

RHYME AS A MUSICAL PARAMETER TO
DEFINE PHRASE STRUCTURE
IN POPULAR MUSIC

by

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iv
LIST OF FIGURES	vi
LIST OF ABBREVIATIONS.....	viii
CHAPTER	
I. CHAPTER ONE.....	1
Introduction.....	1
Terminology and Perspective	2
Expectation of Rhyme.....	6
Rhyme Analysis	9
II. CHAPTER TWO.....	15
Examples.....	15
Analysis.....	17
“Twist and Shout”.....	17
“Poetry in Motion”	22
“California Dreamin’”	25
III. CHAPTER THREE	29
Conclusion	29
BIBLIOGRAPHY.....	31

LIST OF FIGURES

Figure	Page
1. Traditional Nursery Rhyme, “Jack and Jill”	4
2. Children’s Dinner Prayer, “Child’s Grace”	5
3. Common “Roses are Red” Poem	6
4. Excerpt from <i>Night Court</i> Season 4 Ep. 12 “Murder” beginning around 19:00	7
5. Poem from <i>Night Court</i> Season 4 Ep. 12 “Murder”	8
6. Twenty One Pilots, “Stressed Out,” opening verse	9
7. Lou Reed “There is No Time” second verse	10
8. Robert Frost, “The Birds do Thus,” third stanza	11
9. Anonymous limerick.....	12
10. Anonymous limerick transcription	12
11. Limerick sentence form	14
12. The Beatles, “Twist and Shout,” drum pattern	18
13. The Beatles, “Twist and Shout,” mm. 5–12.....	18
14. The Beatles, “Twist and Shout,” mm. 5–20.....	20
15. The Beatles, “Twist and Shout,” condensed.....	21
16. The Beatles, “Twist and Shout,” compound period.....	22
17. Johnny Tillotson, “Poetry in Motion,” mm. 6-9	24
18. Johnny Tillotson, “Poetry in Motion,” mm. 10-13	24

19. Johnny Tillotson, “Poetry in Motion,” mm. 6-13	24
20. Johnny Tillotson, “Poetry in Motion” mm. 14-21	25
21. Barry McGuire, “California Dreamin’” mm. 5-12.....	26
22. Barry McGuire, “California Dreamin’” mm. 13-20.....	28

LIST OF ABBREVIATIONS

Abbreviation	Description
b.i.	– Basic Idea
cad.	– Cadential idea
c.i.	– Contrasting Idea
m.	– Measure
mm.	– Measures
PAC	– Perfect authentic cadence

I. CHAPTER ONE

Introduction

As a result of William Caplin's *Classical Form: A Theory of Formal Functions for the Instrumental Music of Haydn, Mozart, and Beethoven* (1998) that provides a comprehensive study of theme types in instrumental music, the 21st century is experiencing an increase in scholarship that considers theme types in texted music. In "Sentences with Words: Text and Theme-Type in *Die schöne Müllerin*," Stephen Rodgers notes a rise in scholarship that highlights the relationship between text and phrase structure, much of which considers the semantic content of text and its relationship to theme type.¹ While these observations merit attention, I am compelled to note a less mentioned line of investigation among text and phrase analysis: rhyme's role as a determinant of formal structure. Though it seems assumed, a detailed analysis of rhyme's effect in determining musical form remains absent.² This thesis demonstrates how rhyme works in conjunction with multiple musical parameters (rhythm, melody, and

¹ Stephen Rodgers, "Sentences with Words: Text and Theme-Type in *Die schöne Müllerin*," *Music Theory Spectrum* 36, no. 1 (2014): 58. Matthew BaileyShea, "Wagner's Loosely Knit Sentences and the Drama of Musical Form," *Integral* 16/17, (2002/2003). Nathan Martin, "Formenlehre Goes to the Opera: Examples from *Armida* and Elsewhere," *Studia Musicologica* 51, no. 3/4 (2010). Nathan Martin, "Schumann's Fragment," *Indiana Theory Review* 28, no. 1/2 (2010). Michael R. Callahan, "Sentential Lyric-Types in the Great American Songbook," *Music Theory Online* 19, no. 3 (2013), <http://www.mtosmt.org/issues/mto.13.19.3/mto.13.19.3.callahan.html>. Harald Krebs, "Sentences in the Lieder of Robert Schumann: The Relation to the Text," (keynote address, Pacific Northwest Graduate Student Conference, Victoria, BC, February 9–10, 2013).

I have also noticed the following: Robin Attas, "Sarah Setting the Terms: Defining Phrase in Popular Music," *Music Theory Online* 17, no. 3 (2011), <http://www.mtosmt.org/issues/mto.11.17.3/mto.11.17.3.attas.html>; Don M. Randel, "Congruence between Poetry and Music in Schumann's *Dichterliebe*," *19th-Century Music* 38, no. 1 (2014) 30–52; Megan K. Long, "Tonality's Missing Link: Text Setting and Metrical Regularity in Italianate Partsong at the Turn of the Seventeenth Century," (presentation, American Musicological Society and Society of Music Theory joint conference, Vancouver, BC, November 3–6, 2016).

Callahan, 1.5. Callahan describes the motivation of his own work as driven by the relationship between poetic structure, semantic content, and phrase structure—noting research of Krebs and Rodgers by similar design.

² Callahan, 3.2; Attas, 20; Rodgers, 67; Randel, 43. These examples consider rhyme's role in phrase analysis.

harmony) to determine musical form. I engage David Huron's concepts of predictability—prediction effect, dynamic predictability, and schematic predictability—to model how rhyme shapes poetic phrase structure outside of a harmonic and melodic context.³ Using Caplin's model for phrase structure, I then apply the same principles to The Beatles' "Twist and Shout," Johnny Tillotson's "Poetry in Motion," and Barry McGuire's "California Dreamin'"—coordinating my analysis of rhyme with other musical parameters—to reveal compound periodic structures.⁴ My analysis reconsiders repeating phrase groups that do not display goal-directed motion, specifically addressing Ken Stephenson's antiperiodic phrases and Walter Everett's open phrase groups.⁵

To lay the foundation for my analyses in chapter 2, chapter 1 will begin by exploring terminology and perspective. I will then examine lyrics from Twenty One Pilots' 2015 "Stressed Out" and Lou Reed's 1989 "There is No Time." After summarizing Huron's theories of predictability, I apply the concepts to an analysis of a limerick, thereby modeling how rhyme schemes can influence phrase structure outside of a harmonic and melodic context.

