ANALYZING THE PARAMETERS OF FLOW IN RAP MUSIC

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Robert Komaniecki

ANALYZING THE PARAMETERS OF FLOW IN RAP MUSIC

In rap music, “flow” refers to a rapper’s delivery of the lyrics. This dissertation is a systematic analysis of three main parameters of flow: rhythm, rhyme, and pitch. The first chapter reviews the existing literature on rap and establishes a methodology of analysis and rap transcriptions. Chapter 2 focuses on all rhythmic aspects of rap flow, including issues such as rhythmic complexity and speed, rhythmic motifs, and meter. Chapter 3 is dedicated to dissecting issues of rhyme, ranging from basic rhyme forms, to issues of rhyme regularity and density, to rhyming in non-English rap. Chapter 4 examines vocal pitch as an expressive tool in rap music, categorizing the ways in which rappers use the pitch of their voices to shape their music. Chapter 5 features an extended analysis of a single track, “The Ringer” (2018) by Eminem. This analysis demonstrates the various applications of the methodologies established in Chapters 1-4.

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Introduction

Section 0.1: Thinking about Flow

Consider the lyrics below, excerpted from rapper Kendrick Lamar’s performance on the track “Vice City” by Jay Rock (2015, 0:50-1:06).¹

“Big money, big booty bitches, tell the truth nigga I’m lost without it.
Seven figures for a headline, you want some stage time, we can talk about it.
Niggas actin’ like they be rappin’ like nice on the mic… Truly doubt it.
Go against the kid, y’all don’t wanna live, that decision is hella childish.”²

The lyrics as presented above embody virtually all of the qualities for which rap music is commonly criticized. This short excerpt features boasts, threats of violence, and misogyny—three aspects of rap music that have long dogged the genre’s reception and reputation, to the point of spurring a moral panic in the early 1990s.³ The lyrical content of rap is hardly the only aspect of the genre to come under fire, as hip-hop music has long endured general criticisms of being tuneless, repetitive, and simple. Anecdotally, rap music’s status as “music” seems to be called into question more than any other genre.⁴

Certainly, when we examine rap music through many of our typical analytical lenses, there is often less to see than with other genres. Melodies can be fleeting or absent altogether. Harmonic progressions are typically simple and repetitive. Forms are usually verse/chorus, with little deviation.⁵ When combined with lyrics that often seem distasteful, it is easy to see why...

¹ For convenience, I refer to rappers by their stage names (e.g. “Snoop Dogg”) as opposed to their given names (e.g. “Calvin Cordozar Broadus Jr.”). I have found that readers are more familiar with stage aliases than given names, so I prefer to use stage names to aid comprehension.
² Throughout this dissertation, I excerpt rap lyrics that can be profanity-laden, violent, or misogynistic. As my dissertation focuses on aspects of rhythm, rhyme, and pitch separate from semantic meaning, I will present such lyrics without commentary or apology.
³ For one of many sources discussing this, see https://medium.com/cuepoint/the-great-rap-censorship-scare-of-1990-115edc69a62f.
⁴ For an example of this attitude, see a statement made on Twitter by conservative podcaster Ben Shapiro, saying: “Fact: rap isn’t music. And if you think it is, you’re stupid.” https://twitter.com/benshapiro/status/156246995978293248
⁵ Berry (2018, 3) briefly discusses form in rap music, noting the additional categories of “intro,” “bridge,” and “outro” as also being relatively common formal units.
many musicians and listeners seem ready to write rap off completely. However, there is much to be explored when it comes to analyzing the parameters of “flow” in rap music—i.e., a rapper’s delivery of the lyrics.

Example 0.1 below shows a transcription of the same performance from Kendrick Lamar as shown in the lyric transcription above. This transcription is more detailed—we can see the rhythm of his delivery, which syllables are rhymed, and even the relative pitch space of his flow.

The flow in Example 0.1 has considerable nuance with respect to rhythm, rhyme, and pitch. The transcription shows that each line concludes with the same rhythmic motive, which is markedly different from the rhythmic cadence in the rest of the section. The eight-measure excerpt is divided into four rhyming lines (a quatrain) of two measures each. However, there are three additional rhymed pairs (couplets) scattered throughout the excerpt as well. Finally, the transcription shows that Kendrick Lamar lowers his voice at the end of each line, on the lyric that coincides with his line-ending rhythmic motive. In short, the transcription above shows numerous aspects of the music that relate directly to a listener’s experience.
In this dissertation, I add my voice to the steadily growing field of academics who are producing diverse and multi-disciplinary research on rap music. Throughout this document, I will consider aspects of rhythm, rhyme, and vocal pitch in numerous rap tracks ranging from 1980-2018. Each chapter consists of a combination of objective observations, generalizations, speculation, and extended analyses. In this first chapter, I will provide a short justification for my choice in research area and a literature review, followed by an outline of the scope of this work, as well as establishing an analytical groundwork and methodology.

Section 0.2: Justification

Unsurprisingly, my choice to write a dissertation focused on rap music was initially prompted by my enduring enjoyment of and fascination with the genre. However, this alone is not enough to justify such a lengthy project. While researching this music, I asked myself: What could be gained from a music theory dissertation focused on hip-hop?

In early 2018, ratings company Nielsen revealed that for the first time ever, R&B/Hip-Hop had become the most popular genre of music in the United States in 2017, with seven of the ten highest-selling albums coming from that genre. Signifcant critical accolades have come with this commercial success—Kendrick Lamar was awarded the 2018 Pulitzer Prize for music for his album *DAMN.*, becoming the first artist to win the award who was not a classical or jazz musician. In early 2019, rapper Childish Gambino was received a Grammy award for “Best Song,” becoming the first rapper to receive this accolade in the history of the Grammys.

Rap music’s increasing popularity and social relevance greatly contributed to my desire to complete a dissertation on the genre. In my experience as a music theorist, I have found that rap music is underrepresented in the scholarship when compared to its cultural impact, and I want to help remedy this problem by promoting a holistic style of flow analysis that is not only accessible to music theorists, but to any musically-literate readers hoping to engage with rap music on a deeper level. While this dissertation is an extensive discussion of the parameters of flow, it is by no means comprehensive, and will serve as one small part of a rapidly growing coalition of scholarship focused on all aspects of hip-hop music, including its beats and samples, cultural relevance, race and gender considerations, history, and political impact.

Furthermore, I intend for my research to fill what I see as serious gaps in music theory scholarship on rap music. There have been several significant flow studies published in our discipline (which I will outline in the literature review in this chapter), including flow taxonomies (Krims), relating flow to background beats (Adams), relating meter to flow (Ohriner), and flow corpus studies (Condit-Schultz and Ohriner). However, apart from Krims’s contribution (published in 2000) and a 2009 *Music Theory Online* article by Adams, none of these studies are intended to establish tendencies and characteristics of a rapper’s delivery of the lyrics. I believe that for new, nuanced, and innovative scholarship on flow to take hold in coming years, we must first address the lack of scholarship focused on flow more generally. In this dissertation, I will remark extensively on what I see as the primary features of rappers’ deliveries, showing how these parameters impact our experience with and understanding of the music.
Chapter 1: Literature Review and Methodology

Section 1.1: Literature Review

While decades of robust scholarship on rap music exist in several disciplines, hip-hop studies have only recently begun to flourish in the field of music theory. In the literature review that follows, I will first outline each of the most important music theory/musicology monographs on rap as of early 2019, followed by a brief overview of other sources, most of which are outside of the realm of music theory.

Ethnomusicologists were among the first scholars to seriously consider rap music and to establish hip-hop studies as an academic discipline. Cheryl Keyes’s dissertation, titled Rappin to the beat: rap music as street culture among African Americans (1991), was one of the first major documents on the subject of rap music. Further non-theoretical studies of hip-hop were subsequently published by Walser (1995) and Bennett (1999). In her article “At the Crossroads: Rap music and its African Nexus” (1996), Keyes described rap music’s connections to traditional African music and poetry, discussing issues of repetition, regional rap styles, and rap music’s trajectory towards becoming a billion-dollar industry.

Adam Krims’s book Rap Music and the Poetics of Identity (2000) was the first major attempt at scholarly analyses of rap. Krims spends a great deal of time discussing various aspects of a rapper’s flow, which he defines as “an MC’s rhythmic delivery.” While Krims’s contributions are numerous, the most remarked-upon aspect of his book is his taxonomy of flow, in which he divides rap flows into three main types. “Sung” style is Krims’s label for much of old-school rap flows, which feature rhythmically simple deliveries, unexaggerated enunciation, and regular and basic rhyme schemes. “Percussion-effusive” is used to refer to the type of flow

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7 Krims, 15.
8 For an example of what Krims deems “sung” style, see Kurtis Blow’s “Basketball” (1984).
in which a rapper uses his voice to a similar effect as a percussion instrument. Krims relates this style specifically to the work of B-Real, of the hip-hop group Cypress Hill. B-Real’s rapping is distinguished by a choppy, staccato delivery, with syllables often shortened as much as possible. Percussion-effusive style is the least-developed in Krims’s writings, but it is likely that if he had written his book a decade later, he would have considered speedy and rhythmically virtuosic “chopper rap” by the likes of Tech N9ne and Twista to be in the percussion-effusive style.9

“Speech-effusive” style is the last of Krims’s three principal styles of flow, and Krims uses the term to refer to the styles of more contemporary rappers whose deliveries are more complex than their predecessors. Specifically, Krims states that speech-effusive rap is more similar to speech than song, and features “multiple rhymes in the same rhyme complex, internal rhymes, offbeat rhymes, multiple syncopations, and violations of meter and metrical subdivisions of the beat.”10

In addition to Krims’s oft-cited three styles of flow, his book also contains some of the first serious efforts to analyze hip-hop beats. Krims’s version of beat analysis is one of several early rap analyses that purposefully avoid using any Western musical notation. Example 1.1 below shows Krims’s beat and form analysis of an Ice Cube track. The numbers along the top of Krims’s diagram indicate the measures in the song. Krims analyzes the beat of the track by first dividing it into four main “configurations” (configs), which are each a different assemblage of instruments and samples used in the track. Then, Krims divides the track into three verses, separated from each other with two refrains. Finally, Krims makes note of small additions or substitutions to the beat, “upbeats” and “adjuncts,” which are scattered throughout the song but do not overshadow any of the four principal background configurations.

