Ionian Tonic Arrivals as Generators of Chorus Quality in Pop/Rock Songs

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STATE UNIVERSITY

South Central Society for Music Theory March 28, 2014 University of Mississippi

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I. Background

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V. Discussion

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- Focal point of song (Covach 2005)
- More energy than verse (Stephan-Robinson 2009)
- Most memorable section (Harris 2006, Osborn 2010)

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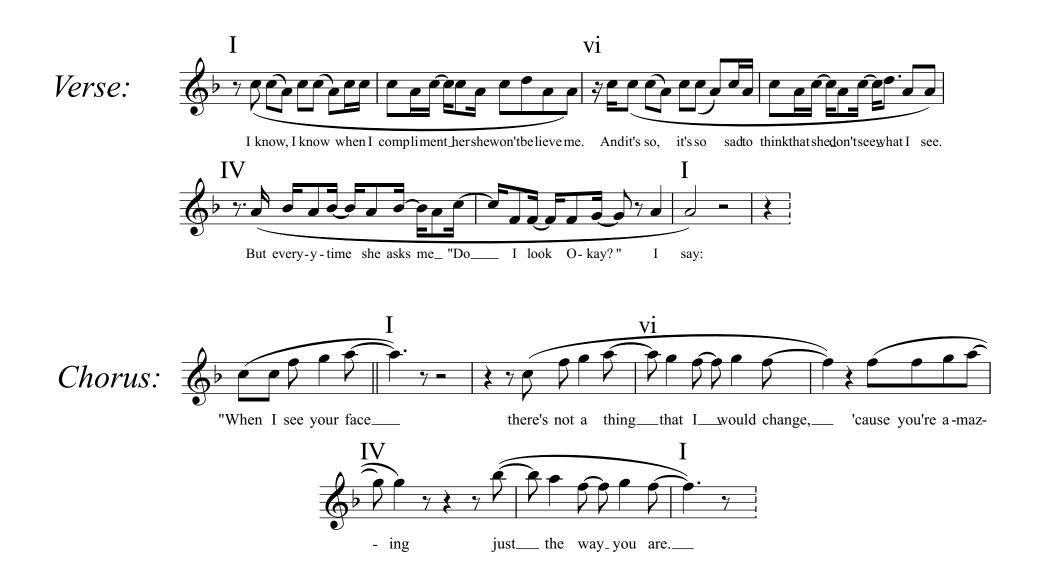
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Pitch and Rhythm

- Less pentatonic (Temperley 2007)
- Melody more coordinated with harmony (Temperley 2007)
- Has slower vocal rhythm than verse (Stephenson 2002)

Prototypical Verse-Chorus:

Bruno Mars, "Just the Way You Are" (2010)



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		starts on tonic				ends on tonic			
		Α	V	С		Α	V	С	
	1955–9	92%	92%	84%		100%	84%	100%	
	1960–4	93%	94%	60%		92%	70%	80%	
	1965–9	90%	88%	75%		83%	43%	58%	
	1970–4	83%	78%	70%		83%	52%	67%	
-	1975–9	85%	79%	78%		85%	37%	60%	
	1980–4	95%	82%	73%]	79%	43%	61%	
	1985–9	100%	91%	74%		75%	29%	55%	

(Summach 2012)

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• Shifts to relative major if verse is in minor (Perricone 2000, Neal 2008, Doll 2011)

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- 4) Verse and chorus have same tonal center and diatonic collection, but chorus includes more arrivals on the Ionian tonic
- 5) Verse and chorus have same tonal center and diatonic collection, but verse avoids Ionian tonic

II. Hypothesis

Justin Timberlake, "Mirrors" (2013)

Verse (C minor)

 $Fm \mid G/B$ Gm Cm Just know that I'm always parallel on the other side Gm Fm Ab Cm ... hand in my hand and a pocket full of soul, I can tell you there's no place we couldn't go Gm Fm Cmhand on the glass, I'll be tryin' to pull you through, You just gotta be strong **Chorus** (Eb major) Eb Bb Ab ... I don't wanna lose you now, I'm lookin' right at the other half of me

Eb The vacancy that sat in my heart is a space that now you hold

Bb Ab

Justin Timberlake, "Mirrors" (2013)

Verse (C minor)

