"Three Chords and the Truth?": A Corpus Analysis of Harmony in Country Music

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“Three Chords and the Truth?”: 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)

BACKGROUND

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

Rock	29%
R&B/Hip-Hop	22%
Pop	13%
Country	10%
Dance/Electronic	4%
Christian/Gospel	3%
Latin	3%
Holiday/Seasonal	2%
Jazz	1%
Classical	1%
Children's	1%

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Harlan Howard: Country music is “three chords and the truth” (in Dansby 2002).

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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)

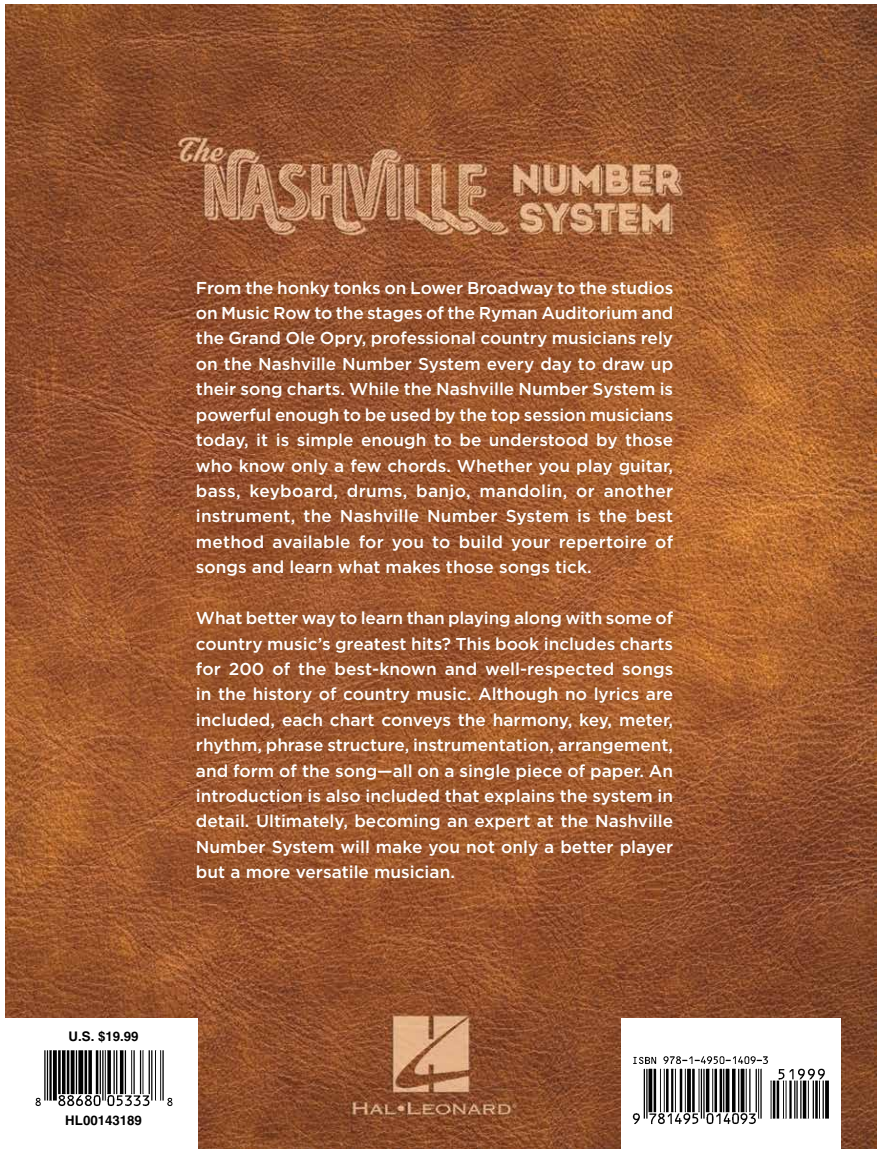
- de Clercq, Trevor and David Temperley. 2011. "A Corpus Analysis of Rock Harmony." *Popular Music* 30/1: 47–70.
- Temperley, David and Trevor de Clercq. 2013. "Statistical Analysis of Harmony and Melody in Rock Music." *Journal of New Music Research* 42/3: 187–204.
- de Clercq, Trevor. (2015). "Corpus 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.