Terminology and Perspective

A large portion of this thesis considers the function of rhyme and its repetition of vowels and consonants. Because the sounds of vowels and consonants involve neither

³ David B. Huron, *Sweet Anticipation: Music and the Psychology of Expectation* (Cambridge: MIT Press 2006), 131–268.

⁴ The Beatles, *Please Please Me*, Parlophone PMC 1202, 1963, LP. Johnny Tillotson, *Poetry in Motion/Princess, Princess*, Cadence 1384, 1960, 7" Single. Barry McGuire, *This Precious Time*, Dunhill D50005, 1965, LP.

⁵ Ken Stephenson, *What to Listen for in Rock: A Stylistic Analysis* (New Haven: Yale University Press, 2002), 112; Walter Everett, *The Foundations of Rock: From "Blue Suede Shoes" to "Suite: Judy Blue Eyes."* (New York: Oxford Press, 2009), 137–138.

pitch nor dynamics, I delegate them to the broad category of timbre. In my research on rhyme, I equate timbre with vowel sounds—such that “cat” and “cut” are timbral changes.

I propose that in situations where listeners understand the language, the timbre of the text communicates a word’s meaning and fulfills our expectation for rhyme. The focus of my thesis is the latter, where our expectation for rhyme schemes affects our listening experience. Before moving on, I will first spend some time defining rhyme and its varieties.

Rhyme can be organized into different categories depending on similarities in sound; my focus for this thesis will be patterns of similar vowel and consonant sounds. To begin an observation of different types of rhyme, I will analyze two different rhyming examples. Both are well known, thus demonstrating the following rhyme forms and types as commonplace.⁶ Consider the opening lines from the traditional nursery rhyme “Jack and Jill” (fig. 1). The overall rhyme scheme follows *aabccb*, but not all rhymes are the same. “Jill” and “hill” (*aa*) both use single syllables with different beginning consonants, but match final vowel and consonant sounds. “Down” and “crown” (*bb*) also match in this way. This is a single-syllable rhyme; its syllable and vowel match is known as a perfect or full rhyme. The final rhyme, “water” to “after” (*bb*), introduces a different type of rhyme. Both words have two syllables (“wa-ter” and “af-ter”), where the first syllable does not match and the second syllable matches exactly. “Water” begins with a short vowel sound (a), while “after” begins with a long vowel (æ).⁷ This syllable and vowel

⁶ The variety of accents in American English complicates how readers experience examples for this thesis. It is for this reason that I suggest examples observing rhyme scheme be played through the Google Translate playback feature. <https://translate.google.com>.

⁷ The vowel symbols used refer to the International Phonetic Alphabet.

Jack and Jill (*a*)
Went up the hill (*a*)
To fetch a pail of water (*b*)
Jack fell down (*c*)
And broke his crown (*c*)
And Jill came tumbling after (*b*)

Figure 1. Traditional Nursery Rhyme, “Jack and Jill.”

similarity, which falls short of a full rhyme, is known as a near or slanted rhyme. To imagine the rhyme as full, try reading the example replacing “after” with “otter.” For double syllable rhymes to be considered full, the first syllable must match by vowel and the second exactly.

As it is, the final rhyme addresses a debated question: Can a word rhyme with itself? For this thesis, the answer is yes. Consider the sounds instead of the words. The third and sixth lines rhyme with exactly matching sounds (“-ter”). If that sound had been its own word, instead of a part of another word, it would be a case of a word rhyming with itself.

The second example is a common children’s dinner prayer (fig. 2). The second and fourth lines rhyme “fed” and “bread” (*b*) with a single-syllable full rhyme, but lines one and two (*a*) are not as straightforward. “Good” and “food” are both single syllables, but do not match beginning consonant or vowel; they only match by final consonant. For this thesis, I will designate matching final consonants as a near rhyme.

God is great and God is good (*a*)
And we thank him for our food (*a*)
By his hand we must be fed (*b*)
Give us lord, our daily bread (*b*)

Figure 2. Children’s Dinner Prayer, “Child’s Grace.”

While full rhymes must follow rigid specifications, near rhymes include all other patterns of vowel and consonant similarities. Each offers a different effect or strength, but for this thesis I will consider all rhymes as weighted the same. For the sake of brevity, my focus is on the effect of expectation for rhyme. The following paragraphs will inspect our general expectation of rhyme in given circumstances.

In our day-to-day speaking, most people are perfectly content without rhyming. Why constrain our methods of delivering thoughts? There are specific situations where the opposite is true: rhyme is expected. Consider the following poem (fig. 3). Because of the opening (“Roses are red”), we know that this is a poem which typically rhymes. This introduction tells us there will likely be a final word to rhyme with “blue.” Notice the *abcb* rhyme-scheme, where “red” (*a*) does not rhyme with “sweet” (*c*). After hearing “sweet,” (*c*) expectations do not recede, and the entire rhymed completion hinges on the final word. Consider the following script from an episode of *Night Court* (fig. 4). Bull’s observation interrupts a tender moment, but his analysis is fair: it does not rhyme. For clarity, I have condensed the poem into its uninterrupted form (fig. 5). The first four lines follow as would be expected (*abcb*), but the final line ends on an unrhymed “that” (*d*).

Roses are red (*a*)
Violets are blue (*b*)
Sugar is sweet (*c*)
And so are you (*b*)

Figure 3. Common “Roses are Red” Poem.

Even though the poem’s first four lines follow the typical rhyme scheme, the extra nonrhyming-line (*d*) negates the effect of the final rhyme. There’s an unsettling and almost knee-jerk effect at the poem’s non-rhymed completion—which prompts Bull’s response to the poem, “Doesn’t rhyme.”⁸ The effect is evidence that we have a learned expectation for rhyme in certain circumstances. The following paragraphs begin by exploring that expectation in music.