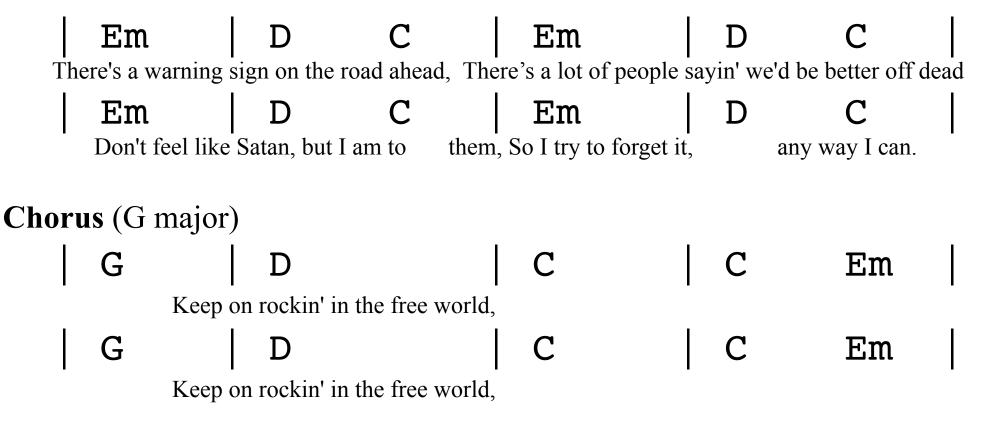
ivivv6Just know that I'm alwaysparallelon the other side. V6iivivbVI... hand in my hand and a pocket full of soul, I can tell you there's no place we couldn't goiviviviviv....hand on the glass, I'll be tryin' to pull you through, You just gotta be strong

Chorus (Eb major)

 I
 V
 IV
 I

Neil Young, "Rockin' in the Free World" (1991)

Verse (E minor)



Duran Duran, "Rio" (1982)

Verse (E minor)

| C/EEm Α With a step to the left and a flick to the right you catch the mirror way out west A/C# C/E Em You know you're something special, and you look like you're the best **Chorus** (E major) E Β D Α Her names is Rio and she dances on the sand E \mathbf{B}

Just like that river

twisting through

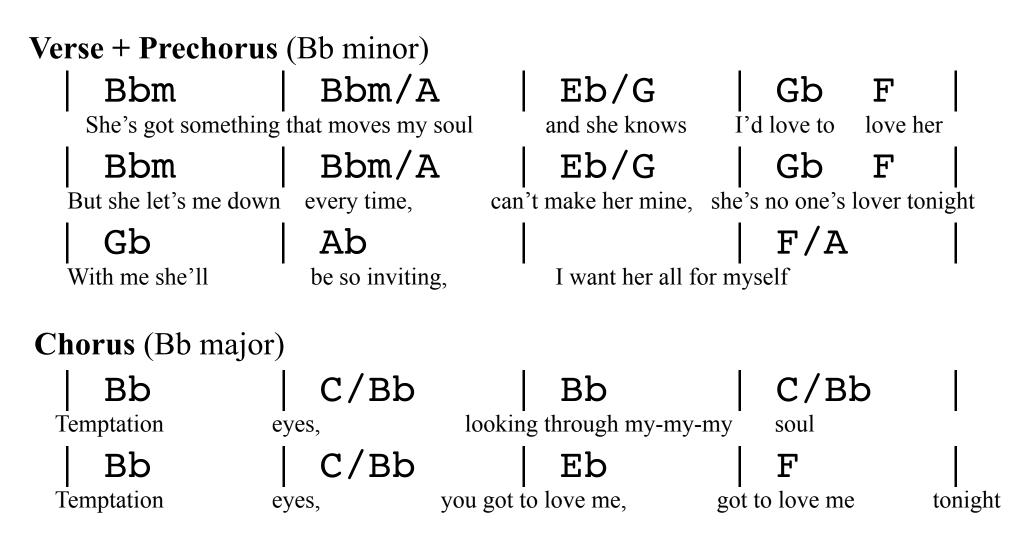
the dusty land

Duran Duran, "Rio" (1982)

Verse (E minor)

bVI6 IV bVI With a step to the left and a flick to the right you catch the mirror way out west | IV6 bVI6 bVI You know you're something special, and you look like you're the best **Chorus** (E major) bVII IV Ι Her names is Rio and she dances on the sand bVII Just like that river twisting through the dusty land

Grassroots, "Temptation Eyes" (1970)



Duran Duran, "Hungry Like the Wolf" (1982)

Verse (E major)

 E
 Woman you want me, give me a sign, and catch my breathing even closer behind

 D
 E

 Do do do do do do....