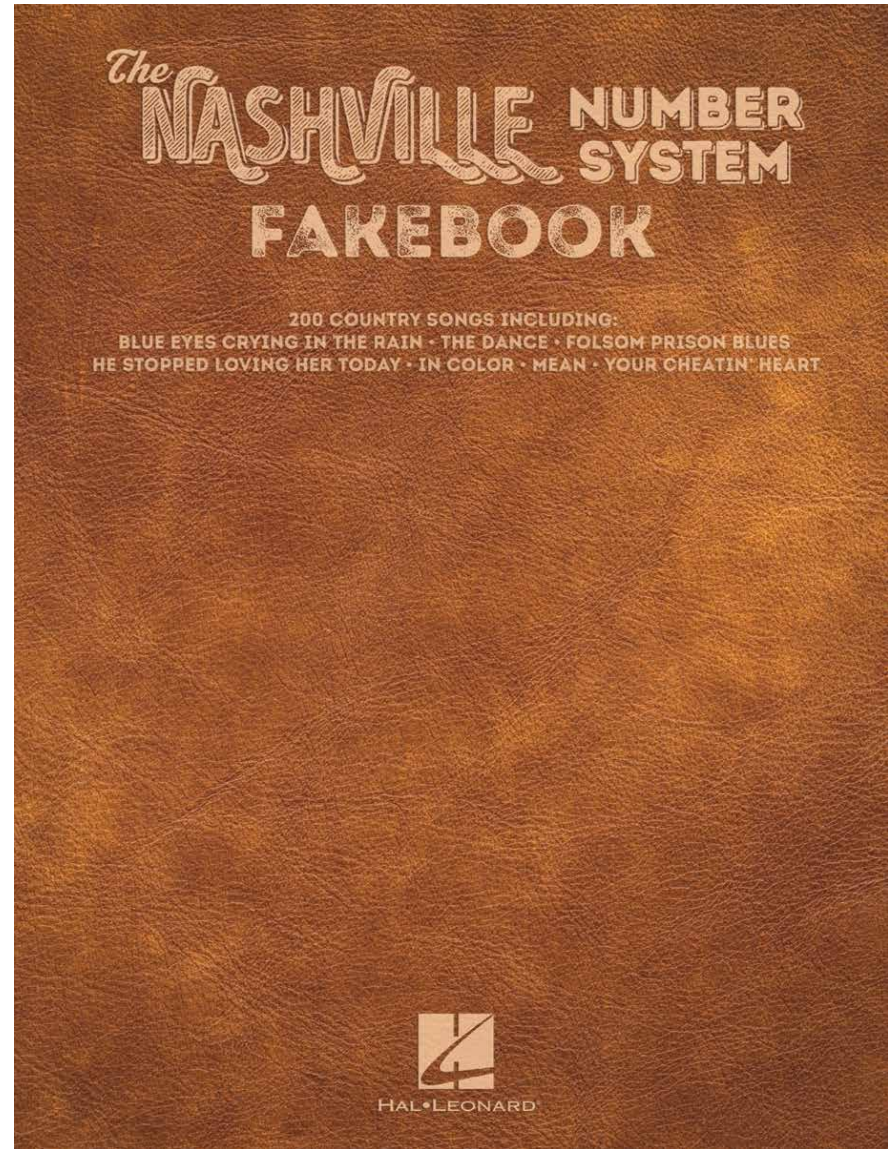
BACKGROUND

CHAPTER TWO

THE METHODS

The Nashville Number System Fakebook (de Clercq 2015)





METHODS

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."

METHODS

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)

METHODS

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

Key of C

$\frac{4}{4}$ ♩ = 100

80's Ladies

(K. T. Oslin)

Sparse Texture

IN) 1^2 $\frac{1^2}{3}$ 4^2 5^{9}_{4}

1^2 $\frac{1^2}{3}$ 4^2 5^{9}_{4}

VR) 1 2^{-7} $\frac{1}{3}$ 4^2

1 1^{6}_{4} <1 1 5

1 2^{-7} $\frac{1}{3}$ 4^2

1 1^{6}_{4} <1 5 5

1 5^7

Full Texture

CH) 1 1 5 4 4

1 $1^{\Delta 9}$ 6- 6- 6-

5 5 5 5

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Full Texture

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6- 5 4 5^{9}_{4} 5

CH) 1 1 5 4 4

1 $1^{\Delta 9}$ 6- 6- 6-

5 5 5 5

Sparse

OUT) 1^2 $\frac{1^2}{3}$ 4^2 5^{9}_{4}

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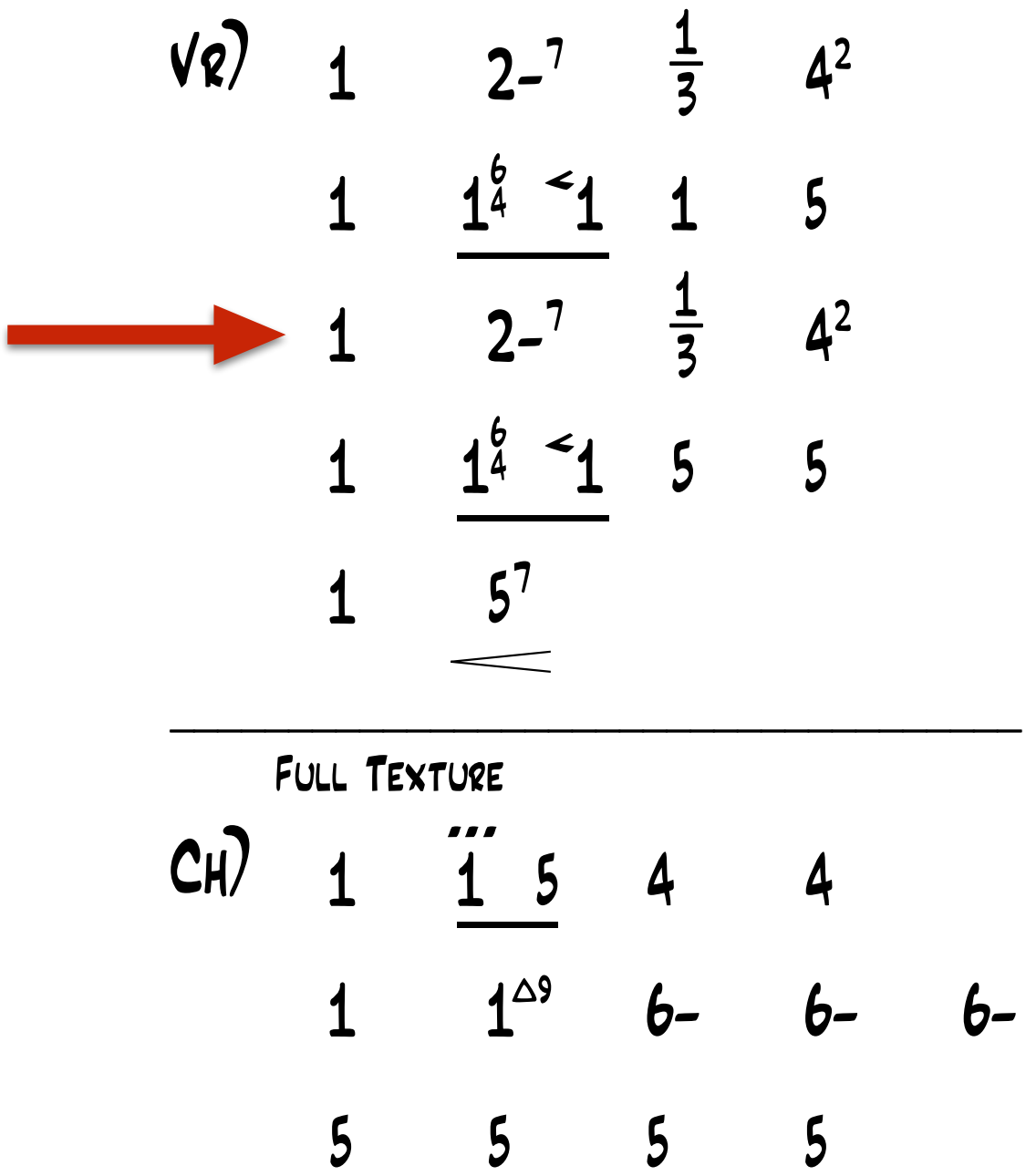
(Repeat Outro & Fade)