Expectation of Rhyme

Twenty One Pilots’ 2015 single “Stressed Out” begins with the lyrics quoted in figure 6. The first two lines conclude with a near rhyme: “heard” and “words.”⁹ The last two lines do not rhyme: “new” and “sang.” The effect is unsettling when the word “sang” arrives. The word choice plays on the listener’s expectation and raises a thought-provoking question: Why do songs rhyme? One possible answer is memory aid; a text is

⁸ The poem’s final line also offsets the rhythmic pulse, which contributes to the final dissonance. I would argue that rhyme contributes more than rhythm to this off-putting effect. Changing the final word “that” to “too” ends the poem on a rhyme (*b*) without disrupting the poetic rhythm. I find the result more pleasing than balancing the poetic meter, but ending the poem without a rhyme. To do so, end the poem on the fourth line, but change “you” (fourth line) to “that.”

⁹ T.V.F. Brogan, “Near Rhyme,” in *New Princeton Encyclopedia of Poetry & Poetics* (Princeton: Princeton University Press, 1993), 823.

Cristine reads Mr. Rothman's poem to Mrs. Rothman.

CRISTINE

Roses are red

Violets are blue—

Mrs. Rothman interrupts.

MRS. ROTHMAN

That part's not original.

Cristine continues reading the poem.

CRISTINE

But you know

I love you

You've always known that.

BULL

Doesn't rhyme.

Everyone stares at Bull while audience laughs.

BULL

Just an observation.

Figure 4. Excerpt from *Night Court* Season 4 Ep. 12 “Murder” beginning around

19:00.¹⁰

¹⁰ *Night Court: Murder*, directed by Jeff Melman (1987; New York City, NY: NBC-TV), TV. Thanks to Dr. Cynthia Gonzales for pointing out this example.

Roses are red (*a*)
Violets are blue (*b*)
But you know (*c*)
I love you; (*b*)
You've always know that. (*d*)

Figure 5. Poem from *Night Court* Season 4 Ep. 12 “Murder.”¹¹

easier to memorize if it rhymes.¹² Another viable answer is that listeners expect songs to rhyme. In figure 6, the ending of the fourth line clashes with the ending of the third, but a similar relationship does not exist between the second and third lines. There is no effect of dissonance between lines 2 and 3, even though “words” does not rhyme with “new.” This is evidence that not only do we expect songs to rhyme, but also that we expect rhymes to occur in couplets. If rhyme implied an unending expectation of the same vowels and consonants, then the absence of rhyme between the second and third line would be off-putting. Furthermore, the artist’s complaint and failure to rhyme suggest an intentional irony that confirms a pressure to conform to a rhymed-couplet pattern.¹³ Indeed, rhyme seems so ingrained into principles of popular song writing that non-rhyming popular music is outside the norm.

¹¹ Ibid.

¹² Gordon H. Bower and Laura Bolton, “Why are Rhymes so Easy to Learn,” *Journal of Experimental Psychology* 82, no. 3 (1969): 453–461.

¹³ The existence of rhyme dictionaries further supports a song writer’s pressure to craft rhyming lyrics. Kevin M. Mitchel, *Songwriter’s Rhyming Dictionary* (Van Nuys, CA: Alfred Publishing Co., Inc., 1996).

I wish I found some better sounds no one's ever heard
I wish I had a better voice that sang some better words
I wish I found some chords in an order that is new
I wish I didn't have to rhyme every time I sang

Figure 6. Twenty One Pilots, “Stressed Out,” opening verse.¹⁴

In “From Lyric to Anti-lyric: Analyzing the Words in Pop Song,” Dai Griffiths recalls Lou Reed’s song “There is No Time” to explore the technique of intentionally not rhyming.¹⁵ While the first verse establishes an *abcb* rhyme scheme, the second verse counters with a non-rhyming *abcd* form (fig. 7). The listener expectation for the final line to end in *b* brings attention to the artist’s message, where listeners hear the consequence of “no time for learned speech” as a failed rhyme. The effect of non-rhyme technique suggests that listeners have a strong expectation for rhyme, one that plays on our listening experience and should be considered in musical analysis. In the next section, I use David Huron’s prediction effect to consider how expectation can emulate cadential function.

Rhyme Analysis

In *Sweet Anticipation: Music and the Psychology of Expectation*, Huron investigates how expectation affects a listener’s musical experience. While this concept derives from Leonard Meyer’s *Emotion and Meaning in Music* (1956), Huron draws from

¹⁴ Twenty One Pilots, *Blurryface*, Fueled by Ramen 548932-2, 2015, CD.

¹⁵ Dai Griffiths, “From Lyric to Anti-lyric: Analyzing the Words in Pop Song,” In *Collected Work: Analyzing Popular Music* (Cambridge: Cambridge University Press, 2003), 51–52.

This is no time for congratulations (*a*)

This is no time to turn your back (*b*)

This is no time for circumlocution (*c*)

This is no time for learned speech (*d*)

Figure 7. Lou Reed “There is No Time” second verse.¹⁶

recent data to develop a theory of emotional response in imagination, tension, prediction, reaction, and appraisal (ITPRA theory). My focus is Huron’s study of prediction. Huron explores the coordination between time and expectation in his analysis of the third stanza from Robert Frost’s “The Birds Do Thus” (fig. 8).¹⁷ Huron—addressing both meter and rhyme—explains that the poem’s duple meter allows listeners to predict when syllables will occur, while the rhyme scheme allows them to predict the vowel.¹⁸ The example illustrates a schema in which listeners anticipate what sound to expect as well as when that sound might occur. A link between predictability and enjoyment can be explained through Huron’s “prediction effect”: The brain’s ability to properly predict events evokes a sense of pleasure, which is then misattributed to the event itself.¹⁹ For the example above, rhyming is expected for two reasons: (1) the lines preceding those in the example use the established rhyme scheme (*abcb*), so that listeners expect the pattern to continue—Huron names this “dynamic predictability;” (2) rhyme is normal in poetry, so

¹⁶ Lou Reed, *New York*, Sire 9 25829-2, 1989, CD. Lines 1 and 3 share syllable relationships for their final words and all lines share uniform poetic meter for the first five syllables. Even though this creates a consonance, it still offsets the previous *abcb* verse.

¹⁷ Huron, 196.

¹⁸ Huron’s use of the word prediction can be a conscious or subconscious prediction.