Chorus (C major)

 C
 G
 F
 |
 |

 In touch with the ground,
 I'm on the hunt, I'm after you
 I'm on the hunt, I'm after you
 I

 C
 G
 F
 D
 (C)

 Smell like I sound, I'm lost in a crowd,
 and I'm hungry like the wolf
 I
 I

Duran Duran, "Hungry Like the Wolf" (1982)

Verse (E major)

 I
 I
 I
 I

 Woman you want me, give me a sign, and catch my breathing even closer behind
 I
 I

 bVII
 I
 I
 I

 Do do do do do do....
 I
 I
 I

LVIVIIIn touch with the ground,I'm on the hunt, I'm after youIIIVIVIVIISmell like I sound, I'm lost in a crowd,and I'm hungry like the wolfI

The Police, "Don't Stand So Close To Me" (1980)

Verse (G minor)

Eb		Gm	
Inside her	there's longing,	this girl's an open page	
Eb		Gm	
Bookmarking,	she's so close now,	this girl is half his age	

Chorus (D major)

DADon't stand so,DDon't stand so,

DAIdon't stand so,IDAdon't stand so,

Bm7

Bm7

Asus

don't stand so close to me

Asus

don't stand so close to me

The Cars, "Just What I Needed" (1978)

Verse (E major)

B Ε You always knew to wear it well, and... you look so fancy I can tell B/D# E ...and I don't mind you hanging out

C#m G# G#m Α and talking in your sleep.

Chorus (E major)

E B | A . C#m B | E B I guess you're just what I needed, I needed someone to feed A . C#m B | E B E B I guess you're just what I needed,

A C#m

A C#m

I needed someone to bleed

The Cars, "Just What I Needed" (1978)

Verse (E major)

V You always knew to wear it well, and... you look so fancy I can tell V6 ...and I don't mind you hanging out

V/vi vi iii IV and talking in your sleep.

Chorus (E major)

I V | IV. vi V | IV | IV vi | I guess you're just what I needed, I needed someone to feed | IV . vi V | I V I V

| IV vi

I guess you're just what I needed, I needed someone to bleed

AC/DC, "Highway to Hell" (1979)

Verse (A major)

 $A \cdot D/F#$ $G \cdot D/F#$ G D/F# G D/F#ADon't need reason,don't need rhyme,ain't nothing that I'd rather do $A \cdot D/F#$ $G \cdot D/F#$ G D/F# G D/F#EGoing downfor a time,my friends are gonna be there, too

Chorus (A major)

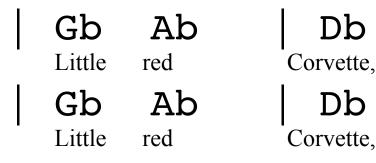
AD/AGD/F#AD/AGD/F#Highway to Hell,D/AGD/FHighway to Hell,Highway to Hell,D/ADHighway to Hell,D/AADDDI'm on the Highway to Hell,D

Prince, "Little Red Corvette" (1982)

Verse (Db major)

GbAbBbmGbGuess I must be dumb, shared a pocket full of horses, Trojan and some of them usedGbAbBbmAb... Saturday night, I guess that makes it all right, you said what have I got to lose?

Chorus (Db major)



	Gb	Ab	Bbm
•	Baby, yo	ou're much to	fast
	Gb		Ab
•	You nee	d a love that's	gonna last

Τ

Ι

Prince, "Little Red Corvette" (1982)

Verse (Db major)

 ${
m IV}$ ΙV V Vl Guess I must be dumb, shared a pocket full of horses, Trojan and some of them used IV V vi V ... Saturday night, I guess that makes it all right, you said what have I got to lose?

