**A Corpus Analysis of Harmony in Country Music Trevor de Clercq** MIDDLE TENNESSEF STATE UNIVERSITY **SCSMT** Conference March 23, 2018 University of Southern Mississippi

## A Corpus Analysis of Harmony in Country Music

I. Background II. Methods III. Results IV. Discussion

## CHAPTER ONE THE BACKGROUND

#### Music Theory/Analysis Research on Harmony in "Rock"

- "The So-Called 'Flattened-Seventh' in **Rock**" (Moore 1995)
- Understanding **Rock** (Covach and Boone 1997)
- Rock: The Primary Text (Moore 2001)
- What to Listen for in **Rock** (Stephenson 2002)
- "Making Sense of Rock's Tonal Systems" (Everett 2004)
- "The Melodic-Harmonic Divorce in Rock" (Temperley 2007)
- "Analytical Methodologies for Rock Music" (Burns 2008)
- *The Foundations of Rock* (Everett 2009)
- "Transformation in **Rock** Harmony" (Doll 2009)
- "Sectional Tonality and Sectional Centricity in **Rock** Music" (Capuzzo 2009)
- "Triadic Modal and Pentatonic Patterns in Rock Music" (Biamonte 2010)
- "The Cadential IV in Rock" (Temperley 2012)
- "Modal Tonicization in **Rock**" (Clement 2013)
- "Counterpoint in **Rock** Music" (Nobile 2015)
- "Harmonic Functions in Rock Music" (Nobile 2016)
- *Hearing Harmony: Toward a Tonal Theory for the Rock Era* (Doll 2017)
- "Rock Harmony Reconsidered" (Osborn 2017)
- The Musical Language of Rock (Temperley 2018)

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- "Rock Harmony Reconsidered" (Osborn 2017)
  The Musical Language of Rock (Temperley 2018)
  "British Pop-Rock Music in the Post-Beatles Era" (Spicer 2001)
- "Neo-Riemannian Theory and the Analysis of **Pop-Rock** Music" (Capuzzo 2004)
- "Retrogressive Harmonic Motion... (in) **Pop-Rock** Music" (Carter 2005)
- Expression in **Pop-Rock** Music (Everett 2008)
- "Guitar Voicing in **Pop-Rock** Music" (Koozin 2011)
  "Anti-Circles as... Model for Harmonic Motion in **Pop-Rock** Music (Traut 2015)
  "Fragile, Emergent, and Absent Tonics in **Pop and Rock** Songs" (Spicer 2017)

#### Genre Share of Listenership in the U.S., 2016 Year-End Report (Nielsen 2017)

Rock	29%
R&B/Hip-Hop	22%
Рор	13%
Country	10%
Dance/Electronic	4%
Christian/Gospel	3%
Latin	3%
Holiday/Seasonal	2%
Jazz	1%
Classical	1%
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Jocelyn Neal: "Musically, there is a pervading misconception that (country music) relies on three-chord harmonic progressions" (1998, 322).

Jocelyn Neal:"One of the enduring clichés about country music is its primitive harmonic language..., (yet) nothing could be further from the truth" (2008, 291-292).

#### Some of My Computational Work with Popular Music (based on the RS 200)

- de Clercq, Trevor and David Temperley. 2011. "A Corpus Analysis of Rock Harmony." *Popular Music* 30/1: 47–70.
- Temperley, David and Trevor de Clercq. 2013. "Statistical Analysis of Harmony and Melody in Rock Music." *Journal of New Music Research* 42/3: 187–204.
- de Clercq, Trevor. (2015). "Corpus Studies of Harmony in Popular Music: A Response to Léveillé Gauvin." *Empirical Musicology Review* 10/3: 239-244.
- de Clercq, Trevor. (2016). "Measuring a Measure: Absolute Time as a Factor for Determining Bar Lengths and Meter in Pop/Rock Music." *Music Theory Online* 22/3.
- Temperley, David & Trevor de Clercq. (2017). "Musical Structure: Melody and Harmony in Popular Music." In *The Routledge Companion to Music Cognition*, 165-177. Edited by Richard Ashley and Renee Timmers. New York, NY: Routledge.
- de Clercq, Trevor. (2017). "Interactions Between Harmony and Form in a Corpus of Rock Music." *Journal of Music Theory* 61/2: 143–170.