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



METHODS

Encoded Excerpt of “80’s Ladies”

```
% Title: 80's Ladies
% Artist: K. T. Oslin
% Copyright: 1987
[Key: C]
[Meter: 4/4]
[Tempo: QN = 100]
[Feel: Normal]

In:   12     12/3       42       594
      12     12/3       42       594

Vr:   1      2-7        1/3      42
      1      (164 <1)   1        5
      1      2-7        1/3      42
      1      (164 <1)   5        5
      1      57

Ch:   1      (1.. 5)    4        4
      1      1M9        6-       6-     6-
      5      5          5        5
```

METHODS

CHAPTER THREE

THE RESULTS

Number of Songs with X or Fewer Chords

	NN 200	
1 chord	0	0.0%
≤ 2 chords	3	1.5%

RESULTS

Number of Songs with X or Fewer Chords

	NN 200	
1 chord	0	0.0%
≤ 2 chords	3	1.5%
≤ 3 chords	53	26.5%

RESULTS

Number of Songs with X or Fewer Chords

	NN 200		RS 200
1 chord	0	0.0%	
≤ 2 chords	3	1.5%	
≤ 3 chords	53	26.5%	

RESULTS

Number of Songs with X or Fewer Chords

	NN 200		RS 200
1 chord	0	0.0%	2.5%
≤ 2 chords	3	1.5%	5.0%
≤ 3 chords	53	26.5%	

RESULTS

Number of Songs with X or Fewer Chords

	NN 200		RS 200
1 chord	0	0.0%	2.5%
≤ 2 chords	3	1.5%	5.0%
≤ 3 chords	53	26.5%	28.5%

RESULTS

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1 chord	0	0.0%	2.5%
≤ 2 chords	3	1.5%	5.0%
≤ 3 chords	53	26.5%	28.5%
≤ 4 chords	100	50.0%	48.0%

Number of Songs with X or Fewer Chords

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

RESULTS

Triad Types in the NN 200, Ranked by Frequency

Triad	Instances	
I	4,602	32.7%
V	3,586	25.5%
IV	3,360	23.8%

Triad Types in the NN 200, Ranked by Frequency

Triad	Instances		Bars	
I	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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vi	851	6.0%	813	4.5%