Chorus (Db major)

ΙV Little red Corvette, IV Little Corvette, red

IV V Vl Baby, you're much to fast IV V You need a love that's gonna last

The Police, "Every Little Thing She Does Is Magic" (1981) Verse (D major)

(G) (A) (B) (C#) of the feelings I have for her in my heart For I have tried before to tell her | (B) | (C#) (G) | (A) (A) (B) (C#)İ (G) Every time that I come near her I just lose my nerve as I've done from the start D. GA | D. GA | D. GA | D **Chorus** (D major) Α Every little things she does is magic, everything she do just turns me on. Bb Α Α Even though my life before was tragic, now I know my love for her goes on.

Counterexample: "Chorus" in Relative Minor

Foreigner, "Cold as Ice" (1977)

"Chorus" (Eb minor)

Ebm You're as cold as ice	Cb You're willing to sacri	fice our love
Ebm	Cb	
Ebm	Cb	Abm
You never take advice	Someday you'll pay t	he price I know.
		_

"Verse" (Gb major)

GbFAbmCbDbI've seen it before, it happens all the time, You're closing the door, you leave the world behindGbFAbmBbYou're digging for gold, yet throwing away a fortune in feelings, but someday you'll pay

IV. Counterexamples

Counterexample: "Chorus" in Relative Minor

Foreigner, "Cold as Ice" (1977)

Start	Mm.	Key	Covach 2003	Alt. Analysis
0:00	4	Eb min	Intro	Intro
0:08	12	Eb min	Chorus	Verse
0:32	8	Gb maj	Verse	Chorus
0:47	16	Eb min	Chorus	Verse
1:17	8	Gb maj	Verse	Chorus
1:33	8	Eb min	Solo	Solo
1:47	14	Eb min	Bridge	Bridge
2:13	32	Eb min	Chorus	Verse

Counterexample: "Chorus" in Relative Minor

Foreigner, "Cold as Ice" (1977)

"Chorus" (Eb minor)

	i		bVI	
		You're as cold as ice	You're willing to sacrifice	our love
	i		bVI	
	i		bVI	iv
_		You want paradise	But someday you'll pay the pr	ice I know.

"Verse" (Gb major)

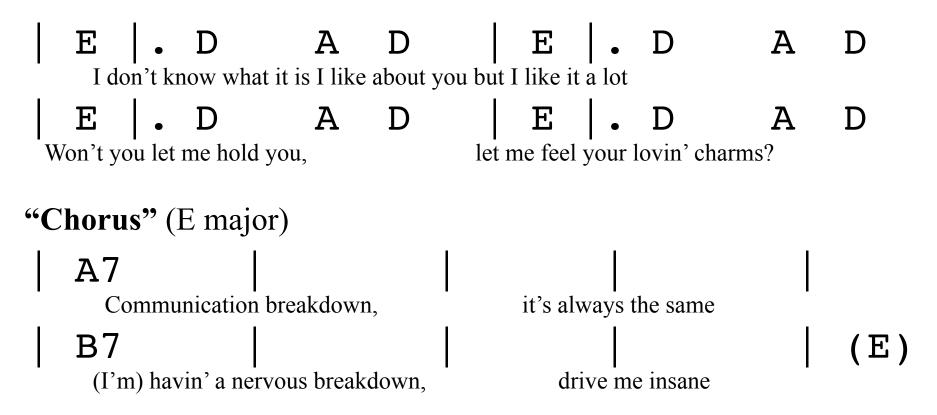
 $\begin{bmatrix} I & VII & ii & IVV \\ V & V \end{bmatrix}$ I've seen it before, it happens all the time, You're closing the door, you leave the world behind $\begin{bmatrix} I & VII & ii & V/vi \\ Vou're digging for gold, yet throwing away a fortune in feelings, but someday you'll pay$

IV. Counterexamples

Counterexample: "Chorus" that avoids Ionian tonic

Led Zeppelin, "Communication Breakdown" (1969)