9 See Chapter 2 of this dissertation for a discussion of “chopper” rap.
10 Krims, 49.
Krims’s beat/form analysis of Ice Cube’s “The Nigga Ya Love to Hate” (1990).\textsuperscript{11}

Krims also diagrammed with specificity the musical content of each of the configurations for this track. Example 1.2 below shows a small selection of Krims’s musical beat diagramming.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{example1.2.png}
\caption{Example 1.2. One of Adam Krims’s beat diagrams for a configuration, upbeat, and adjunct of “The Nigga Ya Love to Hate.”\textsuperscript{12}}
\end{figure}

The top line of Example 1.2 indicates four beats, with letters x, y, and z representing the second, third, and fourth sixteenth note of each beat. The left-hand column of the example lists each instrument or sample that is audible in this configuration. To the right of each instrument, Krims lists either pitches or attack points as they occur in every measure of the one-measure repeated beat. Krims’s beat diagrams are quite specific, but his decision to shirk conventional notation

\textsuperscript{11} Krims (2000), 104.
\textsuperscript{12} Ibid., 105-106.
leads him towards a problem encountered by many rap analysts to come after him. There are many good reasons to not analyze rap music using conventional notation: The artists almost never construct their flows or music using Western notation, and this notation system could be construed as being exclusionary not only to non-musicians, but to the very artists who are being analyzed. Additionally, every transcription can be thought of as an analysis of some kind, as the transcriber is making decisions about which musical parameters to prioritize. If one imposes Western European notation on a piece of music, they risk imposing the parameters prioritized by that notation, namely rhythm and pitch. Of these, however, only rhythm is universally and readily applicable to rap music.

However, a similar problem of accessibility occurs in analyses similar to Krims’s in Examples 1.1 and 1.2: The notation system, which is made solely for this type of music, is initially difficult to understand. Furthermore, most non-Western styles of rap analysis fail at avoiding the problem of exclusionary notation—non-musicians and most rappers would have just as hard of a time reading Krims’s beat diagrams as they would traditional Western notation of the same excerpt.

After Krims, the next major development in the analysis of rap music was not until 2008, when Kyle Adams published the first of three articles, all in *Music Theory Online*, that he would write over the next eight years. Adams’s first article, entitled “Aspects of the Music/Text Relationship in Rap,” sought to investigate the connections between background beats and rappers’ flows. A novelty of Adams’s article, as he notes, is the fact that most music/text relationships involve finding ways in which the music was composed to support the text. With rap music, however, music is often “composed before the text is written,” and Adams asserts that
this often results in rappers delivering their flows in a way that reflects the music, incorporating rhythmic motives or otherwise reacting to the musical background via their flows.\textsuperscript{13}

Example 1.3 below shows one of Adams’s transcriptions from his 2008 article. In this example, Adams is illustrating several ways in which rapper Big Boi has incorporated aspects of a beat into his flow, most significantly that the composite drum rhythm perfectly matches the flow rhythm of the first measure of the chorus. The lyric grid below Adams’s beat transcription mirrors Krims’s configuration—four-beat measures, with each beat subdivided into four sixteenth notes. The utility of this grid-based lyric notation becomes clear when one considers the cyclical nature of most rap beats. Often, rap flow is essentially delivered over a repeated one- or two-measure looped beat, so stacking each measure of lyrics vertically helps readers see overall trends in syllable placement within each loop.

Example 1.3. Adams's beat and lyric transcription of Big Boi's "Tomb of the Boom" (2003) from his 2008 article.\textsuperscript{14}

Adams’s 2009 article, “On the Metrical Techniques of Flow in Rap Music,” was in many ways a breakthrough for rap analysis and is still cited with regularity in most hip-hop analytical

\textsuperscript{13} Adams 2008, abstract.
\textsuperscript{14} Ibid., paragraph 18.
scholarship. The article is known for Adams’s taxonomy of different techniques involved in rap flows. Adams defines flow techniques into two categories, “metrical” and “articulative. These categories, and the parameters associated with them, are listed as Figure 1.1 below.

<table>
<thead>
<tr>
<th>Metrical Techniques</th>
<th>Articulative Techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The placement of rhyming syllables.</td>
<td>1. The amount of legato or staccato used.</td>
</tr>
<tr>
<td>2. The placement of accented syllables.</td>
<td>2. The degree of articulation of consonants.</td>
</tr>
<tr>
<td>3. The degree of correspondence between syntactic units and measures.</td>
<td>3. The extent to which the onset of any syllable is earlier or later than the beat.</td>
</tr>
<tr>
<td>4. The number of syllables per beat.</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 1.1. Adams's metrical and articulative techniques of flow in rap music.*

As the title would indicate, Adams focuses on the metrical techniques of flow in his 2009 article, due in part to them being easier to quantify than articulative techniques. Adams’s article is a series of detailed analyses in which he discusses various ways in which the four metrical techniques of flow are manipulated by rappers for reasons involving phrase, interaction with the background beat, or expressive intent. This article helps to assign concepts to things already understood by rap aficionados—indeed, when somebody is describing a rapper’s flow, they are often describing one or more of the metrical techniques. Adams continues to use lyric grids to transcribe flow, but adds color-coded cells to indicate rhyme, as seen in Example 1.4. As I will discuss shortly, I also favor color-coding for rhyme analysis in my own transcriptions.

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15 Adams 2009, paragraph 8.
16 The concept of a musical “phrase” in rap music is still under much discussion amongst hip-hop scholars. The term is used colloquially and imprecisely, and as Condit-Schultz (2015) notes, it is easy to conflate a musical phrase with a poetic phrase in a genre so dictated by rhymed units. Condit-Schultz also notes that prosodic units are important for segmentation, and that prosodic boundaries help to create musical phrases in rap. In this dissertation, I use the word “phrase” to mean a segment of rap lyrics, typically marked at the end by space, rhyme, or both. As Condit-Schultz notes, most phrases are two or four beats long, with nesting and sub-phrases being possible.
Example 1.4. Adams’s flow transcription of “All Caps” by Madvillain (2004).\textsuperscript{17}

In 2013, Justin Williams published his book *Rhymin’ and Stealin’: Musical Borrowing in Hip-Hop*. The central premise of Williams’s book, as stated in the preface, is that “the fundamental element of hip-hop culture and aesthetics is the overt use of old material to new ends.”\textsuperscript{18} Williams states that borrowing can come in several different forms, as shown in Figure 1.2 below.

\textsuperscript{17} Ibid., paragraph 21.
\textsuperscript{18} Williams 2013, 1.
Figure 1.2. Different types of musical borrowing used to contribute to historical authenticity in hip-hop, from Williams, 2013.\textsuperscript{19}

Much of Williams’s text is not directly related to flow, but rather to the use of samples and other musical cues in hip-hop culture. Williams writes at length about the unique culture of searching for and recycling samples from past records, and the ways in which musical borrowing helps to create the “imagined community” of hip-hop. The book’s five chapters are a potpourri of discussions connected via the common theme of musical borrowing—Williams discusses issues of authenticity, hip-hop martyrdom of figures like 2Pac and Biggie Smalls and postmortem sampling, and jazz rap as high art.

A pair of corpus studies published in a 2015 volume of \textit{Empirical Musicology Review} represent some of the first major empirical work done on rap music in either musicology or music theory. Mitchell Ohriner’s article, entitled “Metric Ambiguity and Flow in Rap Music: A Corpus-Assisted Study of Outkast’s ‘Mainstream’ (1996),” focused on using data to analyze an unusual Outkast track. “Mainstream” is unusual because “unlike virtually every other rap track,

\textsuperscript{19} Ibid., page 30.
the instrumental tracks […] simultaneously afford hearing both a four-beat and a three-beat metric cycle.”