¹⁹ Huron does not use his term prediction effect here, but his description of predictability in poetry matches its definition. Huron, Ch 8.

Life's not so short
I care to keep
The unhappy days;
I choose to sleep.

Figure 8. Robert Frost, “The Birds do Thus,” third stanza.

they are expected as a general trait of the genre—Huron calls this kind of expectation “schematic predictability.” When the second line ends on “keep,” it is expected that the fourth line will end on a rhyming word. When the prediction is confirmed, the brain rewards itself. The reader of the poem then misattributes that positive feeling to the rhyme itself. Huron’s application of prediction effect to poetry suggests that the predictability of rhythm and rhyme in texted music affects our perception. To illustrate how rhyme, rhythm, and repetition influence phrase analysis, I again isolate these elements from harmonic events, but in a popular poetic-form: the limerick.

A possible rhythmic transcription of the limerick in figure 9 appears as figure 10, with the caveat that speech rhythms are subject to tempo fluctuations.²⁰ The limerick adheres to a traditional *aabba* rhyme scheme. The first beat of mm. 2, 4, and 8 ends on rhyme *a*, “-omical,” while the second beat of mm. 5 and 6 repeat rhyme *b*, “-een.” To a listener familiar with the limerick’s form, the rhyme scheme provides a predictability of *what* and *when*: a specific pattern of sounds occurring at the end of lines. By knowing the form, listeners also expect the return of rhyme *a* (m. 8) to conclude the limerick. The

²⁰ While a few common possibilities exist on how the text aligns with poetic meter, figure 10 is a common possibility and will serve my purpose here.

The limerick packs laughs anatomical (a)

Into space that is quite economical (a)

But the good ones I've seen (b)

So seldom are clean (b)

And the clean ones so seldom are comical (a)

Figure 9. Anonymous limerick.²¹

The musical notation is in 6/8 time. The melody consists of eighth and sixteenth notes, with some measures containing beamed eighth notes. The lyrics are written below the notes, with hyphens indicating syllables that span across notes. The melody ends with a double bar line.

1
The lim - er - ick packs laughs an - a - tom - i - cal

2
in - to space that is quite e - co - nom - i - cal

3
but the good ones I've seen so sel - dom are clean

4
and the clean ones so sel - dom are com - i - cal

5
6
7
8

Figure 10. Anonymous limerick transcription.

²¹ William Stuart Baring-Gould, *The Lure of the Limerick: An Uninhibited History* (New York: Crown Publishers 1967), 9.

completed rhyme scheme offers a sense of closure. Consider Huron's account for the cognitive process of closure, summarized from melodic expectation research by Eugene Narmour and the critique of it by Elizabeth Margulis: "The relative absence of expectation defines the boundaries of perceptual chunks: segmentation is primarily statistical. At the same time, the absence of expectation evokes a sense of closure."²² In other words, we feel closure when our expectations are fulfilled. In this way, the expected final event of a limerick, the rhyme in m. 8 beat 1, evokes closure like a musical cadence. Note that the rhyme at the beginning of m. 4 would not evoke the same closure, as it is not at the boundary of a perceptual chunk.

With "cadence" identified, the limerick's phrase structure mirrors a musical sentence (fig. 11). The *aabba* structure divides into presentation (*aa*) and continuation (*bba*). The presentation contains a basic idea (b.i. mm. 1–2) that repeats (mm. 3–4). The continuation fragments (mm. 5–6), and the return of rhyme *a* (m. 4) concludes with the cadential idea (c.i.), thus completing the continuation. Because *bb* (mm. 5–6) shortens in the fragmentation, the presentation and continuation are of equal length (4 mm.). Patterns of rhyme predictability explain how listeners experience a sense of closure outside of harmonic and melodic contexts. By examining closure, phrase boundaries become apparent. For the example above, the pattern was an unorthodox application of sentential design. To best apply this analytical approach in music, text accompanied with weak harmonic and melodic cadence allows for an inspection of closure free of the implications associated with traditional cadence. Popular music fits these criteria and thus

²² Eugene Narmour, *The Analysis and Cognition of Basic Melodic Structures: The Implication-Realization Model* (Chicago: University of Chicago Press, 1990). Elizabeth H. Margulis, "Melodic Expectation: A Discussion and Model" (Ph.D. Diss., Columbia University, 2003) 263. Huron, 157.

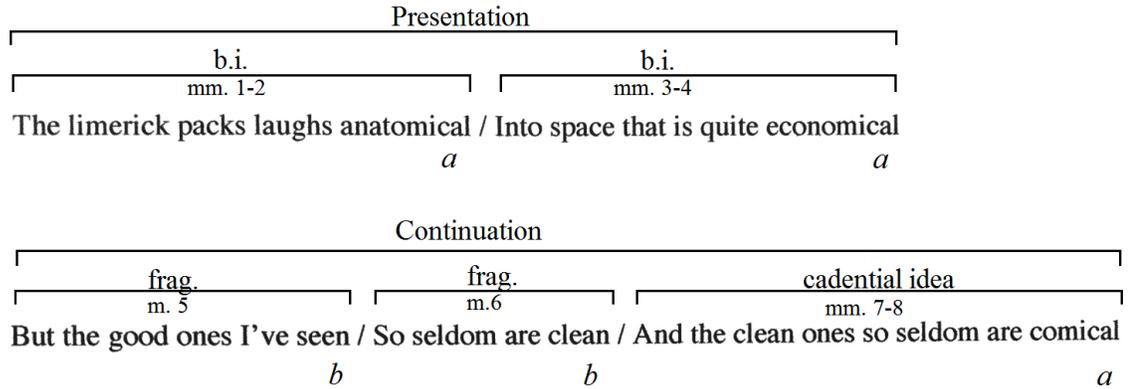


Figure 11. Limerick sentence form.

provides an excellent case study. In chapter 2, I demonstrate this method of analysis in music by drawing on three examples with weak harmonic cadence, as this allows for an inspection of closure free of the implications associated with traditional cadence: The Beatles' "Twist and Shout," Johnny Tillotson's "Poetry in Motion," and Barry McGuire's "California Dreamin'." In each example, I identify a compound periodic structure, in which the expectation for rhyme helps to extend the phrase.