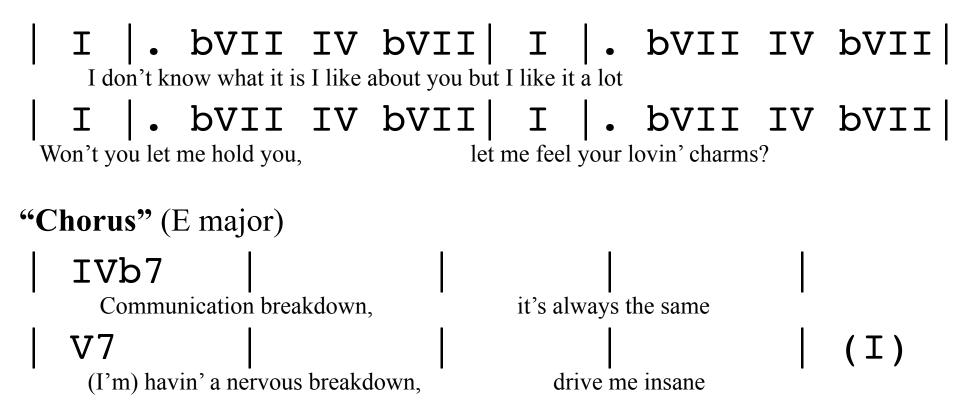
Verse (E major)



Counterexample: "Chorus" that avoids Ionian tonic

Led Zeppelin, "Communication Breakdown" (1969)

Verse (E major)



Counterexample: "Chorus" that avoids Ionian tonic

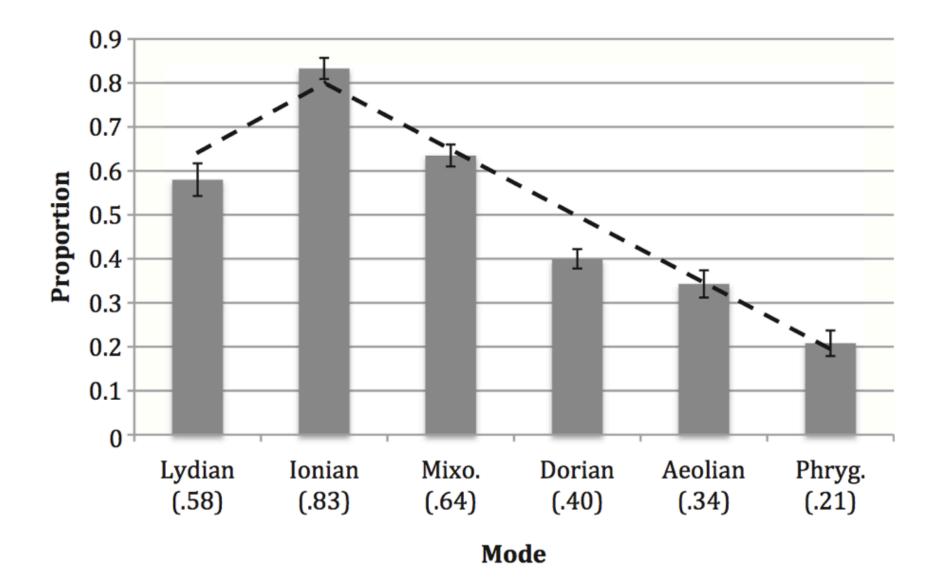
Led Zeppelin, "Communication Breakdown" (1969)

Mm.	New Form	Har	monies
8	Intro (Link)	I	. bVII IV bVII
16	Verse	I	. bVII IV bVII
8	Pre-chorus	IV	*4 V *4
8	Chorus	I	. bVII IV bVII
16	Verse	I	. bVII IV bVII
8	Pre-chorus	IV	*4 V *4
8	Chorus	I	. bVII IV bVII
14	Solo	I	. bVII IV bVII
8	Pre-chorus	IV	*4 V *4
4	Link	I	. bVII IV bVII
16+	Outro (Chorus)	I	. bVII IV bVII

IV. Counterexamples

Listener preference for Ionian mode

Temperley and Tan (2012)