While the scope of Ohriner’s article may initially seem limited to a single track, he used this project as a platform to make several important general contributions to rap analysis. When analyzing his corpus, Ohriner addressed issues of rhyme in rap music, noting the degree of subjectivity that comes with labelling rhymes. One issue with rhyme that Ohriner points out is deciding whether to differentiate between perfect rhyme (e.g., “bump” and “jump”) and slant rhyme (e.g. “lake” and “same”). Ohriner also theorizes on upper and lower temporal “limits” to rhyme. A syllable may technically rhyme with another syllable that is separated by several measures of rapping, thus placing it beyond an “upper limit” and making listeners unlikely to perceive those two syllables as being rhymed. Similarly, if two rhymed syllables are extremely close to one another in a rapper’s delivery (e.g., the two syllables in “downtown”), listeners may also not perceive those syllables as being rhymed. Ultimately, Ohriner manually encodes rhyme in his corpus, demonstrating that even rigorous empirical approaches to rap analysis must embrace some subjectivity when it comes to rhyme.

Ohriner’s article also establishes a few useful precepts when it comes to rap flow—notably, that most rap phrases conclude on the fourth beat of a measure, most rhymed syllables are separated by four beats, and that most rhymed syllables occur on the fourth beat of a measure. These conclusions are confirmed by another hip-hop corpus study published in the same volume of *Empirical Musicology Review*. Nathaniel Condit-Schultz’s article, entitled “MCFlow: A Digital Corpus of Rap Transcriptions,” is a very significant contribution to rap analysis due to the author’s work to confirm many principles of rap music that have been

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20 Ohriner 2016, abstract.
generally understood to be true by hip-hop practitioners and aficionados, but never backed up with empirical evidence.

Condit-Schultz’s premise involves encoding various aspects of a rapper’s flow into his corpus, including rhythm, rhyme, and vocal pitch—the three parameters of flow upon which this dissertation is based.\textsuperscript{21} Similar to Ohriner, Condit-Schultz remarks on the subjectivity of rhyme classification, but adds additional nuance to his transcriptions through the use of IPA (International Phonetic Alphabet) pronunciation characters, a practice that I also occasionally adopt in this dissertation. Condit-Schultz’s corpus analysis results in the identification of several important precepts of rap music, including the following:

1. The typical rap pace is approximately 4.5 syllables per second.
2. The tempo of rap instrumentals has decreased over time, while overall rapping speed has not.
3. In general, rhyme density (rhymes per measure) has increased since rap’s inception.
4. Rhymed syllables are most likely to occur on beat four of a given measure.
5. Phrases are almost all either two or four beats in length.\textsuperscript{22}

The \textit{Cambridge Companion to Hip-Hop} (2015), edited by Justin Williams, was a landmark achievement for the broader field of hip-hop studies. Contributing authors came from a variety of disciplines, and wrote on diverse topics such as production (Tabron), hip-hop and politics (Deis, Jeffries), non-English hip-hop (Manabe, Fernandes, Neff), and religion (Zanfagna). However, the two chapters most relevant to a music-theoretical study of rap music are Oliver Kautny’s “Lyrics and flow in rap music” and Kyle Adams’s “The musical analysis of hip-hop.” In Kautny’s chapter, the author works to describe “styles” of flow by their relationship

\textsuperscript{21} Condit-Schultz (2016) refers to vocal pitch as “tone.”
\textsuperscript{22} Condit-Schultz (2016).
to three parameters: production (“the air flowing out of the lungs, formed into a flow of sound”),
texture (“the musical result of the airflow synchronized to a musical arrangement called beat”),
and reception (“the feel of music while perceiving it”).
Kautny also uncovers several questions regarding microtiming that flow analysts are still working to satisfactorily resolve—as rappers do not always rap exactly on the beat, what other methods of notation could be explored to accurately transcribe flows? Furthermore, how does one determine, even using software, the exact moment a syllable starts? These are questions that have continued to come up occasionally in the subfield, usually raised by scholars familiar with the sound visualizing software Sonic Visualizer and Praat. As addressing these issues requires detailed, scientific methodology, doing so is outside of my current goals. For the purposes of this dissertation, it will suffice to “quantize” syllables to the nearest easily heard beat division.

Adams’s chapter in the *Cambridge Companion* serves as an analytical primer and as an extension of his 2009 article in *Music Theory Online*. He begins by identifying one of the main “problems” with hip-hop analysis—that is, that because lyrics are music are often written independently, and lyrics are delivered over a cyclical beat, it is often fruitless to make claims about musical connections between the lyrics and the beat existing in service of one larger expressive narrative. Adams goes on to re-engage with his difficult-to-quantify “articulative techniques” from his 2009 article, analyzing the ways in which they “contribute to the affective state of a rap song.” In the chapter, Adams makes several connections between parameters such as the relative sharpness/dullness of consonants or the amount of legato used in a rappers delivery and a track’s lyrical content.

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23 Kautny 2015, 103.
24 Adams 2015, 118-134.
25 Ibid., 123.
In recent years, rap scholarship continues to grow in popularity within the field of music theory. Adams published a third *Music Theory Online* article in 2016 that uses an unusual remix album that uses beats solely comprised of cat sounds as a platform to answer analytical questions about rap remixes. My own 2017 article, “Analyzing Collaborative Flow in Rap Music,” sought to draw connections between the metrical techniques of flow used by rappers on shared tracks to musically signal their shared group membership.

Paul Edwards has made innumerable contributions to rap scholarship through his two compilations of interviews with rappers, *How to Rap* and *How to Rap 2*, published in 2009 and 2013 respectively.\(^{26}\) In these interviews, Edwards covers a variety of topics—everything from rhyming techniques to vocal pitch to stage presence—in a way that shifts the focus onto practitioners of hip-hop. While there is little more to summarize about Edward’s contributions here, numerous excerpts from his interviews will be peppered throughout this document, as the insight of rappers is an invaluable contribution to any rap scholarship.

The scholarly literature on rap music is extensive and spans numerous fields outside of music theory. As this dissertation is focused on the relatively constrained task of analyzing flow, much of this scholarship will fall outside of the purview of this document but deserves to be mentioned here. Multidisciplinary scholarship on issues of race/culture and rap music is popular, with some of the major authors being Chang (2006), Haskins (2000), Keyes (1996 and 2002), Maultsby and Burnim (2005), Orejuela (2014), Rose (1994), Stewart and Duran (1999), Sullivan (2003), and Wheeler (1991). Scholarship on sampling, musical borrowing, and rap beats more generally is also a significant portion of the field, with prominent authors being Demers (2003), Fink (2005), Greenwald (2002), Maxwell (1991), Miyakawa (2007), Savage (2011), Schloss 


Section 1.2: Notes on Scope and Methodology

In this dissertation, I will be focused solely on flow in rap music. As is such, discussions of semantic meaning, beats and production, geographical considerations, history, race, class, and gender fall outside of the purview of my current research, despite being essential components of a holistic understanding of hip-hop. To be clear, I am not proposing that rap scholarship divorce flow from other musicological and ethnomusicological perspectives—rather, I am offering my research as a demonstration of the types of observations that can be made when focusing on relatively narrow categories (rhythm, rhyme, and pitch) within hip-hop scholarship. Despite the limited scope of my dissertation, the ongoing discussions on rap from scholars in other branches of music academia can often be related to this document, and readers should ponder these connections as they proceed.

In terms of repertoire selection, I have made transcriptions of rap songs that I believe are best-suited to illustrate the concept at hand. As a result, my song selection was largely shaped by the music with which I am most familiar, primarily rap music released between 2000 and 2018. I have not placed any specific constraints on my repertoire selection in terms of artist representation, date, geographic region, or language. Readers will notice that I analyze tracks by female hip-hop artists less frequently than those by male artists. This regrettable fact is due simply to the fact that men far outnumber women in hip-hop. In fact, it is likely that the ratio of female to male rappers in this dissertation is greater than on hip-hop charts, as I made a conscious effort to seek out music from female rappers when possible. As the hip-hop “canon” is
arguably still being formed, the very concept of a canon also merits addressing. While I do not make many statements of value or quality in this dissertation, readers should be aware that there is a certain implicit value judgement that is unavoidable when selecting examples, and as is such, readers should assume that I believe that most of my chosen examples are either good, impactful, or both. As a final repertoire note, due to my personal background, the vast majority of the examples in this dissertation are in English, with several notable exceptions in Chapter 3.

In this dissertation, I refer to rappers by their stage aliases rather than their given names. I have made this decision not only because I believe it shows respect to a rapper’s chosen professional alias, but because doing so saves readers time and confusion—the average reader is much more likely to know Lil Jon by his stage name than by his real name, Jonathan Mortimer Smith.

My chosen method of notating rap flows is transcribing a rapper’s delivery on a rhythmic staff using Western notation, and signaling rhyme using color-coding. In choosing Western notation, I hope to make my scholarship accessible not only to music theorists, but to any musically literate readers. My choices in color are arbitrary, and the colors in disparate examples are unrelated to one another. A sample transcription is shown below in Example 1.5. Note that there are several multisyllabic rhymed groups (e.g. “Harley truck” and “hardly luck”). In the case of multisyllabic groups, I include all syllables in the same colored section, indicating their status as a single rhymed unit. If fragments of the multisyllabic rhymed group occur, I highlight them using the same color as used for the complete group. In all of the examples in this dissertation,

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27 As a further repertoire note, in this dissertation I tend to focus on examples of fairly standard hip-hop practice, rather than exceptional or outlying cases. In that sense, I highlight hip-hop “practitioners” more than I do “innovators,” due to my goal of describing normative hip-hop practice.
rhythmic values are quantized to the nearest easily discernible note value—in the case of Example 1.5, each attack point is quantized to the nearest 16th note.