## CHAPTER TWO THE METHODS

#### The Nashville Number System Fakebook (de Clercq 2015)

### MASHWILLE NUMBER

From the honky tonks on Lower Broadway to the studios on Music Row to the stages of the Ryman Auditorium and the Grand Ole Opry, professional country musicians rely on the Nashville Number System every day to draw up their song charts. While the Nashville Number System is powerful enough to be used by the top session musicians today, it is simple enough to be understood by those who know only a few chords. Whether you play guitar, bass, keyboard, drums, banjo, mandolin, or another instrument, the Nashville Number System is the best method available for you to build your repertoire of songs and learn what makes those songs tick.

What better way to learn than playing along with some of country music's greatest hits? This book includes charts for 200 of the best-known and well-respected songs in the history of country music. Although no lyrics are included, each chart conveys the harmony, key, meter, rhythm, phrase structure, instrumentation, arrangement, and form of the song—all on a single piece of paper. An introduction is also included that explains the system in detail. Ultimately, becoming an expert at the Nashville Number System will make you not only a better player but a more versatile musician.

ISBN 978-1-4950-1409-3

#### MASHVILLE NUMBER SYSTEM FAKEBOOK

200 COUNTRY SONGS INCLUDING: BLUE EYES CRYING IN THE RAIN - THE DANCE - FOLSOM PRISON BLUES HE STOPPED LOVING HER TODAY - IN COLOR - MEAN - YOUR CHEATIN' HEART

HAL-LEONARD



### Sources for the Songs (de Clercq 2015)

- Academy of Country Music. 1967-2014. "Single of the Year."
- Academy of Country Music. 1967-2014. "Song of the Year."
- Allmusic. 2015. "Country Song Highlights."
- American Music Award. 1974-1995. "Favorite Country Single."
- *Billboard*. 1946-2014. "Year-End #1 Country Singles."
- Billboard. 2014. "Top 70 Country Songs 1989-2014."
- *Billboard*. 2008. *"Billboard* 50th Anniversary Charts: All-Time Top Country Songs."
- Country Music Television. 2003. "CMT 100 Greatest Songs of Country Music."
- Country Music Association. 1967-2014. "Single of the Year."
- Country Music Association. 1967-2014. "Song of the Year."
- Nashville Songwriters Association International. 1967-2014. "NSAI Song of the Year."
- *The Recording Academy*. 1965-2014. "Grammy Award for Best Country Song."
- Rolling Stone. 2014. "100 Greatest Country Songs of All Time."
- Taste of Country. 2012. "Top 100 Country Songs."

### Sample of Songs in the "NN 200"

- "Wabash Cannonball" (Roy Acuff, 1933)
- "Foggy Mountain Breakdown" (Flatt & Scruggs, 1950)
- "Your Cheatin' Heart" (Hank Williams, 1952)
- "Ring of Fire" (Johnny Cash, 1962)
- "King of the Road" (Roger Miller, 1964)
- "D-I-V-O-R-C-E" (Tammy Wynette, 1968)
- "Always On My Mind" (Willie Nelson, 1971)
- "Rhinestone Cowboy" (Glen Campbell, 1974)
- "He Stopped Loving Her Today" (George Jones, 1978)
- "Forever and Ever, Amen" (Randy Travis, 1987)
- "Friends in Low Places" (Garth Brooks, 1990)
- "Strawberry Wine" (Deana Carter, 1996)
- "Alcohol" (Brad Paisley, 2005)
- "Need You Now" (Lady Antebellum, 2009)
- "Mean" (Taylor Swift, 2010)
- "Cruise" (Florida Georgia Line, 2012)
- "Automatic" (Miranda Lambert, 2014)

#### Chart of "80's Ladies" (K. T. Oslin, 1987)

KEY OF C

4 *.* = 100 4

80'S LADIES (K. T. OSLIN)