V. Discussion

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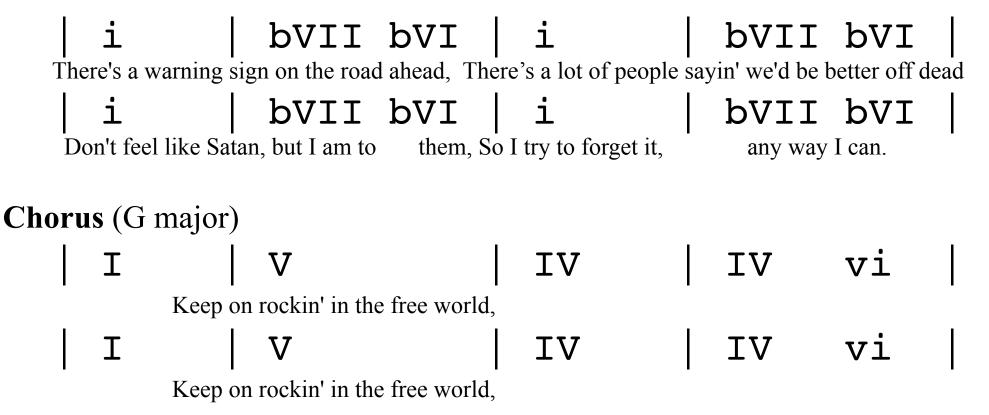
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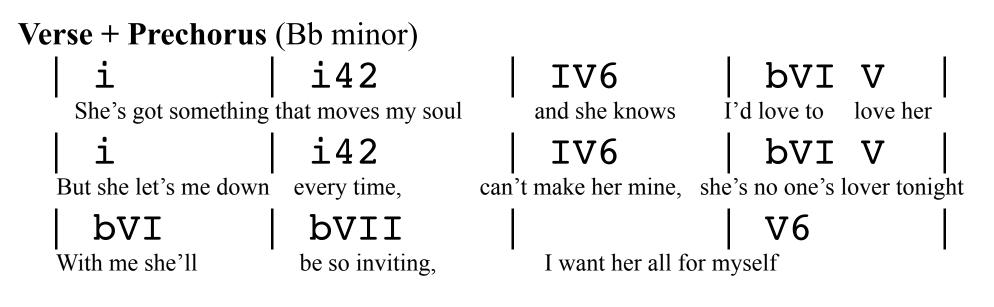
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Neil Young, "Rockin' in the Free World" (1991)

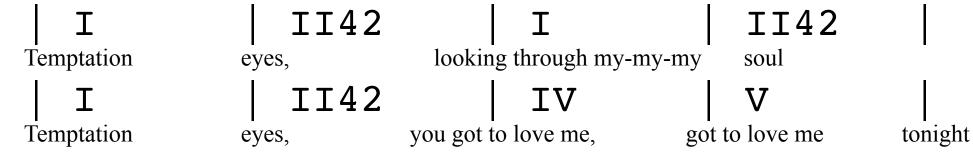
Verse (E minor)



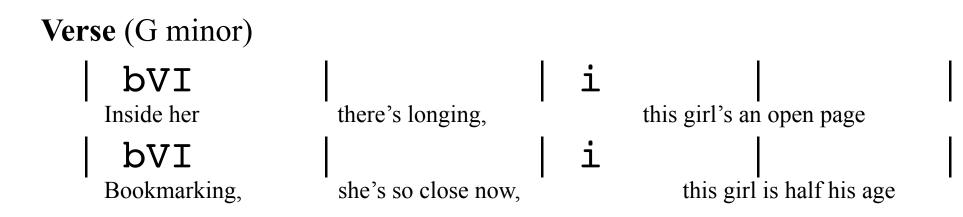
Grassroots, "Temptation Eyes" (1970)



Chorus (Bb major)



The Police, "Don't Stand So Close To Me" (1980)



Chorus (D major)

IVDon't stand so,IVDon't stand so,

IVdon't stand so,IVdon't stand so,

vi7Vsus
don't stand so close to mevi7Vsus
don't stand so close to me

AC/DC, "Highway to Hell" (1979)

Verse (A major)

I.. IV6bVII..IV6bVIIIV6bVIIIV6IDon't need reason,don't need rhyme,ain't nothing that I'd rather doI.. IV6bVII..IV6bVIIIV6bVIIIV6VGoing downfor a time,my friends are gonna be there, too

Chorus (A major)

The Police, "Every Little Thing She Does Is Magic" (1981) Verse (D major)

(4) (5) (6) (7) of the feelings I have for her in my heart For I have tried before to tell her

 (5)
 (6)
 (7)

 (5)
 (6)
 (7)

 (4) (5) I just lose my nerve as I've done from the start Every time that I come near her I.IV V | I.IV V | I.IV V | Ι **Chorus** (D major) Every little things she does is magic, everything she do just turns me on.

V

bVI Even though my life before was tragic, now I know my love for her goes on.