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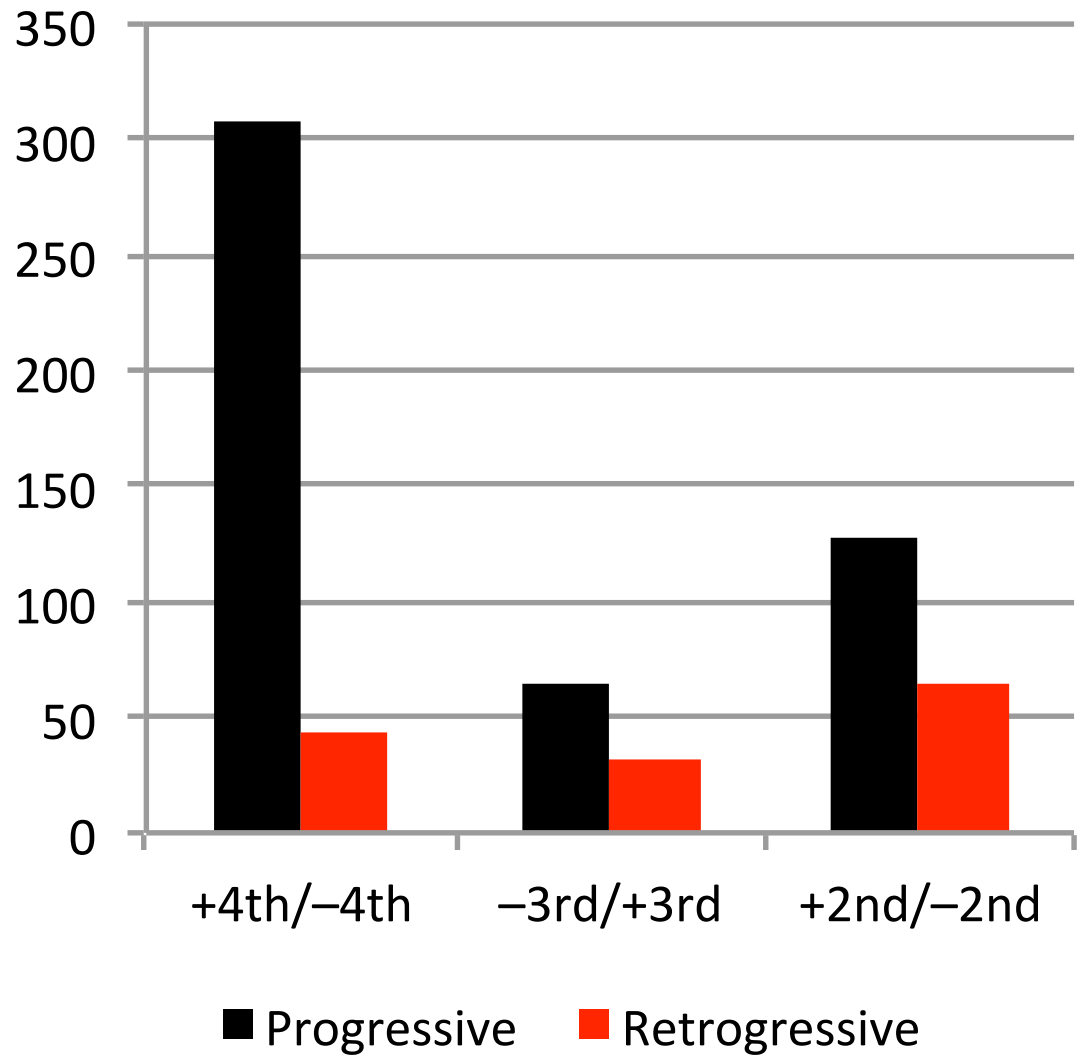
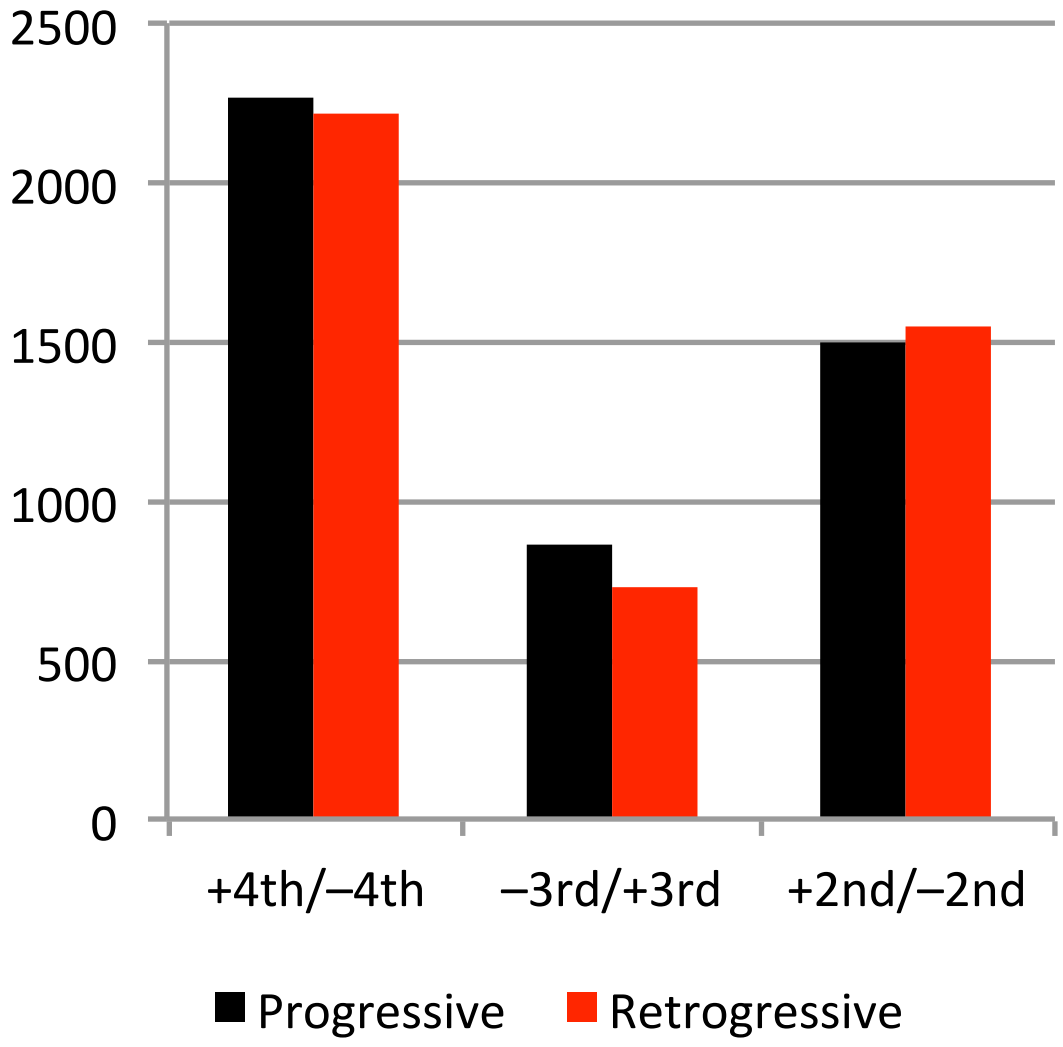
vi	851	6.0%	813	4.5%
ii	704	5.0%	677	3.8%
bVII	225	1.6%	208	1.2%
II	182	1.3%	193	1.1%
iii	120	0.9%	133	0.7%
i	97	0.7%	194	1.1%
bVI	76	0.5%	71	0.4%
III	73	0.5%	69	0.4%
v	51	0.4%	44	0.2%
VI	34	0.2%	40	0.2%
iv	23	0.2%	26	0.1%