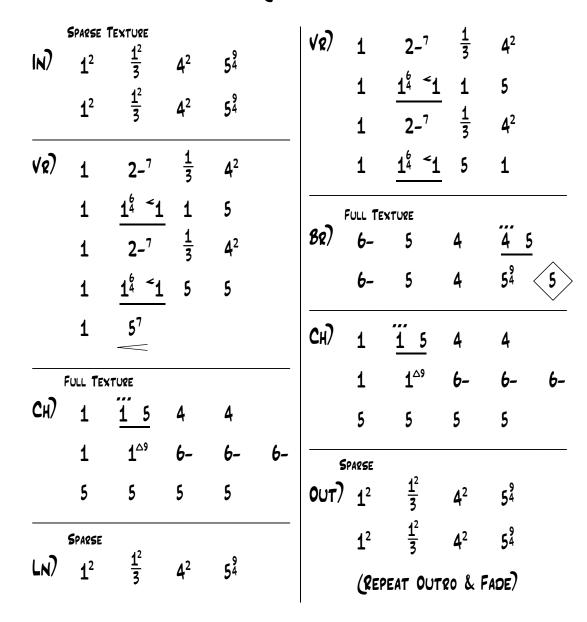


Chart of "80's Ladies" (K. T. Oslin, 1987)

FULL TEXTURE  
CH) 1 
$$15$$
 4 4  
1  $1^{\triangle 9}$  6- 6- 6-  
5 5 5 5

#### **Encoded Excerpt of "80's Ladies"**

% Art % Cop [Key: [Mete [Temp	cist: pyrigh c] er: 4/	= 100]	L		
In:	12 12	12/3 12/3	42 42	594 594	
Vr:	1 1 1 1 1	2-7 (164 <1) 2-7 (164 <1) 57	1/3	42 5 42 5	
Ch:	1 1 5	(1 5) 1M9 5	4 6- 5	4 6- 5	6-

# CHAPTER THREE

## THE RESULTS

	NN	200
1 chord	0	0.0%
$\leq 2$ chords	3	1.5%

#### NN 200

1 chord	0	0.0%
$\leq 2$ chords	3	1.5%
$\leq$ 3 chords	53	26.5%



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	NN	200	<b>RS 200</b>
1 chord	0	0.0%	2.5%
$\leq 2$ chords	3	1.5%	5.0%
$\leq$ 3 chords	53	26.5%	



	NN	200	<b>RS 200</b>
1 chord	0	0.0%	2.5%
$\leq 2$ chords	3	1.5%	5.0%
$\leq$ 3 chords	53	26.5%	28.5%



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$\leq$ 3 chords	53	26.5%	28.5%
$\leq$ 4 chords	100	50.0%	48.0%



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1 chord	0	0.0%	2.5%
$\leq 2$ chords	3	1.5%	5.0%
$\leq$ 3 chords	53	26.5%	28.5%
≤ 4 chords	100	50.0%	48.0%
$\leq$ 5 chords	146	73.0%	65.5%
$\leq$ 7 chords	188	94.0%	86.0%
$\leq$ 9 chords	196	98.0%	95.0%
$\leq 10$ chords	199	99.5%	96.5%
$\leq$ 14 chords	200	100.0%	99.0%

Triad	Instances4,60232.7%3,58625.5%		
Ι	4,602	32.7%	
V	3,586	25.5%	
IV	3,360	23.8%	



Triad	Instances		Ba	rs
Ι	4,602	32.7%	7,800	43.6%
V	3,586	25.5%	3,945	22.0%
IV	3,360	23.8%	3,621	20.2%



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### Instances of I, IV, V in NN 200: 82% Bars of I, IV, V in NN 200: 86%



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### Instances of I, IV, V in RS 200: 79% Bars of I, IV, V in RS 200: 85%