Example 1.5. A sample transcription.

Occasionally, I will show imprecise, relative vocal pitch spatially in my transcriptions. One such example is below (Example 1.6), in which syllables are performed in three general pitch “zones”: mid-range, higher, and lower. I will explain further my methods of conveying relative pitch in Chapter 4.

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28 In determining the meter of my examples, I privilege the idea of a musical backbeat, in which beats two and four of a measure are stressed, usually with a snare-or-rimshot-adjacent sound, while beat one is often emphasized with a bass drum. I acknowledge that in many of my examples, there are theoretically other hearings and meters that may exist.
As I have stated previously, determining what does and does not rhyme in rap lyrics is generally acknowledged to involve some subjective judgement. Thus, all my determinations of rhyme in my rap transcriptions are based on my own hearing of the music, as well as considerations of slant rhyme, contextual emphasis, and upper and lower limits, all of which will be explored in more detail in Chapter 3.

In the chapters that follow, I build a holistic methodology for analyzing flow in rap music. In chapters 2-4, I analyze the parameters of rhythm, rhyme, and vocal pitch. The final chapter of this dissertation is a capstone analysis—a sample of the type of analytical work that can be done when engaging with the three main parameters of flow.
Chapter 2: Rhythm and Meter in Rap Flows

“Rap is rhythm and poetry.”—Rakim, “Follow the Leader” (1988).

In this chapter, I will describe a framework for analyzing, transcribing, and classifying rhythm in hip-hop. Rap music eschews most conventions of melody and harmony found in typical popular music. Thus, rhythm is arguably rap music’s defining musical feature—as Condit-Schultz (2016) says, “rap is made musical, as opposed to poetic, by its rhythm.” Over rap’s relatively short history, a dramatic proliferation of rhythmic techniques and trends has taken place, with the rhythms of flow ranging from simple and predictable to extraordinarily complex and irregular. Indeed, rhythm is such a vital component of rapping that many artists base their lyrics around a desired rhythm, instead of vice versa. “I don’t write lyrics, I use sounds instead of words,” says rapper Schoolly D. “As long as you’ve got the feeling and as long as you have the rhythm then, in the end, I add words” (Edwards 2013, 1). Rapper Thes One echoes this sentiment, saying that one can approach writing rap “like a producer, and hear a rhythm over the beat. Like if we were to add another layer of percussion over this, what would it sound like? And then try to model the rhyme pattern after that” (Edwards 2013, 4).

I will begin by establishing some general principles about rhythm and flow. Then, I will discuss background rhythmic “textures” in a broad sense, contrasting simple and compound divisions of the beat as they appear in contemporary examples. Next, I will detail the pervasive use of rhythmic motives in flow, comparing and contrasting motivic groups to those arising from rhyme. Subsequently, I will delve into the issue of speed and tempo in rap music, dissecting verses by rappers renowned for their rapid-fire flows, and analyzing the ways in which rapping speed effects other parameters of flow.
Section 2.1: Introduction

Many aspects of rap music that have long been understood by hip-hop performers and aficionados have only recently been introduced into hip-hop scholarship. Such scholarship, including the empirical work of Condit-Schultz and Ohriner, provides us with a valuable set of rap precepts—which I will discuss henceforth.

Meter

Metrically speaking, the vast majority of rap is in an “unrelenting duple meter” (Ohriner 2016). While non-duple rap tracks exist, they are quite uncommon. Early rap music drew heavily on samples from funk music, which, like nearly all African-American genres, employs a prominent backbeat rhythm. Thus, both rap and funk music feature innumerable duple meter tracks meant to inspire dancing to a steady beat. Early producers of rap and other electronic dance music sought drum “breaks” in records—sections of two to eight bars in a track where the percussive instruments are especially prominent. Early DJs would then mark the exact moment that a drum break occurred on two identical records using chalk or a crayon. Then, DJs would play the danceable drum break on one record while moving the other record into position so that just as the first drum break finishes, the DJ could fade immediately from one record to the other, which would be poised to repeat the same drum pattern. This allowed DJs to alternate between two records continuously, artificially looping a drum break.29

As rap began with ample samples from funk music, a majority of rap tracks still feature simple divisions of the beat, rather than compound (Berry 2018, 2). It has grown increasingly common for rappers to employ a compound, triplet-based flow, however, and I will address this technique later in this chapter.

Beats and flow

Echoing the quotations from Thes One and Schoolly D at the beginning of this chapter, Adams (2008) argues that at least in certain instances, rappers will structure their flow to interweave with certain rhythmic or motivic elements of the background beat. Using transcriptions of both the track’s instrumental background and a rapper’s flow, Adams draws connections between short rhythmic motives and the track’s instrumental. Rap, like other popular music, is heavily reliant on repetition, and repeated rhythmic motives are common, and indeed, almost unavoidable in conventional hip-hop music.

Tempo

With respect to tempo, Condit-Schultz (2016) has shown that there has been a gradual decrease in rap tempi from one year to the next. Condit-Schultz’s data show that while roughly 110 beats per minute (BPM) was an average rap tempo in 1980, tempos slowed to around 80-90 BPM over the following three decades. Curiously, Condit-Schultz’s corpus also showed that there was not a commensurate decrease in average rap syllables per second over time as accompanimental tempos slowed.

Ohriner and Condit-Schultz both confirm with their data that the metric position of rhymed syllables is usually on the fourth beat of a measure, and that typical phrases in rap music tend towards being one bar long. Both Adams (2009) and Condit-Schultz make a helpful distinction between stressed and unstressed syllables. In a discussion of syncopation in rap, Condit-Schultz observes that syncopations often occur due to the placement of stressed syllables in flow, rather than the placement of any syllables. Thus, it is possible for a transcribed rap flow to appear to be free of syncopation on a surface level, while in actuality the rapper is accenting certain syllables to create the impression of a second layer of emphasized (and sometimes
syncopated) syllables. Example 2.1 (Condit-Schultz’s Figure 4) shows an example from Eminem’s “Drug Ballad” (2000) in which a syncopated stream of accented syllables can be heard within a stream of steady 16th notes.

![Example 2.1](image)

Example 2.1. An excerpt from Eminem’s “Drug Ballad” (2000), from Fig. 4 in Condit-Schultz (2016).

Finally, we can make some very basic generalizations about changes in rhythm of rap flows over time. The general consensus among rap aficionados is that rhythms have become increasingly complex since rap’s beginnings. While there is no corpus data to back up this assertion, anecdotally, it seems sound. Early 80s dance-hall rap is generally rhythmically simplistic, with steady eighth notes forming predictable patterns and rhyme schemes. In the 90s and 00s, there seems to have been a gradual increase in complexity—rhythmically simple rap flows are still commonplace, but complex rhythmic flows are more plentiful. Rap tracks designed to inspire dance still thrive, but there is also a sizeable share of rap artists that seem to revel in complexity for its own sake, as a challenging endeavor. Of course, “complexity” is a term that inspires value judgements—but it is safe to say that rhythmic variety is more prominent in today’s rap flows than those from three decades ago.

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30 Robust scholarship exists on the topics of accent-generated grouping structures, with perhaps the most prominent being Lerdahl and Jackendoff’s “On the Theory of Grouping and Meter” in The Musical Quarterly (1981). In this article, Lerdahl and Jackendoff contrast “metrical accents” with “phenomenal accents,” with the former being accents implied by a piece’s meter and the latter being accents applied by perceivable surface-level accents in the music (such as dynamic or timbral accents).

31 Condit-Schultz’s corpus study (2016) does offer some limited data that lead to this conclusion based on what the author calls “preliminary” and “exploratory” analyses.
Section 2.2: General Rhythmic Textures

Before moving into exceptional, advanced, or nuanced rhythmic techniques in rap music, it is important to first define what could be considered unexceptional: the basic rhythmic textures found in the majority of rap flows. It is against the normative backdrop of these textures that rappers create the rhythmic cells, motives, and syncopation that I will discuss later in this chapter.

Simple Divisions

For most of the history of rap music, simple divisions of the beat have been the norm. This is especially true for early rap. Example 2.2 shows a rhythmically straightforward section of rapper Phife Dog’s verse in A Tribe Called Quest’s “Can I Kick It?” (1990). Phife Dog uses simple beat divisions and subdivisions, consistently placing each end rhyme in his verse on the first beat of each measure.\textsuperscript{32}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{example2_2.png}
\caption{A transcribed excerpt from Phife Dog’s verse in A Tribe Called Quest’s “Can I Kick It?” (1990, 2:59-3:09).}
\end{figure}

Example 2.3 shows a section of Snoop Dogg’s “Gin and Juice” (1993).\textsuperscript{33} In Example 2.3, we can see that Snoop Dogg’s flow is almost entirely non-syncopated and features simple duple and quadruple subdivisions of the background beat. This relatively simple rhythmic patterning is

\textsuperscript{32} As Adams and Condit-Schultz have observed, end rhymes are more likely to occur on the fourth beat of a given measure, so while Phife Dog’s rhythm is normative, his rhyme placement is not.