II. CHAPTER TWO

Examples

In chapter 2, I will consider three examples in which the expectation of rhyme influences my analysis of the phrase structure: Johnny Tillotson's "Poetry in Motion," The Beatles' "Twist and Shout," and Barry McGuire's "California Dreamin'." All three examples are 16-m. compound themes whose phrases, as I will show, rely on rhyme to define a hierarchy of closure. I chose this phrase group to identify a recurring example in which rhyme lengthens the phrase to a goal-directed moment. The first 8 mm. of the compound structure follows the effect of rhyme in normal musical circumstances, but the final moment aligns rhyme with melody or cadence. In these three examples, I present a *modus operandi* in which rhyme emulates cadential effect to create a compound-periodic phrase.

Additionally, I chose this phrase group in order to reconsider the notion of two of these examples as repetitive phrases. Ken Stephenson and Walter Everett identify a repeating phrase in popular music using "Twist and Shout" and The Mamas & the Papas' "California Dreamin'," respectively.²³ Stephenson refers to his model as "antiperiodic," while Walter Everett notes a similar phrase group he calls "open phrase groups." Both examples are phrases in which a repeating chord progression does not provide cadential hierarchy, but instead loops. The result is a phrase group that instead of maintaining goal direction, exhibits repetition. I do not intend to dispute their concept, as both scholars provide multiple examples as evidence. However, I do believe that these examples provide an opportunity to admire an elusive quality in repetition. Even acoustically

²³ Stephenson, 112. Everett, 137–138. I will later address why I analyze Barry McGuire's recording instead of The Mamas & Papas' recording.

identical repetitions can be perceived as alternating sounds. In *On Repeat: How Music Plays the Mind*, Elizabeth Margulis uses a car's turn signal with acoustically indifferent clicks as an example, where many people hear this as a strong-weak pattern of clicks.²⁴ My analysis reveals how "Twist and Shout" and "California Dreamin'" defy static repetition through the expectation of rhyme.

Before moving to my analysis, I must clarify why I chose Barry McGuire's recording of "California Dreamin'" instead of The Mamas & the Papas' recording. As mentioned above, Everett uses the latter as an example for open phrase groups in succession (not failing to note that the final chord of the song simulates a full cadence).²⁵ I had originally considered using the same recording for my example, but Caplin's model of phrase structure applies more clearly to McGuire's recording. Everett's analysis for the Mamas & Papas' recording can also be applied to McGuire's, as none of Everett's remarks pertain to the melody. The two recordings are remarkably similar and McGuire himself has pointed out his voice is on the opening vocals of The Mamas & the Papas' recording.²⁶ It seems the two recordings share some of the same tracks, and McGuire's vocals were never completely cleaned from The Mama's & the Papas' recording.²⁷

²⁴ Elizabeth H. Margilus, *On Repeat: How Music Plays the Mind* (New York: Oxford University Press, 2014), 32–33.

²⁵ Everett, 138.

²⁶ Greg Wigler, "California Dreamin'," Youtube video, 3:51, August 9, 2007, <https://www.youtube.com/watch?v=nYvQ9UFSLjk>.

²⁷ The Mamas & the Papas, *California Dreamin'*, Dunhill 45-D-4020, 1965, 7" Single. Very faintly, McGuire's vocals can be heard around 0:09 as the lower octave in the Mamas & Papas' vocal melody.

Analysis

“Twist and Shout”

A 2-m. progression (I–IV–V) accompanies almost the entirety of “Twist and Shout.” At the smallest unit, the drum loops a 1-m. pattern of alternating bass and snare hits (fig. 12). This 1-m. unit occurs twice for every cycle of the harmonic progression. To zoom out even further (fig. 13), two differing melodic ideas—basic idea (mm. 5–6 and 9–10) and contrasting idea (mm. 7–8 and mm. 11–12)—span a 4-m. length (mm. 5–8 and mm. 9–12). Each idea leads to the downbeat and is followed by an echoing tail motive that participates in IV–V harmonies. This 4-m. idea repeats in variation, creating larger 4-m. unit. At the end of the second 4-m. unit (m. 12), the drum inserts a fill. Huron associates the fill as a rhythmic cue for leading into a hypermetric downbeat.²⁸ The predictability in a fill’s subdivision anticipates the forthcoming downbeat and increases the listener’s certainty for harmonic change. Indeed, the fill in m. 12 leads into a harmonic change of V to I, but the V–I motions at mm. 5, 7, 9, and 11 do not contain a fill. The vocal “Ooh” after the downbeat in m. 12 provides a clue: the howl-like effect seems to celebrate the end of a multimeasure unit. As discussed, this is not the first multimeasure unit.

I propose that the fill and “howl” observe the multimeasure unit as created through rhyme. As was shown with the limerick, prediction effect is applicable to rhyme (fig. 9, 10, and 11). Because songs rhyme so frequently, we are enculturated to expect rhymes to occur in couplets and thus form a schematic expectation. Additionally, rhyme schemes rarely deviate from established patterns and, therefore, allow a dynamic

²⁸ Huron, 248–249. In *Unlocking the Groove: Rhythm, Meter, and Musical Design in Electronic Dance Music*, (Bloomington: Indiana University Press, 2006), 185–188, Mark Butler addresses an inconsistent definition of hypermeter. It is for this reason that I follow Butler’s example and use the term “multimeasure unit” for this thesis. My reference to hypermeter mirrors Huron’s use of the word.

Figure 12. The Beatles, “Twist and Shout,” drum pattern.²⁹

Figure 13. The Beatles, “Twist and Shout,” mm. 5–12.³⁰

²⁹ In addition to drum fills, there are slight alterations to this pattern, but only after it has been firmly established (mm. 5–11).

predictability (even to those unfamiliar with the schema).³¹ I demonstrated previously that rhymes are expected in couplets; “Twist and Shout” is no exception. At the end of the first c.i. (fig. 13 m. 7), the listener’s expectation of rhyme projects forward to the end of the second c.i. (mm. 10-11). When the word “out” is heard, the rhyme is complete and the brain rewards itself. The listener then misattributes that pleasant feeling to rhyme itself.