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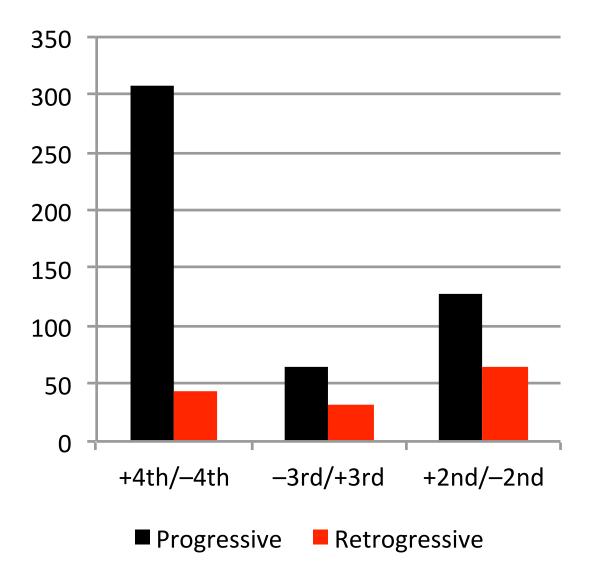
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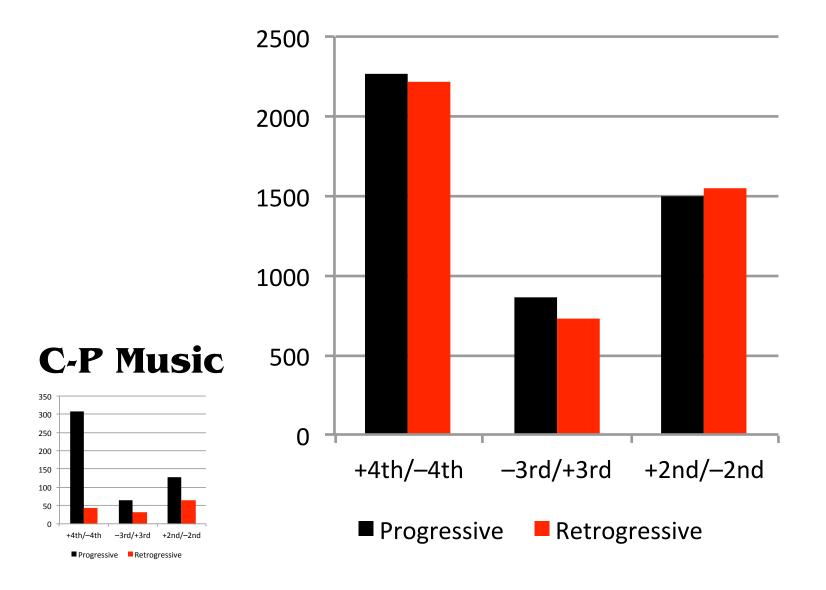
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vi	851	6.0%	813	4.5%
ii	704	5.0%	677	3.8%
ЬVII	225	1.6%	208	1.2%
II	182	1.3%	193	1.1%
iii	120	0.9%	133	0.7%
i	97	0.7%	194	1.1%
bVI	76	0.5%	71	0.4%
III	73	0.5%	69	0.4%
V	51	0.4%	44	0.2%
VI	34	0.2%	40	0.2%
iv	23	0.2%	26	0.1%