\textsuperscript{33} At the time this track was released, the artist (Calvin Broadus) went by the stage name “Snoop Doggy Dogg.”
emblematic of Snoop Dogg’s approach to most of “Gin and Juice,” which features uncomplicated rhyme schemes and rapping at a relaxed tempo.

![Example 2.3. A transcribed excerpt of Snoop Dogg’s “Gin and Juice” (1993, 0:33-0:44).](image)

The seemingly unremarkable rhythmic surface conceals a more complex interplay of rhyme and motive. Syntactically, the four bars shown in Example 2.3 are separated from phrases before and afterwards, and yet they contain no significant rhyming syllables at all—while the majority of lines in “Gin and Juice” feature rhyming lyrics falling predictably on the fourth beat of each bar, Snoop Dogg apparently abandons rhyming lyrics altogether in Example 2.3. However, the bars are still connected to one another through the two quarter note rhythmic motive at the beginning of the first three bars. This correspondence, which should be thought of as rhythmic rhyme (rather than textual rhyme), works to aurally connect a series of lines that abandon the frequent lyrical rhymes of most rap.\[^{34}\]

**Compound Divisions**

While simple duple meters are overwhelmingly the most common rhythmic setting of rap flows, compound divisions of the beat have become increasingly popular in recent years, spurring commentary both in academia and in the popular sphere. While triplet-based rap flows...
have certainly been in fashion in recent years, their origins stretch back more than three decades to Public Enemy’s “Bring the Noise” (1987).

Generally acknowledged to be the first example of triplet-based flows in rap music, rapper Chuck D’s verse in Example 2.4 is constructed similarly to many of the triplet flows that would follow in the years to come. While the entirety of the verse is not pictured in Example 2.4, it is rapped nearly completely in a compound meter, clashing rhythmically with the simple duple background beat. Indeed, many rap verses that utilize triplets do so to an extreme, making triplet figures in those verses far more numerous than any other rhythmic figure. Furthermore, Example 3 shows a series of rhymed syllables beginning on the beat—syncopation is exceptionally rare in triplet-based rap, and lines usually appear as a flurry of unrhymed triplets leading towards a rhymed syllable.

While rap music in the 80s and 90s was primarily produced in New York and Los Angeles, much of the popularity of triplet-based flows is due to rappers from the Southern regions of the U.S., especially Memphis, Tennessee. Rapper Lord Infamous achieved some

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35 The producers of “Bring the Noise” (The Bomb Squad) highlight this compound/simple clash by initially removing all musical layers from the beat except for the ubiquitous “Funky Drummer” sample.
success using this style in the early 90s, and later co-founded the rap group Three 6 Mafia, which steadily gained popularity throughout the 90s and into the 2000s.

Example 2.5. A transcribed excerpt of Lord Infamous’s verse in Three 6 Mafia’s “Sleep” (2000, 0:10-0:24).

In Example 2.5, Lord Infamous’s flow exemplifies many of the characteristics that can be found in triplet-based rap more generally. The syllable-dense flow is rhythmically uncomplicated, with each line structured as a string of triplet eighth notes rushing towards a single rhymed syllable on the fourth beat. The eighth rest that Lord Infamous takes at the end of each line is also common—many rappers using triplet flow treat their lyrics as short, choppy phrases that are separated from one another by rests that fall in regular positions. Finally, note that in triplet-based rap, the lyrics are often in service of the rhythm, rather than the other way around. In Example 2.5, Lord Infamous has arranged his lyrics so that prosaic stress nearly always lands on a beat, rather than between them. For example, see the placement of the word “suspension” (su·spen’sion), which allows the second, emphasized syllable to arrive on a downbeat. It could be argued that syllabic stress comes at the expense of lyrical comprehensibility in “Sleep,” as the lyrics shown in Example 2.5 are quite abstract.
As rap flows continued to develop through the 2000s and 2010s, triplet-based flows gained yet more popularity. To be clear, triplet-based flows refer to a rapper delivering syllables in triplets against the backdrop of a duple-meter beat. This is in contrast to rap flows that are set against a backing track in compound meter, which I will discuss briefly in a later section of this chapter. Especially pivotal in triplet rap’s popularity is the trio Migos, who have used compound divisions so much in their flows that triplet-based rap is now sometimes referred to simply as “Migos flow” (Caswell 2017).

Example 2.6. A transcribed excerpt of Offset’s verse in the group Migos’s track “Bad and Boujee” (2017, 1:00-1:07)

Example 2.6 shows Migos member Offset using the group’s signature rhythm in the track “Bad and Boujee” (2017). Without passing value judgements, everything from the rests separating phrases, to the rhymed syllables on beat four, to the semantically abstract lyrics are archetypal of the modern “trap” rap scene, of which the Migos are a part.37

As a rhythmic “template” for rap flows, compound divisions of the beat often coexist with simple divisions within a single track. In many cases when multiple rappers appear on the same track, the artists will rap using flows that are rhythmically distinct from one another—

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36 Triplet-based flow is not to be conflated with rap tracks that are in a compound meter as implied by their background beat (see “Spaceship” by Kanye West and “My First Song” by Jay-Z for examples).

37 Trap rap music is a nebulous combination of electronic dance music and rap. The style is typically characterized by bleak lyrical content (“trap” is also slang for a place where people purchase drugs), low and prominent bass, double-time high-hat cymbals, and a generally minimalist musical aesthetic.
ostensibly due to some combination of personal preference and a desire to stand apart from their collaborators. Examples 2.7a and 2.7b show two rap verses performed on BOOT’S’s “Delete Delete” (2018), performed by Run the Jewels members El-P and Killer Mike, respectively.

**Example 2.7a. A transcribed excerpt from El-P’s guest verse in BOOT’S’s “Delete Delete” (2018, 0:07-0:22)**

**Example 2.7b. A transcribed excerpt from Killer Mike’s guest verse in BOOT’S’s “Delete Delete” (2018, 1:37-1:48).**

El-P’s verse in “Delete Delete” is entirely free of compound divisions of the beat. Instead, El-P’s flow is constructed around a rhythmic motive—an eighth note followed by two sixteenths, the second of which is tied into the following beat. Thus, when Killer Mike begins the track’s second
verse with a series of triplet groupings, there is a highly marked rhythmic change from El-P’s previous verse. This change is noteworthy, especially when one considers that as members of the rap group Run the Jewels, Killer Mike and El-P often trade lines back and forth in other tracks, sharing rhythmic motives, and sometimes even completing each other’s rhyme schemes. Interestingly, Killer Mike’s reliance on compound beat divisions in “Delete Delete” reflects the different geographical backgrounds of Run the Jewels’s two members. While El-P hails from Brooklyn, New York, Killer Mike grew up in Atlanta—the same region where many prominent purveyors of triplet rap got their start.

While it is true that triplet-based flows often do not co-exist with duple divisions within a single verse, there are exceptions. Examples 2.8a and 2.8b show excerpts from Kendrick Lamar’s verse in the refrain-less track “DNA.” (2017). In this track, Lamar uses two distinct rhythmic textures in his flow. Example 2.8a shows a representative excerpt of the first half of the track, while Example 2.8b shows the latter section. As is clear in the figures, Kendrick Lamar makes a dramatic shift from using only duple divisions to an entirely triplet-based flow. A relevant musical feature, which is not shown in the Examples, is that there are two background beats that comprise the track “DNA.”, and Lamar’s switch from duple to triple coincides with the transition from one beat to another. While there is no refrain per se, the moment at which the track switches from one beat to another is marked by a brief transitional period during which neither beat is present, and the track is layered with conflicting vocal samples. Lamar’s choice to change the rhythmic makeup of his flow at the moment of a beat change was likely no

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38 This phenomenon also occurs in Run the Jewel’s “Oh My Darling Don’t Cry” (2014).
coincidence, as it draws even more attention to an already very marked shift in the track.

Example 2.8a. A transcribed section of Kendrick Lamar’s “DNA.” (2017, 1:10-1:23).


**Other Rhythmic Styles**

Other basic rhythmic templates for rap flows are less easily-defined than simple and compound divisions of the beat. Two of Krims’s three main categories of flow deal explicitly with rhythmic features. Both percussion-effusive and speech-effusive flow are still commonplace today, nearly two decades after Krims published his categories. In the following section, I will describe some other rhythmic styles in hip-hop, relating them to Krims’s categories, with the intention of building upon his descriptions of these flow styles.

A stylized subset of simple/duple division has become increasingly popular in recent years, though examples exist throughout much of rap’s history. This style of rap, which I will refer to as “burst rap,” is distinguished by short bursts of several syllables in a short period of
time, which are immediately followed by rests.

Example 2.9 shows an exemplary bit of burst rap from Killer Mike’s guest verse in fellow Atlanta rapper Big Boi’s track, “Kill Jill” (2017). As is typical in this rhythmic setting, offbeats are de-emphasized, with every beat punctuated by bursts of between one and three syllables. This particular affectation lends itself to a listener hearing the rapper’s flow as a layer of percussion, melded with the background beat—precisely as rappers Schoolly D and Thes One described their creative process at the beginning of this chapter. Indeed, Krims (2000, 50) describes this choppy, staccatto rapping style as “percussion-effusive.” Krims goes on to describe the percussion-effusive style as moments where “a given MC is using his/her mouth as a percussion instrument.” Krims’s description of “sharp attacks” and “crisp delivery” apply directly to Killer Mike’s flow in Example 2.9. Elaborating further, Krims also states the following: “Percussion-effusive flow is not necessarily quick and may even fall into fairly regular and predictable rhythmic patterns; what marks it out are the focused points of staccato

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39 In this context, I am using “beat” in the traditional metric sense, as opposed to the more common hip-hop terminology in which “beat” refers to the background music over which a rapper’s flow is recorded.
and pointed articulation, often followed by brief caesuras that punctuate the musical texture and subdivide regular rhythmic units.”