With the rhyme resolution fulfilled, it would be tempting to identify this as the end of the phrase—and in a way, it is. The tail motive’s harmonic dependency precludes it from a melodic authority and thus functions as an extension of the harmonic rhythm.³² To bring focus to the melody of mm. 1–20 (fig. 14), I recompose mm. 5–20 eliminating all tail motives (fig.15). To do so, I remove beats 3 and 4 of odd measures (mm. 5, 7, 9, etc.) and beats 1 and 2 of even measures (mm. 6, 8, 10, etc.). This condensed version removes every instance of IV from the I–IV–V progression. I also modify rhythms and text to accommodate the compact arrangement. I do not suggest that I provide a “fixed” version; removing the tail motive, however, condenses the melody to $R=1/2 N$, revealing a periodic phrase structure. The resolution of rhyme “shout” to “out” (m. 6 and m. 7–8) unifies the first 4-m. phrase. Similarly, the rhyme “good” and “would” propel listener expectations forward to group mm. 9–12 as a single phrase. Since rhymes are expected in couplets (*aa, bb, cc, etc.*), we expect a rhymed relationship between the antecedent c.i. and consequent c.i., but not anywhere else. When “shout” is heard (m. 6) expectations are

³⁰ A 4-m. introduction, a drum fill in m. 4, and the melody of mm. 12–13 have been omitted for clarity.

³¹ I am aware of my proximity to circular logic: people like rhyme because they expect it; people expect rhyme because they like it. I believe there are two factors at play to explain this: (1) dynamic predictability suggests rhyme would be enjoyable even to those who are not tuned into the schema; (2) I find lyrics that rhyme are much easier to memorize. Combined, these factors are a persuasive force for songwriters, and the result is rhyme’s ubiquitous place in sung music.

³² I will later address this harmonic and melodic offset in more detail.

Well shake it up ba - by now _____ Twist and shout _____
 V I IV V I IV V

Shake it up ba - by _____ Twist and shout _____
 I IV V I IV V

Come on _____ come on _____ come on _____ come on _____ ba-by _____ now _____ Come on and work it on out _____
 I IV V I IV V

Work it on out _____
 I IV V

Well work it on out _____ hon - cy _____ You know you look so good _____
 Ooh _____ fill _____ I IV V I IV V

Work it on out _____ Look so good _____

You know you got me go - in' _____ now _____ Just like I knew you would _____
 I IV V I IV V

Got me go - in' _____ Like I knew you would _____ Ooh _____
 I IV V fill

Figure 14. The Beatles, “Twist and Shout,” mm. 5–20.³³

focused forward. In mm. 7–8, the rhyme is completed, and expectation for future rhyme ceases. As this occurs, the melody rests on the mediant scale degree, and the tonic chord arrives (m. 8). The combined effects create a weak resolution. For mm. 9–12, a similar series of events occurs that culminate in an even stronger resolution as the final notes arrive on the tonic scale degree (mm. 11–12).

With this expectation and resolution, mm. 5–8 and 9–12 form a single compound period. Applying this analysis to the actual song (fig. 16) results in an offset between

³³ The melody in m. 20 has been omitted for clarity.

The image shows two staves of music from 'Twist and Shout' by The Beatles. The first staff covers measures 1-8, and the second staff covers measures 9-12. Above the first staff, a bracket labeled 'compound antecedent' spans measures 1-6, and another bracket labeled 'consequent' spans measures 7-8. Within the antecedent, measures 1-3 are labeled 'b.i.' and measures 4-6 are labeled 'c.i.'. Within the consequent, measure 7 is labeled 'b.i.' and measure 8 is labeled 'c.i.'. Below the first staff, the lyrics are 'Shake it up ba - by__ Twist and shout__ Come on come on ba - by__ Work it on out__' and the chord progressions are V, I, V, I, V, I, V, I. The second staff covers measures 9-12. Above it, a bracket labeled 'compound consequent' spans measures 9-12. Within it, measures 9-10 are labeled 'b.i.' and measures 11-12 are labeled 'c.i.'. Below the second staff, the lyrics are 'Work it on out__ Look so good you got me go - in__ I knew you would__' and the chord progressions are V, I, V, I, V, I, V, I.

Figure 15. The Beatles, “Twist and Shout,” condensed.

melodic and harmonic patterns. The melody arrives on the tonic harmony (m. 11), the beginning of the I–IV–V progression. This offset in melody and harmony may seem to contradict the given analysis, but this peculiarity is not uncommon to popular music.³⁴ A song’s melody, harmony, and rhythm all possess the potential to provide a cadence, but not necessarily simultaneously. In describing the music of Jimmie Rodgers, Jocelyn Neal explains that the strongest cadences occur when these elements are simultaneous.³⁵ In “Twist and Shout,” the melody ends before the progression does. At the end of the compound antecedent (m. 11), a rhyme completes as the melody focuses on the mediant scale degree and the result is a weak closure. The next time rhyme and melody close together, at the end of the compound consequent (m. 19), the melody enhances its closure by concluding on tonic: melody and rhyme provide a hierarchy of closure.

³⁴ Stephenson, 57–58.

³⁵ Jocelyn Neal, “Song Structure Determinants: Poetic Narrative, Phrase Structure, and Hypermeter in the Music of Jimmie Rodgers,” (PhD diss., University of Rochester, 2002), 51, ProQuest (3045250).

compound antecedent

antecedent

Well shake it up ba - by now _____ Shake it up ba - by _____ Twist and shout _____
 V I IV V I IV V

(compound antecedent)

consequent

Come on _____ come on _____ come on _____ come on ba-by _____ now _____ Come on and work it on out _____
 I IV V I IV V

compound consequent

antecedent

Well work it on out _____ hon - ey _____ You know you look so good _____
 Ooh _____ fill I IV V I IV V

(compound consequent)

consequent

You know you got me go-in' _____ now _____ Got me go - in' _____ Just like I knew you would _____
 I IV V I IV V _____ fill

Figure 16. The Beatles, “Twist and Shout,” compound period.