### **Root Motion in Common-Practice Music** (Temperley 2009)

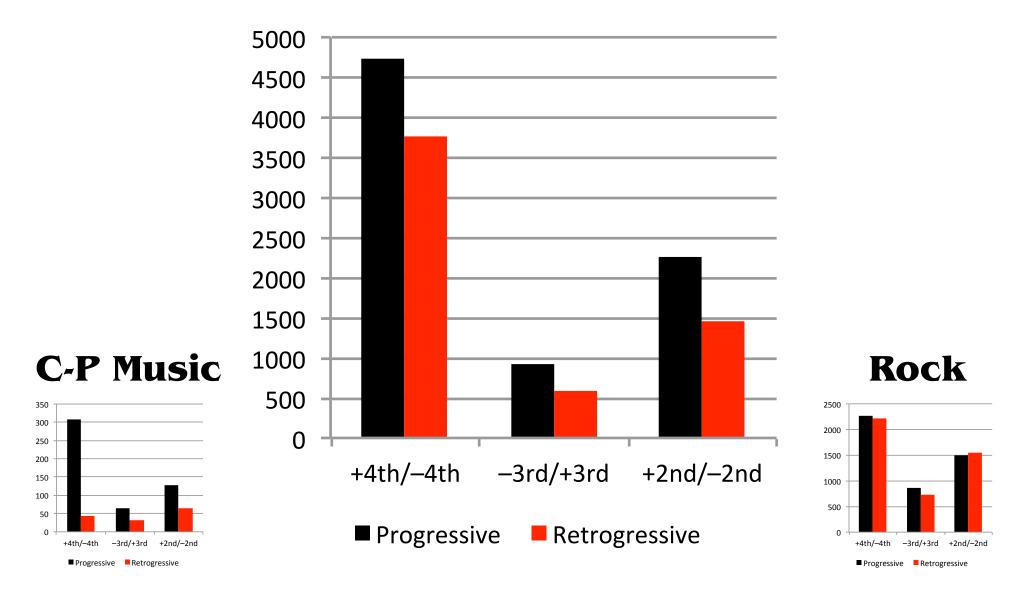


### Root Motion in Rock Music (de Clercq & Temperley 2011)





### Root Motion in Country Music (the NN 200)



Pattern XY	Interval	<b>Motion Type</b>	Factor	Pattern YX	Pairs
bVII – IV	-P4	Retrogressive	5.52	IV – ÞVII	137
I – bVII	-M2	Retrogressive	3.60	bVII – I	161

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iii – IV	+m2	Progressive	3.55	IV – iii	100
vi – IV	-M3	Progressive	3.18	IV – vi	506
I – vi	-m3	Progressive	2.36	vi – I	423
ii – V	+P4	Progressive	1.99	V – ii	542
I – ii	+M2	Progressive	1.76	ii – I	502
IV – V	+M2	Progressive	1.67	V – IV	1,907
V – vi	+M2	Progressive	1.65	vi – V	593
V – I	+P4	Progressive	1.40	I – V	3,751
ii – IV	+m3	Retrogressive	1.09	IV – ii	232
I – IV	+P4	Progressive	1.03	IV – I	3,587

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### Root-position chords in NN 200: ~94%



## Non-root-position Chords in the NN 200

Triad and Bass	Instances		Common Chords Before		Common Chords After	
I over 3	373	(41.2%)	IV	(43%)	IV	(61%)
			Ι	(30%)	ii	(27%)
			ii	(23%)		
V over 7	213	(23.5%)	Ι	(68%)	vi	(55%)
			vi	(14%)	Ι	(27%)
I over 5	78	(8.6%)	vi	(83%)	IV	(77%)
IV over 6	67	(7.4%)	Ι	(30%)	Ι	(37%)
			ЬVII	(28%)	V	(21%)
					V over 7	(21%)
V over 4	40	(4.4%)	IV	(68%)	IV	(44%)
			Ι	(33%)	Ι	(36%)
IV over 1	28	(3.1%)	Ι	(61%)	Ι	(50%)
I over 7	22	(2.4%)	Ι	(91%)	vi	(82%)