Example 2.10 shows another example of burst rap that nicely fits Krims’s conception of percussion-effusive flow. In the song “T-Shirt” (2017), Migos member Takeoff raps in short, separated bursts that emphasize beats throughout the track. In this specific instance, Takeoff’s burst rap complements the tendency of all Migos members to add in add-libbed shouts throughout their verses, typically repeating important or rhymed words. As can be seen below, Takeoff’s choppy delivery allows each one of these ad-libs to cut through the texture and be heard clearly.

“Speech effusive” flow (another term borrowed directly from Krims) refers to a rhythmic setting in which rappers are more beholden to the natural rhythms of speech than to familiar patterns in simple or compound metric contexts.⁴⁰ Krims says:

[Speech-effusive]… rhythms outlined are irregular and complex, weaving unpredictable polyrhythms. The polyrhythms, in turn, trace their elaborate patterns against the more regular (albeit often themselves complex) rhythms of the musical tracks. Also notable in many speech-effusive performances are large numbers of syllables rhyming together, so

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⁴⁰ Krims (2000, 51).
that once a rhyme is established, quite a few rhyming syllables will be produced before the next series of rhymes begins.41

Unlike the previously-mentioned rhythmic templates for rap flow, speech-effusive flow is best defined by its lack of rhythmic consistency, rather than by its propensity for any certain rhythmic figure. Example 2.11 below shows a transcription of Lauryn Hill’s verse in “How Many Mics” by the Fugees (1996). For an excerpt of only ten measures, there is a stunning variety of note values. Especially notable is Hill’s tendency to perform rhymed syllables using differing (non-rhyming) rhythmic motives—an uncommon practice. Further evidence of Hill’s speech-effusive style can be seen in her treatment of rhyme, especially the instances in which she sets up a chain of polysyllabic rhymes, then goes on to use lyrics that only partially rhyme with other corresponding words in the rhyme scheme (for example, “muz-ak” and “whack” in the sixth measure of Example 2.11).

41 Ibid., 51.
2.11. A transcribed excerpt from Lauryn Hill’s verse in the Fugees’s “How Many Mics” (1996, 0:29-0:58).

Speech-effusive flow can be invoked by rappers while still using other rhythmic flow templates. Indeed, Krim describes speech-effusive flow as existing on a spectrum—that is to say, it is not analytically helpful to think of a given excerpt of flow as either “in” the speech-effusive style or not. This is true of each of the rhythmic templates that I have described in this section: Rappers can and often do mix the styles from song to song, verse to verse, or even line to line. A rapper may primarily perform in a speech-effusive style but switch to burst rap in order to emphasize a particular line. Thus, the flow categories above are not intended to be inflexible, but rather are intended to help analysts make generalizations about the rhythmic construction of a rapper’s flow.

**Uncommon Meters in Rap**

While most rap songs are in 4/4 time, examples in compound meter do exist. Examples 2.12a and 2.12b below show a section of rapper Jay-Z’s “My First Song,” the entirety of which is
rapped over a background beat that is in 6/8. At first glance, Jay-Z’s flow may seem unremarkable, but there are unusual features of his syntax that may have arisen from the general non-normativity of compound meter in hip-hop. Note that in measures 3 and 8 of Example 2.12a, Jay-Z repeats the first syllable of a word before continuing. Aesthetically, this sounds quite similar to a stutter—almost as if these moments were inserted by Jay-Z to help him get back “on the beat.” Additionally, the eighth measure of Example 2.12b showcases a non-normative text setting in which Jay-Z uses the beginning of a new sentence to complete a previous series of end rhymes. While enjambment (one line spilling over into the line that follows it) is common in rap, it is unusual for a new sentence to begin before a prior series of end rhymes is concluded.

Example 2.12a. A transcribed excerpt of Jay-Z’s “My First Song” (2003, 0:22-0:33).
Rap tracks in 3/4 time appear to be essentially nonexistent. This could be because of hip-hop’s traditionally heavy reliance on a backbeat, due in part to its funk influences. With a backbeat traditionally arriving on the second and fourth beat of a measure, compound meters can still give an impression of a more typical hip-hop groove alternating between strong and weak beats.

While compound meters are uncommon in rap, asymmetrical and mixed meters are even more so.\textsuperscript{42} However, a limited number of examples can be found. For inclusivity’s sake, I will include two examples in this chapter, but not comment on them extensively, as asymmetrical rap is too uncommon for theorists to draw any genre-wide generalizations from the few examples that exist.

Example 2.13 shows a transcribed excerpt from Captain Murphy’s “Gone Fishing” (2012). The majority of this track is in 5/8, grouped into 3+2. The track owes its unusual meter to a sample of the track “A Estos Hombres Tristes” (1969), by the Argentinian psychedelic rock band Almendra. Rapper Jeremiah Jay’s flow is quite behind the beat as he swings 16\textsuperscript{th} notes

\textsuperscript{42} For more examples of rap in compound meter, see “Drunk and Hot Girls” and “Spaceship” by Kanye West and Gang Starr’s “Stay Tuned.”
lazily, but beyond the unusual meter, there is nothing particularly noteworthy in “Gone Fishing” in terms of rhythm.

Example 2.13. A transcribed excerpt of Captain Murphy’s “Gone Fishing” featuring Jeremiah Jay (2012, 0:15-0:23)

Example 2.14 shows an excerpt of rapper Clipping’s (stylized as “.clipping”) track “Story 2” (2014). In “Story 2,” a novel metric technique comes into play as every eight measures, an eighth note is added to the underlying meter. Clipping begins rapping in 3/8, but smoothly transitions into 4/8 eight measures later, and so on.
Example 2.14. A transcribed excerpt from Clipping’s “Story 2” (2014, 0:00-0:30)

As the shifting meters in this track are so abnormal, I will comment only briefly on one of the several unique aspects of “Story 2.” In mm. 7 of Example 2.14, Clipping sets up a two-syllable rhyme on the first and second eighth note of the measure (“work nights”), which he immediately reinforces on the downbeat of mm. 8 (“worst nights). Clipping then continues to focus on these
rhymed syllables as the prevailing meter switches to 4/8 in mm. 9. However, while Clipping does maintain the same rhymed syllables through mm. 15, the metric position of each two-syllable rhyme shifts to the end of the measure—instead of occurring on the first and second eighth note of the bar, as they did in the 3/8 section, they now occur on the final two eighth notes of measures in 4/8.

Section 2.3: Rhythmic Cells/Motives

Repetition is one of the most universal features of Western music. Indeed, it has been suggested that we require repetition in order to understand music—in his Fundamentals of Musical Composition, Schoenberg says that “intelligibility in music seems to be impossible without repetition.”\(^{43}\) Richard Middleton differentiates between “musematic” and “discursive” repetition. Musematic repetition is “the repetition of short units,” such as riffs in rock and roll. Discursive repetition is “the repetition of longer units, at the level of the phrase […], the sentence, or even the complete section” (Middleton 1983, 238). Middleton does not comment on rap specifically, but states more broadly that musematic repetition is found in most African American popular music forms.

For a variety of psychological reasons, we tend to seek out music with repetition. In Elizabeth Margulis’s well-known 2013 experiment, one group of participants were played non-repetitive excerpts of music by Berio and Carter, while another group was exposed to the same recordings, but digitally-altered to include repetitions. Participants rated the digitally-altered, repeating recordings as more musical, more enjoyable, and more likely to be composed by a human (as opposed to generated by a computer). Margulis suggests that repetition imbues music with a “social and biological role in the creation of interpersonal cohesion.”\(^{44}\) Within individual

\(^{43}\) Schoenberg (1967, 21).

\(^{44}\) Margulis (2013, 6).
pieces, musical elements are repeated extensively, drum beats, chord progressions, and melodies all heard many times, allowing listeners to anticipate musical activity before it ever happens.

Repetition is then logically one of the most important defining aspects of “popular” music of all genres. For instance, see Example 2.15—a transcription of the refrain of Taylor Swift’s enormously popular “Shake it Off” (2014).⁴⁵

Example 2.15. A transcription of the chorus of Taylor Swift’s “Shake it Off” (2014, 0:41-1:05).

Though Example 2.15 spans sixteen measures, or sixty-four beats of music, the entirety of the melodic material can be found in bracketed motives A and B, which total only 9.5 beats of music. What’s more, this chorus is repeated three times throughout the 3 minute, 41 seconds long track, followed by an outro comprised mostly of motive B. In total, 48% of the melodic material in “Shake it Off” is copies of motives A and B above. Put another way: When combined,

⁴⁵ The song was written by Swift, and produced by Max Martin and Shellback (Johan Shuster).
motions A and B total at just over 3 seconds long, yet they comprise approximately 110 seconds of the track. Margulis and others demonstrate that repetition in music is psychologically pleasing to us. The “mere exposure effect” is a name for the psychological phenomenon in which humans express a subconscious preference for things that we are familiar with, and music is proven to be no exception.