“Poetry in Motion”

To begin my analysis of Johnny Tillotson’s “Poetry in Motion,” consider the first four measures of the verse (fig.17), where b.i (mm. 6–7) precedes c.i (mm. 8–9). The

4-m. unit concludes on a dominant chord to model an antecedent phrase. The next 4-m. unit (fig.18) like the previous one, concludes on the dominant. In combination, the phrases fail to provide cadential hierarchy, thus denying the traditional standard of antecedent and consequent harmonic relationships. Instead of focusing on harmonic repetition, consider the function of cadential hierarchy in the periodic phrase: the antecedent offers a complete musical idea and the consequent echoes the same (or similar) idea, but with firmer resolution. Instead of using a harmonic cadence to provide resolution, mm. 6–13 (fig.19) utilize our expectation of rhyme to create closure. The 8-m. phrase follows a standard *abab* rhyme scheme, with rhymes *a* at the end of each b.i. and *b* at the end of each c.i. The listener's schematic expectation for an *abab* form anticipates the return of *b* (m. 13), whose arrival ceases further expectation and thereby offers closure. Thus, rhyme *b* directs the listener forward at the first c.i. (m. 9) and provides closure for the second (m. 13). While both contrasting ideas remain harmonically identical, the accompanying rhyme scheme emulates harmonic hierarchy to propel a listener's expectation forward and provide closure.

The next 8-m. period follows a similar design (fig. 20): two 4-m. phrases containing b.i. and c.i. This time the final c.i. (mm. 20–21) concludes with a PAC; the melody concludes on $\hat{1}$ while harmony moves to tonic. As such, mm. 14–21 complete a traditional period. These two consecutive 8-m. periods form a 16-m. compound period, where rhyme provides closure for the first half (fig. 19, mm. 6–13) and cadence combined with rhyme offers even stronger closure for the second half (fig. 20, mm. 14–21).

antecedent

b.i. c.i.

6 7 8 9

Po - e - try in mo - tion Wal - kin' by my side__

I vi IV V

Detailed description: This figure shows the first four measures of a musical phrase in 4/4 time, key of B-flat major. The melody starts on G4 (measure 6), moves to A4 (7), Bb4 (8), and C5 (9). Harmonic analysis labels the chords as I (G), vi (F), IV (Bb), and V (C). Brackets above the staff indicate an antecedent structure: a basic idea (b.i.) spanning measures 6-7 and a consequent idea (c.i.) spanning measures 8-9.

Figure 17. Johnny Tillotson, “Poetry in Motion,” mm. 6-9.³⁶

10 11 12 13

Her love - ly lo - co - mo - tion Keeps my eyes O - pen wide__

V I vi IV V

Detailed description: This figure shows the next four measures of the phrase. The melody continues from C5 (measure 10), moves to Bb4 (11), A4 (12), and G4 (13). Harmonic analysis labels the chords as V (C), I (G), vi (F), IV (Bb), and V (C). The structure is a consequent idea (c.i.) spanning measures 10-13.

Figure 18. Johnny Tillotson, “Poetry in Motion,” mm. 10-13.

antecedent

b.i. c.i.

6 7 8 9

Po - e - try in mo - tion Wal - kin' by my side__

(a) (b)

I vi IV V

consequent

b.i. c.i.

10 11 12 13

Her love - ly lo - co - mo - tion keeps my eyes o - pen wide__

(a) (b)

I vi IV V

Detailed description: This figure combines the two previous figures. The first part (measures 6-9) is labeled 'antecedent' and the second part (measures 10-13) is labeled 'consequent'. Both parts have their respective b.i. and c.i. brackets. Annotations (a) and (b) are placed under the notes for 'mo - tion' and 'side__' respectively in both parts.

Figure 19. Johnny Tillotson, “Poetry in Motion,” mm. 6-13.

³⁶ A 5-m. introduction and pickup to m. 10 has been omitted for clarity.

antecedent

b.i. c.i.

14 15 16 17

Po - e - try in mo - tion See her gen - tle sway

(a) (b)

I vi IV V

consequent

b.i. c.i.

18 19 20 21

A wave out on the o - cean could ne - ver move that way

(a) (b)

I vi IV V I PAC

Figure 20. Johnny Tillotson, “Poetry in Motion” mm. 14–21.

“California Dreamin’”

The verse of Barry McGuire’s “California Dreamin’” begins on an anacrusis at the end of a 4-m. introduction that elaborates a repeated dominant chord. Like “Twist and Shout,” each melodic idea (bass clef) of the verse leads to a downbeat, while harmonically driven tail-motives (treble clef) interject (fig. 21).³⁷ Also like “Twist and Shout,” a 2-m. b.i. (mm. 5–6) precedes a 2-m. c.i. (mm 7–8) to form an antecedent whose progression and melody rest on the dominant chord (m. 7). Unlike the repeating I–IV–V progression in “Twist and Shout,” “California Dreamin’” provides more harmonic variety.

³⁷ Listen to the second verse of The Mamas & The Papas’ recording (0:43–0:51) to hear the melody without its tail motive.

The image displays a musical score for the first 12 measures of "California Dreamin'" by Barry McGuire. The score is in 4/4 time and the key of D major. It is divided into two sections: the antecedent (measures 5-8) and the continuation (measures 9-12). The antecedent section features a melodic line in the treble clef and a bass line in the bass clef. The lyrics are "All the leaves are brown and the sky is gray". The continuation section features a melodic line in the treble clef and a bass line in the bass clef. The lyrics are "I've been for a walk on a win-ter's day". The harmonic analysis is provided below the bass line, with chords labeled with Roman numerals and letters in parentheses. The antecedent section is labeled "antecedent" and the continuation section is labeled "continuation".

Antecedent (mm. 5-8):

Lyrics: All the leaves are brown and the sky is gray

Harmonic Analysis: V (a) i VII VI VII V7 (b)

Continuation (mm. 9-12):

Lyrics: I've been for a walk on a win-ter's day

Harmonic Analysis: VI III V i VI V7 sus⁴-----3

Figure 21. Barry McGuire, “California Dreamin’” mm. 5–12.

While the progression, in “California Dreamin’,” that supports the antecedent (i–VII–VI–VII–V) slightly varies the ubiquitous i–VII–VI–V Andalusian cadence, the second half of the phrase (mm. 9–12) destabilizes the progression with chords VI and III, respectively. The destabilization creates a sense of mobility for the first half of the continuation (mm. 9–10) and the melodic movement to the dominant scale degree—supported by chords VI and V—provide resolution for the cadential idea (m. 11). The following tail motive (mm. 11–12) uses a 4–3 suspension to elaborate the dominant chord.