Root Motion in Common-Practice Music (Temperley 2009)

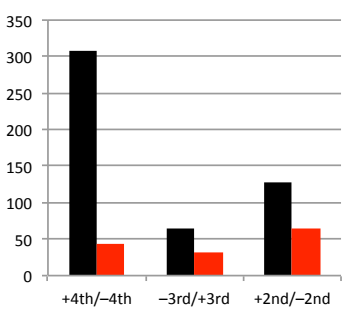


RESULTS

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

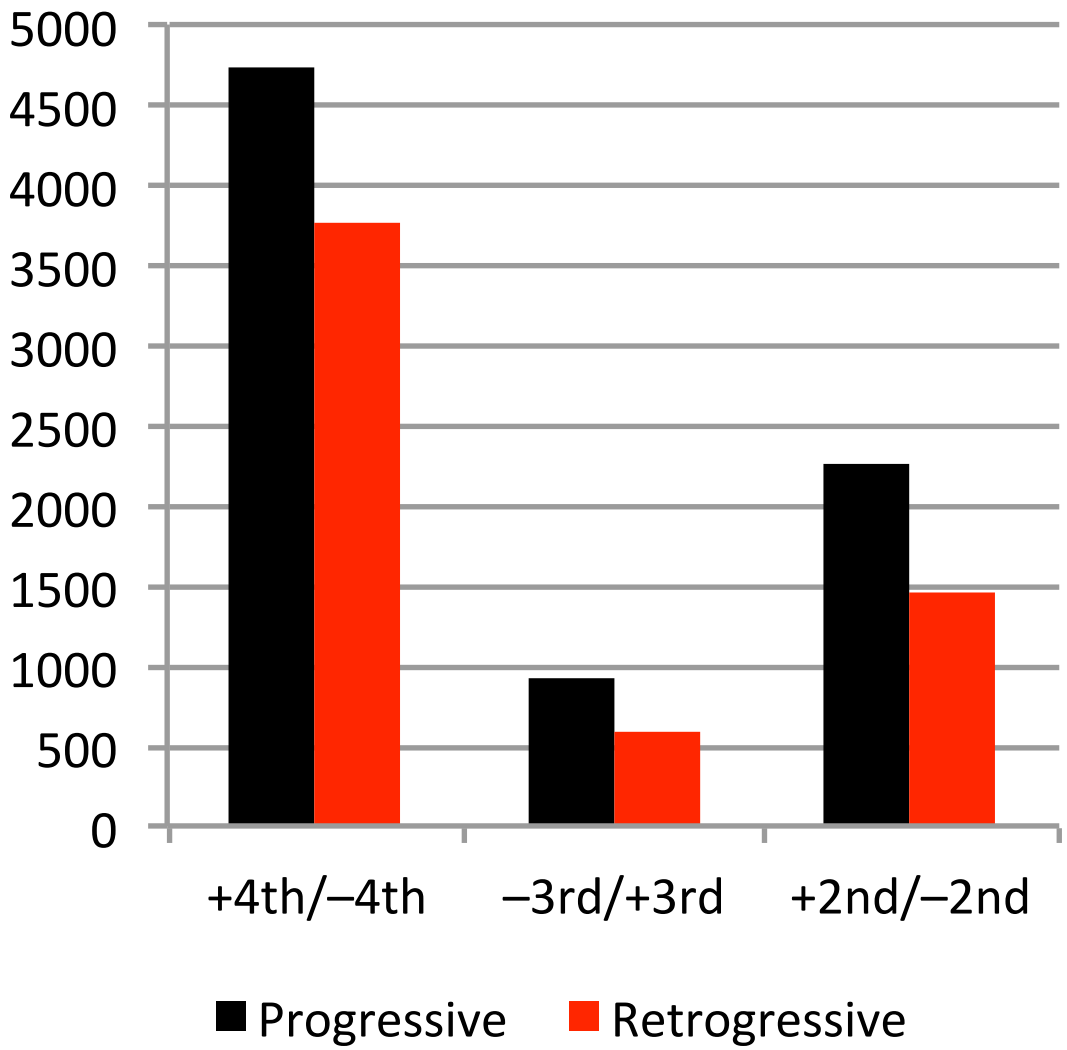


C-P Music



RESULTS

Root Motion in Country Music (the NN 200)



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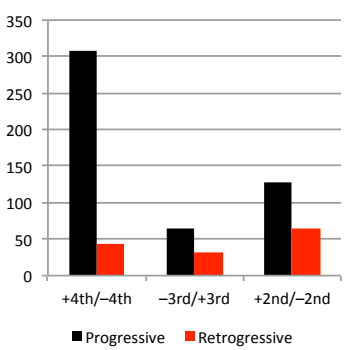
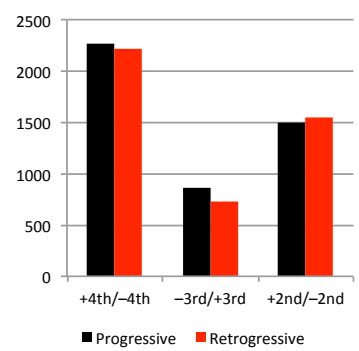