Rap music relies on repetition just as much as any other genre of popular music, if not more. Indeed, sampling drum breaks to compose a rap beat is rooted in repetition. However, because of rap’s tendency to feature sparse or no melodic content (until recently; see chapter 4), vocal repetition is instead to be found primarily in rhythmic motives or cells.

Example 2.16 shows an excerpt from Lady Leshurr’s “Queen’s Speech 4” (2015). In this example, Lady Leshurr employs a simple rhythmic motive consistently on the fourth beat of each measure. Thus, rhymed syllables also “rhyme” in a rhythmic sense. When it comes to repetition of rhythmic motives in flows, rhyme and rhythm typically come hand-in-hand. As is shown in Example 2.16, the repeated arrival of familiar rhymed syllables, rapped against a familiar rhythm, and consistently occurring in a familiar metric location all aid listeners to expect
repetition in a way analogous to the melodic repetition shown in “Shake it Off” (Example 2.15), albeit on a smaller, more local scale within the track.

In Example 2.17, a rapper again uses rhythmic motives to create aural connections through repetition in her music. Cardi B’s “Bodak Yellow” (2017) features extensive repetitions of a specific rhythmic motive, labelled “A” in the example below.

Example 2.17. A transcribed excerpt of Cardi B’s “Bodak Yellow” (2017, 0:14-0:44).

The above excerpt of “Bodak Yellow” demonstrates the power of rhythmic motives in rap music. Upon first hearing of this track, most listeners would hear every occurrence of rhythmic motive A as an end-rhyme—and indeed, they would be mostly correct. However, upon closer inspection, we can see that only the final syllable in each group of three (“move,” “choose,” etc.) is strictly rhymed from group to group. The first two syllables in each end-rhyme often do not rhyme at all—for example, “wanted” and “bloody” in measures 2 and 4. However, the insistent repeating of this rhythmic motive, along with its consistent placement on the third beat of most
measures, is enough to create an aural impression of syllable rhymes when in fact only rhythmic rhyme is present.\(^4^6\) In fact, the end rhyme in measure 8 does not contain a single syllable that rhymes with any of the surrounding rhymed groups, yet Cardi B’s rhythmic delivery is enough to essentially will her listeners into hearing a rhyme where there is none.

While it is common in rap for repeated rhythmic motives to not strictly rhyme every syllable, the opposite—that is, polysyllabic rhyming pairs that don’t correspond rhythmically—is exceedingly rare. Previously, Example 2.11 showed that Lauryn Hill occasionally delivers syllables that rhyme poetically, but not rhythmically. Another example of this uncommon practice can be seen in Example 2.18, a transcription from rapper Kyle’s verse in Donnie Trumpet and the Social Experiment’s track, “Wanna Be Cool” (2015). In this verse, most of Kyle’s rhymed syllables are rhythmically set to corresponding motives. However, from mm. 3-5 of the example below, Kyle pairs the rhymed syllables “Goodwill” with a much-elongated setting of “good still.” This moment is highly marked in the overall texture of the verse—Kyle completely disrupts the normative pattern of end rhymes arriving around the fourth beat. Furthermore, this moment corresponds with a new texture in the track’s background beat, and Kyle changes the primary rhythmic texture of his flow, switching to triplets for several bars. The aural effect of this lyrically rhymed pair that is not rhythmically rhymed is a marked separation

\(^{4^6}\) Cardi B also creates parallelisms using her vocal pitch, a technique discussed in Chapter 4.
from what has preceded this moment and what follows it.


Examples 2.16 and 2.17 illustrated another important central tenet of rhythmic motives in rap music, namely that they nearly always fall in the same metric position. Example 2.19, an excerpt from Dr. Dre’s “Forgot About Dre” featuring Eminem (1999), provides a counterexample. In Example 2.19, there is a clear rhythmic motive that falls as frequently as it does unpredictably within the meter. Within a span of just eight measures, the bracketed motive repeats eleven times, and can be heard in six unique metrical positions. This effect, while still falling under the heading of a repeated rhythmic figure, subverts our expectations, totally disrupting any sense of regularity of end-rhyme placement.

A more detailed analysis of this excerpt occurs in my 2017 article (Komaniecki 2017).

Section 2.4: Rapping Speed and Tempo

The speed at which a rapper is delivering his or her flow is intimately related to the rhythmic makeup of said flow. In his corpus study, Condit-Schultz’s data indicated that “the typical pace of rap deliveries [is] approximately 4.5 syllables per second […] It is extremely rare for rappers to rap fewer than two syllables per second while, at the other extreme, we see some rare cases of rappers rapping as fast as ten or more syllables per second.”\textsuperscript{48} In this section, I will examine closely several examples of “speed rap,” commenting on the effect that style of flow has on its rhythmic makeup.

Example 2.20 is an excerpt of Jaz-O and Jay-Z’s fittingly-titled track “The Originator,” (1990), one of the first examples of speed rap. In this excerpt, Jaz-O is rapping very fast by the standards of any era—about ten syllables per second, near the upper threshold of Condit-Schultz’s study. Notice the relative lack of variety in terms of rhythmic figures—as is typical of speed rap, Jaz-O prioritizes rapidly delivering syllables at a relatively steady rhythmic duration.

\textsuperscript{48} Condit-Schultz (2016).
Both compound and duple divisions are well-represented in speed rap from all genres, and Jaz-O’s steady patter of sixteenth-note triplets is reminiscent of the slower triplet rapping in the previous examples from Lord Infamous and Offset. Note the lyrical content of measure 4—in speed rap, occasionally lyrical creativity will fall by the wayside in favor of text that is easy to deliver extremely quickly.


Example 2.21 shows another instance in which semantic coherence gives way to rapping speed. In Busta Rhymes’s verse of Chris Brown’s “Look at Me Now” (2011, also featuring Lil’ Wayne), the three rappers rap up to an impressive speed of approximately 9.6 syllables per second. However, in order to maintain a rapid chain of sixteenth notes for eight measures, Busta Rhymes opted to fill in some lyrical gaps with nonsense syllables. Notice the end of measure four, in which Busta Rhymes raps “da da da da” in order to fill a beat with sixteenth notes. Later in the excerpt, he inserts the lyrics “a-bada boom a-bada bing” in order to add a quick rhyme.
(“bing”) into the existing series of rhymes. Furthermore, much of this exceptionally fast rap verse does not make sense syntactically—for example, the phrase “it doesn’t matter ‘cause I’m gonna da da da da” is never completed in any meaningful way, and that lyrical thread is abandoned as the rapper continues his deluge of syllables.


Example 2.22 is an excerpt from famed speed rapper Twista’s well-known and Grammy-nominated single, “Overnight Celebrity” (2004). A rhythmic feature of this excerpt can be associated with speed rap more generally: rhyme-triggered slowing. Note that not only are all of Twista’s lyrically-rhymed groups rhythmically-rhymed as well, but each group of rhymed syllables is set to a rhythm that is slightly slower than the surrounding texture. This rhyme-triggered slowing is common in speed rap, and can be seen to a lesser extent in Example 2.20.

The aural effect of Twista’s slower pace around end-rhymes is clear: The rhythmic setting allows the text to be heard more clearly and distinguished from the surrounding lyrics as a significant

49 “Bada bing” was a phrase used in the film The Godfather to reference murder, so this insertion is not entirely meaningless.
group of rhymed syllables.

Example 2.22. A transcribed excerpt of Twista’s “Overnight Celebrity” (2004, 0:46-1:00).

Rappers and fans often use the speed at which a rapper can deliver flow as a criterion for judging an artist’s skill or the quality of their craft. Indeed, it is common for rap tracks that feature speed rap to signal to listeners that they are hearing something impressive and beyond the grasp of lesser rappers. For example, Twista’s track “Slow Jamz” (2003) feat. Jamie Foxx and Kanye West features an interlude in which a woman engages in a bit of sexually-charged pleading with Kanye West, begging him to “do it faster, baby” (ostensibly referencing his rapping speed).\(^\text{50}\) Kanye replies: “Damn, baby, I can’t do it that fast, but I know someone who can—Twista!” As Kanye signals to his listeners that they are about to hear a rapper with considerable talent, Twista launches into another of his typical rapid-fire verses. Similarly, in Eminem’s “Lucky You” (2018) feat. Joyner Lucas, Eminem executes a shift from normally-paced flow to a blistering double time. Immediately before he makes this switch, a starting pistol

\(^{50}\)“Slow Jamz” can be found on both Twista’s album Kamikaze (2003) and Kanye West’s album College Dropout (2004).
sound effect can be heard—presumably signaling the commencement of an impressive lyrical “sprint.”

Likewise, many speed rappers themselves equate rapidity with quality. Examples 21a and 21b show two different sections of Mac Lethal’s “Die Slow” (2007). Upon a cursory glance, it is difficult to believe that both excerpts come from the same track—while examples show eight measures of flow, Example 2.23a only contains a single monosyllabic rhymed couplet, while Example 2.23b contains many rhymes, all of them polysyllabic, in close proximity to one another. In Example 2.23a, Mac Lethal (a rapper known for YouTube videos of his speed rapping) deliberately slows his cadence down to a loping eighth note pattern as he taunts his unnamed rap opponents, implying that their fans must be “stupid” to enjoy more moderately-paced flows. Later in the track, Mac Lethal reverts to a much quicker delivery, while maintaining the same scorning affect.