In addition to harmonic and melodic stability on the dominant chord, the rhyme scheme also offers closure for the first 4-mm. unit. The b.i. (mm. 5–6) ends on the word “brown,” while the c.i. (mm. 7–8) ends on the word “gray.” Listeners might not expect m. 9 to rhyme with “brown” (*aba* rhyme), but they would expect the cadential idea (m. 11) to conclude on a rhyme with “gray” for an *abab* or *abcb* rhyme. Indeed, the word “day” accompanies the dominant chord at the end of the cadential idea (m.11) to complete the *abcb* rhyme. If the listener expected the rhyme, then the completion evokes a sense of pleasure and a lack of further rhyme expectation provides closure. Therefore, the second 4-mm. unit (mm. 9-12) offers a stronger resolution than the preceding four measures (mm. 5–8). Just as in previous examples, the rhyme scheme works in conjunction with melody and harmony to create a sense of closure and continuity. With closure through rhyme and harmonic stability (m. 11), antecedent (mm. 5–8) and continuation (mm. 9–12) form a hybrid theme-type to create an 8-m. phrase.

The second 8-m. idea occurs in mm. 13–20 (fig. 22). Like the previous 8-m. phrase, a 2-m. b.i. (mm. 13–14) precedes a 2-m. c.i. (mm. 14–15) and concludes with a dominant chord (m. 15). The next 4-m. unit begins with a repetition of the b.i. (mm. 17–18) and concludes with a cadential idea (mm. 18–19). The return of the b.i. (mm. 17–18) offers more stability than the previous phrase’s continuation and prepares the listener for a conclusion. The phrase concludes on a dominant chord while the melody resolves on a tonic pitch (mm. 19–20).³⁸

³⁸ David Temperley, “The Melodic-Harmonic ‘Divorce’ in Rock,” *Popular Music* 26, no. 2 (2007). Temperley finds a similar independence between melody and harmony in rock music. Temperley notes instances where unresolved non-chord tones suggest a stratified relationship between melody and harmony in rock music.

antecedent

b.i. c.i.

tail motive tail motive

13 14 15 16

I'd be safe and warm If I was in L. A.

I'd be safe and warm if I was in L. A.

(a) (b)

V i VII VI VII V7sus⁴-----3

continuation

b.i. tail motive cad.

17 18 19 20

Cal - i - for - nia drea - min' on such a win - ter's day

Cal - i - for - nia drea - min' on such a win - ter's day

(c) (b)

i VII VI VII V7

Figure 22. Barry McGuire, “California Dreamin’” mm. 13–20.

In addition to the harmonic stability of the dominant chord (m. 19), voices join tutti at the cadential idea (mm. 19–20) to enhance resolution. The rhyme scheme also contributes to this moment. The completion of the *abcb* rhyme scheme occurs in m. 19 with “day,” completing the rhyme set up at the end of the c.i. (mm. 15–16). These effects combine to create a more powerful resolution than the previous 8-m. unit (fig. 21). As a result, mm. 13–20 (fig. 22) form an 8-m. unit to compliment the preceding 8-m. hybrid theme-type (fig. 21)—creating a single 16-m. compound period with a compound antecedent (fig. 21, mm. 5–12) and a compound consequent (fig. 22, mm. 13–20).

III. CHAPTER THREE

Conclusion

In this thesis, I consider how rhyme works in conjunction with melody, harmony, and rhythm to determine formal structure. I began chapter 1 with an overview of rhyme and its varieties by analyzing its use in a common prayer and nursery rhyme. Referencing an episode of *Night Court*, I then pointed out our learned expectation for *abab* and *abcb* rhyme schemes. I applied this expectation to music, noting two examples where artists intentionally deviate from an established rhyme scheme to enhance the message of their text. These examples provide further evidence for our expectation of rhyme in popular music. I then introduced the work of David Huron, reviewing dynamic predictability, schematic predictability, and prediction effect. Using Huron's concepts, I then applied Caplin's model of phrase analysis to a limerick. In chapter 2, I applied this method to The Beatles' "Twist and Shout," Johnny Tillotson's "Poetry in Motion," and Barry McGuire's "California Dreamin'." In these examples, the rhyme scheme emulates cadential resolution at the end of an 8-m. phrases to create a 16-m. compound theme, in which rhyme alone provides resolution at the end of the first 8-m. phrase, and rhyme combines with other musical elements to enhance resolution at the end of the second.

Music theorists have long debated the proper analytical method for popular music.³⁹ While some would argue that traditional analytical methods are not appropriate

³⁹ Lori Burns, "Analytical Methodologies for Rock Music: Harmonic and Voice-Leading Strategies in Tori Amos's 'Crucify,'" in *Expression in Pop-Rock Music: A Collection of Critical and Analytical Essays*, ed. Walter Everett (New York: Garland Publishing, Inc, 2000), 213–216. Butler, 23-24. Burns and Butler provide summary and input for this ongoing debate.

for popular music, this thesis provides merit for their utility. By broadening the scope to consider rhyme as a determinate of phrase analysis, I could then apply Caplin's model for phrase analysis—a respected analytical method.

This thesis's narrow scope of analysis—namely, songs between 1960 and 1965—presents a rich potential for future research projects. I did not intend analyze examples recorded only within a five-year span, but such a result suggests that the identified phrase group occurs more frequently in popular music written around the early 1960s. Supporting such a hypothesis would require analyzing top-hit charts from the second half of the 20th century. Additionally, large-quantity polling of listener experience could shed light on the effect of rhyme in music.

My thesis focuses on a specific phrase grouping in which rhyme emulates cadence to provide a hierarchy in resolution. While rhyme is regular throughout popular music, it does not normally work to achieve a single goal-directed moment within a 16-m. compound period—as presented in this thesis. Nevertheless, I have presented how rhyme's effect in music remains relevant in phrase analysis.⁴⁰ It is my hope that the methods used in this thesis serve as an additional tool for popular-music analysis.

⁴⁰ An internal rhyme would be an example of a rhyme in less predictable circumstances.

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