Rock



RESULTS

Two-chord Patterns in the NN 200, Ranked by Asymmetry

Pattern XY	Interval	Motion Type	Factor	Pattern YX	Pairs
bVII – IV	–P4	Retrogressive	5.52	IV – bVII	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:
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RESULTS

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%)
			I	(30%)	ii	(27%)
			ii	(23%)		
V over 7	213	(23.5%)	I	(68%)	vi	(55%)
			vi	(14%)	I	(27%)
I over 5	78	(8.6%)	vi	(83%)	IV	(77%)
IV over 6	67	(7.4%)	I	(30%)	I	(37%)
			bVII	(28%)	V	(21%)
					V over 7	(21%)
V over 4	40	(4.4%)	IV	(68%)	IV	(44%)
			I	(33%)	I	(36%)
IV over 1	28	(3.1%)	I	(61%)	I	(50%)
I over 7	22	(2.4%)	I	(91%)	vi	(82%)

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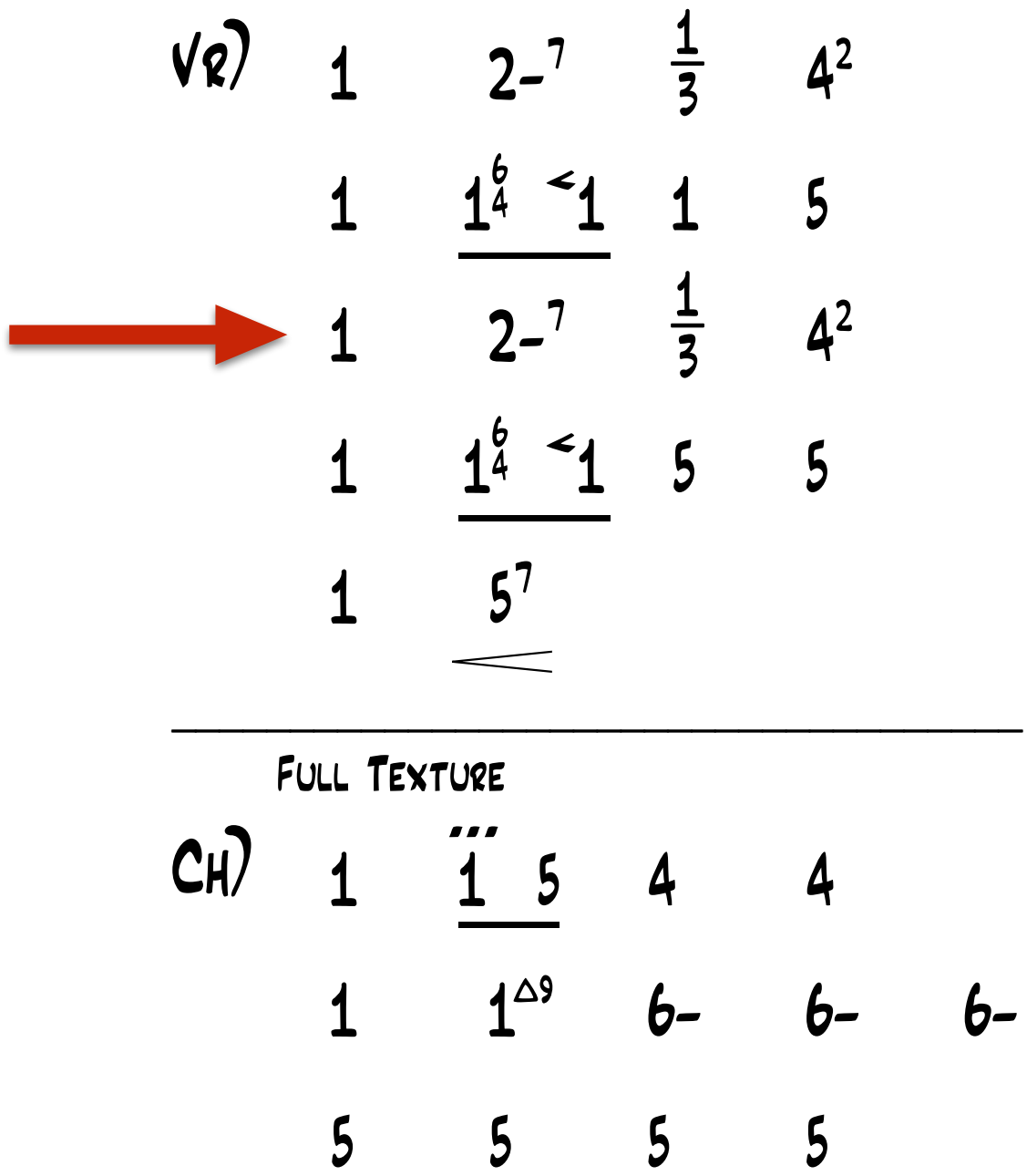
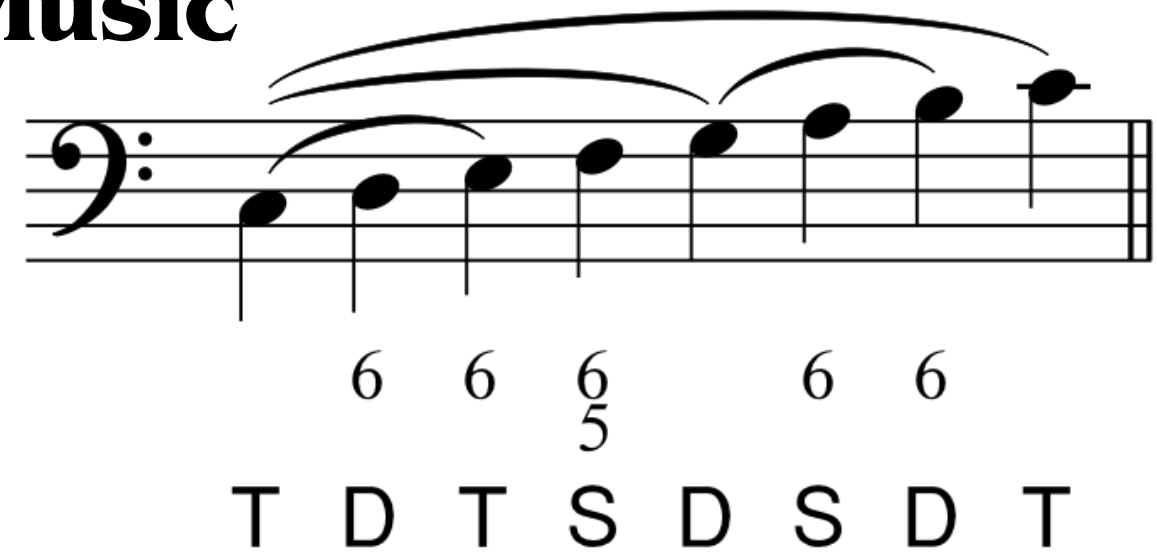


