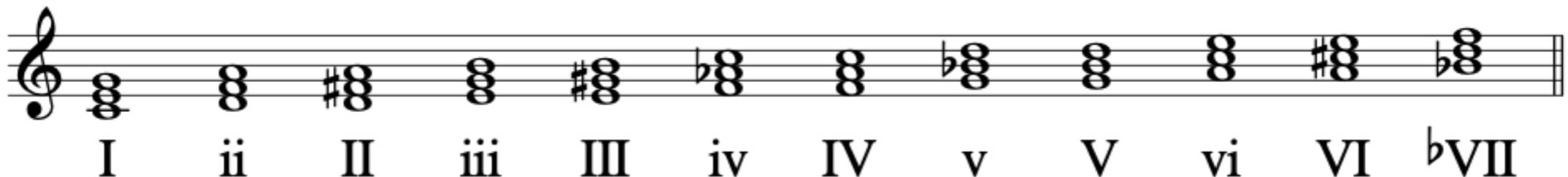
Natural Minor (One-Based)



Chromatic Minor



Major



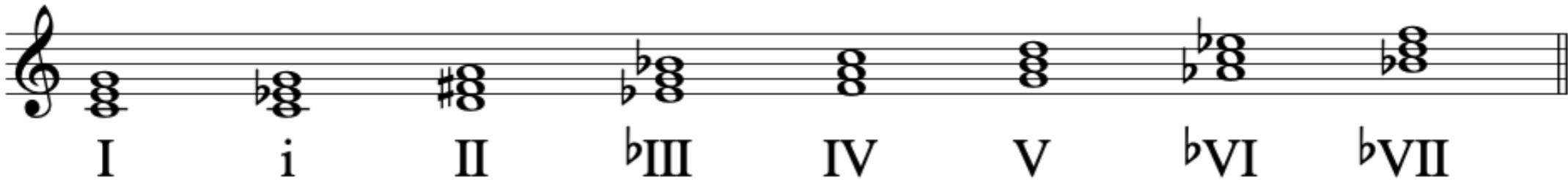
Three Harmonic Palettes

Stephenson (2002)

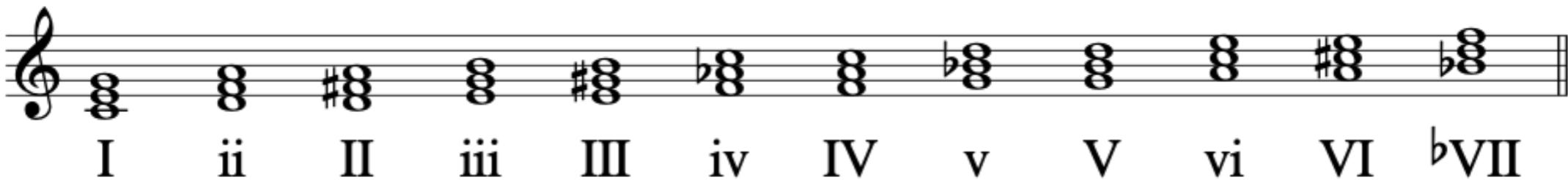
Natural Minor (One-Based)



Chromatic Minor



Major



Natural Minor (Six-Based)



Triple-Tonic Complex

“Radioactive” (Imagine Dragons), Chorus

0:55



1 Bm D A E

A musical staff in G major (one sharp) and common time (indicated by '8'). It shows a melody consisting of eighth-note patterns corresponding to the chords Bm, D, A, and E. The lyrics "up, I feel it in my bones, e - nough to make my sys - tems blow." are written below the staff.

5 Bm D A E/G♯

A musical staff in G major (one sharp) and common time (indicated by '8'). It shows a melody consisting of eighth-note patterns corresponding to the chords Bm, D, A, and E/G♯. The lyrics "Wel-come to the new age, to the new age, wel-come to the new age, to the new age." are written below the staff.