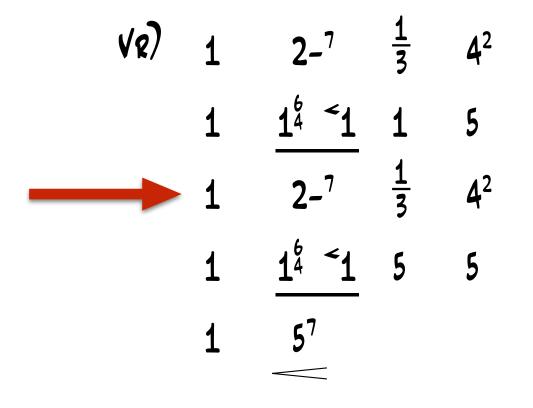
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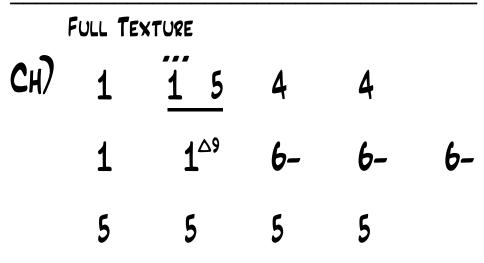
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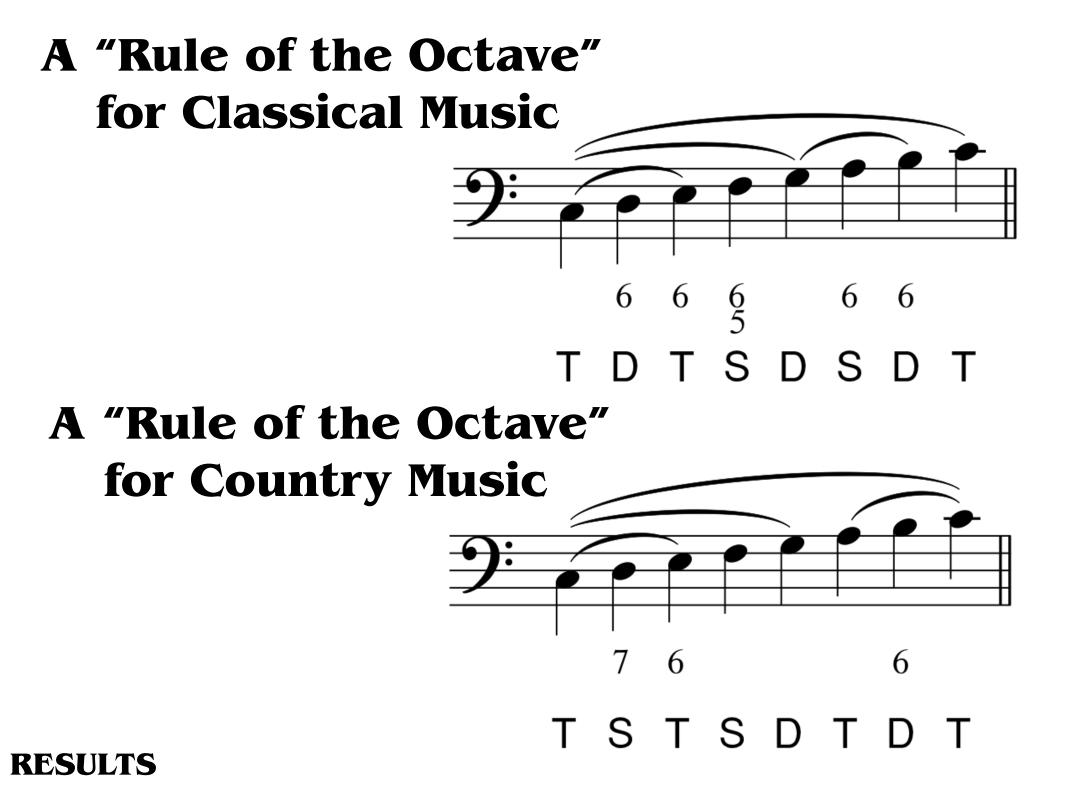
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### Chart of "80's Ladies" (K. T. Oslin, 1987)





### 



## CHAPTER FOUR THE DISCUSSION

## Like Rock (& unlike Classical), Country:

- Employs bVII much more frequently than vii<sup>O</sup>
- Shows a much greater use of root-position chords than inversions
- Shows a good deal of retrogressive harmonic motion (e.g., V–IV, V–ii, ii–I)
- Has subdominant often acting in cadential role



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## Like Classical (& unlike Rock), Country:

- Uses more dominant chords overall than subdominant
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## **Other Notable Features of Country:**

- Is almost always set in a major key
- Does not have significantly more three-chord songs than rock
- Relies only slightly more heavily on I, IV, and V than other styles
- Rarely has a harmonic palette of more than 7 different chords

#### DISCUSSION

## **THANK YOU!**

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