RESULTS

A "Rule of the Octave" for Classical Music



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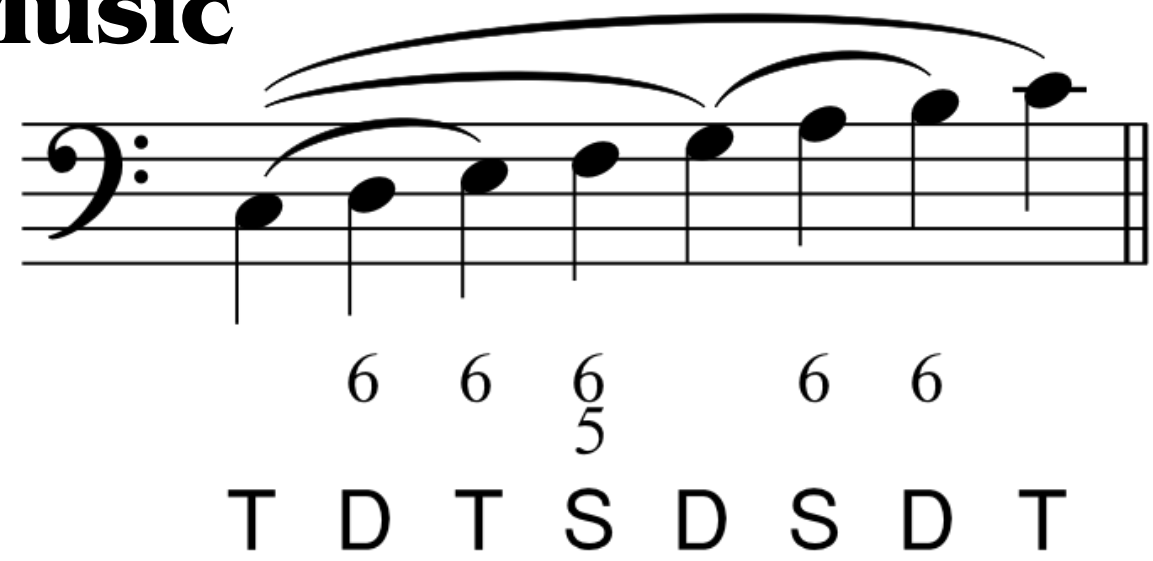
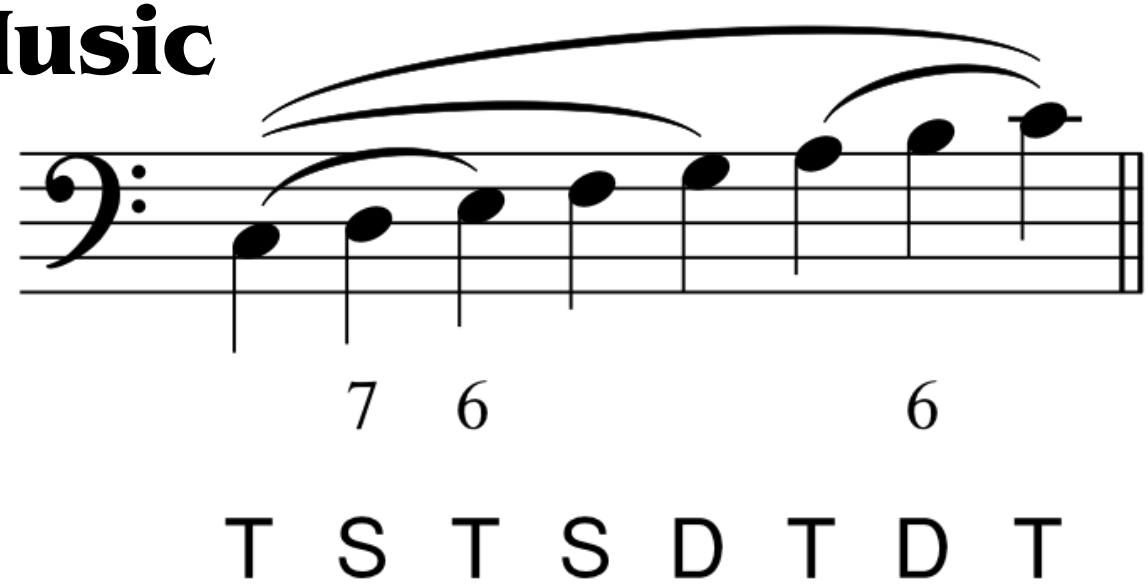


A "Rule of the Octave" for Country Music



RESULTS

CHAPTER FOUR

THE DISCUSSION

Like Rock (& unlike Classical), Country:

- Employs bVII much more frequently than vii^{o}
- 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

DISCUSSION

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Like Classical (& unlike Rock), Country:

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- Shows greater use of traditional cadential motion (e.g., ii–V–I, IV–V–I) than plagal motion

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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!