B = 1 i bIII bVII IV6

“Radioactive” (Imagine Dragons), Chorus

0:55

A musical staff with a treble clef, a key signature of two sharps, and a common time signature. The melody consists of quarter notes on the A, C, and E strings. Below the staff, the lyrics "I'm wak-ing" are written in a cursive font.

A musical score for a single melodic line. The key signature is G major (one sharp). The time signature is common time. The melody consists of eighth and sixteenth notes. The lyrics are: "up, I feel it in my bones, e - nough to make my sys - tems blow." The score includes chord labels Bm, D, A, and E above the staff, and measure numbers 1 and 8 below the staff.

5 Bm D A E/G \sharp

8 Wel-come to the new age, to the new age, wel-come to the new age, to the new age.

A musical score for a single melodic line. The key signature is G major (one sharp). The time signature is common time (indicated by '8'). The melody consists of eighth-note patterns. The lyrics are: "Wel-come to the new age, to the new age, wel-come to the new age, to the new age." The chords above the staff are Bm, D, A, and E/G#. Measure numbers 5 and 8 are indicated on the left.

B = 1 i bIII bVII IV⁶

D = 1 vi I V II⁶

Dorian–Lydian Complex

“Radioactive” (Imagine Dragons), Chorus

0:55

Musical notation for the first measure of the chorus. Treble clef, key signature of A major (two sharps), common time (indicated by '8'). The notes are: B (quarter note), A (eighth note), G (eighth note), F# (eighth note). The lyrics "I'm wak - ing" are written below the notes.

Musical notation for the first line of the chorus lyrics. Treble clef, key signature of A major (two sharps), common time (indicated by '8'). The notes are: B (quarter note), A (eighth note), G (eighth note), F# (eighth note), E (quarter note), D (eighth note), C (eighth note). The lyrics "up, I feel it in my bones, e - nough to make my sys - tems blow." are written below the notes.

Musical notation for the second line of the chorus lyrics. Treble clef, key signature of A major (two sharps), common time (indicated by '8'). The notes are: B (quarter note), A (eighth note), G (eighth note), F# (eighth note), E (quarter note), D (eighth note), C (eighth note), E/G# (eighth note). The lyrics "Wel-come to the new age, to the new age, wel-come to the new age, to the new age." are written below the notes.



D = 1 vi I V II⁶

The Three Modal Complexes

Aeolian-Ionian: A, B, C, D, E, F, G
6 7 1 2 3 4 5

Dorian-Lydian: A, B, C, D, E, F♯, G
6 7 1 2 3 ♯4 5

Phrygian-Mixolydian: A, B♭, C, D, E, F, G
6 ♫7 1 2 3 4 5

“Save Me” (Fleetwood Mac)

Vr)	Am	Am	D/A	D/A
	F	F	G	G
Pre)	B ^b	B ^b	F	F
	Am	C/G	F	F
Ch)	G Am	F G	G Am	F G
	G Am	F G	G Am	F G

Phrygian-Mixolydian Complex

VR)	6-	6-	$\frac{2}{6}$	$\frac{2}{6}$
	4	4	5^4	5^4
<hr/>				
PRE)	ל	ל	4	4
	6-	$\frac{1}{5}$	4	4
<hr/>				
CH)	<u>5 6-</u>	<u>4 5</u>	<u>5 6-</u>	<u>4 5</u>
	<u>5 6-</u>	<u>4 5</u>	<u>5 6-</u>	<u>4 5</u>

“Save Me”
(Fleetwood Mac)

(E^b) 4

Rolling In The Deep

Adele

8ths

I

6-

6-

L=105

V

6-

6- 3-	3- 5	5 3- 5
F 111 111	F 111 111	F 111 111

III

6-

6- 3-

3- 5

5 3- 3- 5

Add Kick
J's

V

:6-

6- 3-

3- 5

5 3- 3- 5

Hand
in

Chord

4

5

3-

4

♪'s

4

5

3-

3'

C

6-

5

4

45

C

6-

5

4

45

:7:

Rehearsal

4

4

6-

5

5

Chas Williams
(Session Musician)
Nashville Chart

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THANK YOU!

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