Bibliography:

Biamonte, Nicole. 2010. "Triadic Modal and Pentatonic Patterns in Rock Music." *Music Theory Spectrum* 32 (2): 95–110.

Budge, Helen. 1943. "A Study of Chord Frequencies Based on the Music of Representative Composers of the Eighteenth and Nineteenth Centuries." PhD diss., Teachers College, Columbia University.

Burgoyne, John Ashley. 2011. "Stochastic Processes and Database-Driven Musicology." PhD diss., McGill University.

Dansby, Andrew. 2002. "Country Scribe Harlan Howard Dies." *Rolling Stone* magazine online, March 5. <http://www.rollingstone.com/music/news/country-scribe-harlan-howard-dies-20020305> (accessed June 16, 2017).

Covach, John and Andrew Flory. 2015. *What's That Sound? An Introduction to Rock and Its History*, 4th edition. New York, NY: W. W. Norton.

de Clercq, Trevor. 2015. *The Nashville Number System Fake Book*. Milwaukee, MI: Hal Leonard.

———. 2017. "Interactions Between Harmony and Form in a Corpus of Rock Music." *Journal of Music Theory* 61/2: 143–70.

de Clercq, Trevor and David Temperley. 2011. "A Corpus Analysis of Rock Harmony." *Popular Music* 30 (1): 47–70.

Doll, Christopher. 2017. *Hearing Harmony: Toward a Tonal Theory for the Rock Era.* Ann Arbor, MI: University of Michigan Press.

Everett, Walter. 2004. "Making Sense of Rock's Tonal Systems." *Music Theory Online* 10 (4).

Gjerdingen, Robert. 2007. *Music in the Galant Style*. Oxford, UK: Oxford University Press.

Huron, David. 2006. *Sweet Anticipation: Music and the Psychology of Expectation*. Cambridge, MA: MIT Press.

Jensen, Joli. 1998. *The Nashville Sound: Authenticity, Commercialization, and Country Music*. Nashville, TN: Vanderbilt University Press..

Laitz, Steven. 2012. *The Complete Musician: An Integrated Approach to Theory, Analysis, and Listening*, 3rd edition. Oxford, UK: Oxford University Press.

Matthews, Neal Jr. 1984. *The Nashville Numbering System: An Aid to Playing by Ear*. Milwaukee, WI: Hal Leonard.

Moore, Allan. 1992. "Patterns of Harmony." *Popular Music* 11 (1): 73–106.

———. 1995. "The So-Called 'Flattened Seventh' in Rock." *Popular Music* 14 (2): 185-201.

———. 2001. *Rock: The Primary Text: Developing a Musicology of Rock*, 2nd edition. Aldershot, UK: Ashgate.

———. 2012. *Song Means: Analysing and Interpreting Recorded Popular Song*. Surrey, UK: Ashgate.

Neal, Jocelyn. 1998. "The Metric Makings of a Country Hit." In *Reading Country Music: Steel Guitars, Opry Stars, and Honky-Tonk Bars*, edited by Cecelia Tichi, 322-337. Durham, NC: Duke University Press.

———. 2008. "Country-Pop Formulae and Craft: Shania Twain's Crossover Appeal." In *Expression in Pop-Rock Music: Critical and Analytical Essays*, 2nd edition, edited by Walter Everett, 285-311. New York, NY: Routledge.

———. 2013. *Country Music: A Cultural and Stylistic History*. Oxford, UK: Oxford University Press.

The Nielsen Company. 2017. "Nielsen Music Year-End Report U.S. 2016." <http://www.nielsen.com/us/en/insights/reports/2017/2016-music-us-year-end-report.html> (accessed June 15, 2017).

Peterson, Richard. 1997. *Creating Country Music: Fabricating Authenticity*. Chicago, IL: University of Chicago Press.

Riley, Jim. 2010. *Song Charting Made Easy: A Play-Along Guide to the Nashville Number System.* Milwaukee, WI: Hal Leonard.

Rolling Stone. 2004. "The 500 Greatest Songs of All Time." 963 (Dec. 9): 65–165.

Spicer, Mark. 2017. "Fragile, Emergent, and Absent Tonics in Pop and Rock Songs." *Music Theory Online* 23 (2).

Stephenson, Ken. 2002. *What to Listen for in Rock: A Stylistic Analysis*. New Haven, CT: Yale University Press.

Temperley, David. 2009. "A Statistical Analysis of Tonal Harmony." <http://davidtemperley.com/kp-stats/> (accessed June 15, 2017).

———. 2011. "The Cadential IV in Rock." *Music Theory Online* 17 (1).

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.

Williams, Chas. 2012. *The Nashville Number System*, 7th edition. Nashville, TN: Chas Williams.

Wyatt, Keith and Carl Schroeder. 1998. *Harmony & Theory: A Comprehensive Source for All Musicians*. Milwaukee, WI: Hal Leonard.