Example 2.23a. A transcribed excerpt of Mac Lethal’s “Die Slow” (2007, 0:47-1:00).

Examples 2.23a and 2.23b demonstrate what I stated previously—some rappers and rap aficionados equate rapping speed with traits such as complexity, technicality, skill, and especially quality. Part of the goal of this dissertation is to problematize this sentiment by suggesting a range of flow characteristics and techniques that can indicate a rapper’s technical prowess beyond their ability to rap quickly. Of course, a rapper’s quality is subjective, so I won’t attempt to make any value judgements—instead, let us simply explore other aspects of rhythm and structure, considering speed as one tool in a large kit.

As I have shown previously, speed rap verses occasionally prioritize rapidity over meaning, grammar, or syntax in their lyrics. I believe many listeners would acknowledge lyrical meaning as an important measure by which we can make claims about a rap track’s quality. My position is one that I doubt is particularly controversial—speed alone is not a sufficient indicator of a rapper’s skill, or the quality of their flows, any more that virtuoso technique is the sole indication of skill in any other performance domain.

<table>
<thead>
<tr>
<th>“And I can hit you with that motherfucker”</th>
<th>“I bleed the blood of a cold stone that roams”</th>
</tr>
</thead>
<tbody>
<tr>
<td>With you I don’t give a fuck who sent you</td>
<td>without a shadow</td>
</tr>
<tr>
<td>I’m a killer so I really gotta get ‘em</td>
<td>I’m only deep enough to realize that I’m shallow</td>
</tr>
<tr>
<td>Man I’m all up in em, walkin’ with a</td>
<td>My head I keep it up but it’s hard to keep it straight</td>
</tr>
<tr>
<td>motherfuckin’ midget</td>
<td></td>
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<tr>
<td>When she got some big old nipples</td>
<td>When you don’t believe in love and you just can’t cope with hate</td>
</tr>
<tr>
<td>And she got some big old titties</td>
<td></td>
</tr>
<tr>
<td>And I really don’t wanna be rude and leave</td>
<td></td>
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</tbody>
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Without taking a little nibble of food while I got a whole big old titty.”
- Twisted Insane, “100 Round Clip” (2012, 1:31-1:41)

As the difference between love and lust clarifies as trust
If you only had an hour to sum your whole life up
Would you spend that hour sayin’ that an hour ain’t enough?”
- Eyedea, “On This I Stand” (2001, 0:41-1:02)

Consider the excerpted lyrics from two different rappers above. Twisted Insane, who is known for his rapping speed, is rapping at a pace of more than ten syllables per second—a pace that makes his lyrics difficult to even make sense of upon first listening. It is perhaps due to this that Twisted Insane’s verse is difficult to comprehend even in writing—although no nonsense syllables are used, nonsense abounds all the same. If Twisted Insane had used nonsense words, it would likely take listeners a hearing or two to realize that, due to the incredible pace of his delivery. Eyedea’s verse is much slower than Twisted Insane’s, containing roughly the same amount of lines but stretching about twice as long, but phrases and ideas are much more intelligible, and the subject/verb relationships are consistently clear.52

While I have not conducted a lyrical corpus study, as I become more acquainted with speed rap, it becomes more evident that metaphor, simile, and other lyrical techniques become less common as flows speed up. I do not contend that speed rappers are unskilled—but I do take issue with the tendency of some artists to equate rapping slowly with rapping poorly. Indeed, as I

52 A study has also been done to rank the vocabulary of rappers. See https://io9.gizmodo.com/rappers-ranked-by-vocabulary-size-v2-0-1615347822 for details.
have shown above, many other factors beyond flow speed could play into our evaluation of a rapper’s “quality” or technical prowess, including wordplay, narrative, rhythmic diversity, and rhyme complexity.\textsuperscript{53}


I will conclude this chapter with an analytical vignette. “On Me” was released by rapper The Game in 2015, and features Kendrick Lamar as a guest artist performing one of the track’s three verses.\textsuperscript{54} The form of “On Me,” which is slightly unconventional due to its lack of any real chorus or refrain, is diagrammed in the table below.

<table>
<thead>
<tr>
<th>Section</th>
<th>Timestamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>0:00-0:10</td>
</tr>
<tr>
<td>Verse 1 (The Game)</td>
<td>0:10-0:44</td>
</tr>
<tr>
<td>Verse 2 (Kendrick Lamar)</td>
<td>0:44-1:50</td>
</tr>
<tr>
<td>Interlude</td>
<td>1:50-2:11</td>
</tr>
<tr>
<td>Verse 3 (The Game)</td>
<td>2:11-3:49</td>
</tr>
<tr>
<td>Outro</td>
<td>3:49-4:45</td>
</tr>
</tbody>
</table>

An important feature of “On Me” to note from the outset is the tendency of both artists to rap behind the beat, occasionally making rhythmic quantization difficult. Thus, the transcriptions in

\textsuperscript{53} See Chapter 3 for further analysis of rap verses in terms of rhyme scheme complexity, diversity, frequency, and regularity. After some initial analysis of rhyme schemes in tracks with exceptionally fast flow, my impression is that there is often an inverse relationship between rhyme complexity and flow speed. Certainly, the percentage of non-rhymed words in tracks with fast flow is generally much higher than in more average-paced performances. A corpus study focused on speed and rhyme will be needed to confirm my assumption, however.

\textsuperscript{54} It is worth noting that both The Game and Kendrick Lamar are prominent rappers from the city of Compton.
Examples 2.24a-c should be understood to be approximations of the laid-back, rhythmically imprecise style of flow exemplified in the track.

Example 2.24a shows The Game’s first verse of “On Me.” The verse is quite short, at a mere twelve measures. In this verse, The Game’s rhythmic style can be characterized by its lack of reliance on rhythmic motives as a rhyme-reinforcing tactic. Contrasting the recurring use of rhythmic cells in a specific metrical location that distinguishes some rap (see Cardi B’s rhythmic motives in Example 2.17), The Game seems less concerned with his rhymed syllables being set to familiar rhythmic patterns. For instance, the green-highlighted rhymes in Example 2.24a are primarily two-syllable words (“menstrual,” “dental,” etc.). Despite this, these rhymed groups are often not heard in identical rhythmic or metrical settings. While the first rhymed group in this pattern (“Benzo” in mm. 1) occurs on the fourth beat, in subsequent bars, the corresponding rhymes can be heard on the second and third beats (mm. 6 and 4 respectively), as well as distributed over a bar line (mm. 2-3). Furthermore, the two-syllable rhyme highlighted in green (“Benzo,” etc.) is heard several times in a fragmented form only containing the first syllable on words like “pens” and “clenched” (mm. 2 and 4).

Later in the same verse, The Game similarly sets rhymed groups to non-corresponding rhythms and metrical positions. In mm. 9-10 of Example 2.24a, there are three occurrences of a three-syllable rhymed group (highlighted in light purple). Not only is each of these three rhymed groups set to a slightly different rhythm, but each occurs at a different metrical position.
Example 2.24a. The first verse of “On Me” (2015, 0:10-0:42), performed by The Game.

Kendrick Lamar’s guest verse in “On Me,” which is transcribed in Example 2.24b, has a considerably different rhythmic profile than The Game’s prior verse. While The Game clearly favored a cadence that emphasized regular swung sixteenths in simple beat divisions, Lamar’s delivery is more varied. Rhythmically, Lamar structures his verse three different principal subdivisions: Straight sixteenths (mm. 1-2), swung sixteenths (mm. 3-16, 21-24), and triplet eighth notes (mm. 17-20). Lamar’s shift from straight to swung sixteenths circa measure 3 is an unusual moment, and is camouflaged by a gradual change, rather than an immediate one.

While The Game’s antecedent verse was characterized by its lack of clearly-defined rhythmic motives, Lamar’s answering verse is notable for the opposite reason. Indeed, the first
two beats of Lamar’s verse provide a rhythmic cell that is then repeated eight times in the
opening measures. This two-beat rhythmic motive—a sixteenth rest followed by seven syllables
delivered on sixteenth notes—is used to string together a series of corresponding rhymed groups,
highlighted in blue and red. While each rhyme or rhymed group is only 1-2 syllables long,
Lamar’s repeated rhythmic cell lasts for two beats, creating a sense of larger, rhythmically
rhymed units that exceed the lyrical rhymes in this section.

Lamar’s technique of using larger rhythmic motives to encapsulate rhymed groups
appears once more in mm. 17-20. Here, as Lamar markedly shifts from simple to compound
divisions, each measure is essentially the identical in terms of rhythmic profile. This rhythmic
setting, when paired with the metrical placement of emphasized rhyming syllables on each beat,
creates a passage in which both lyrical and rhythmic rhyme enforce one another. Indeed, while
not every syllable is part of a rhymed group, Lamar’s rhythmic setting helps to aid the
impression that entire measures and lyrical phrases rhyme with one another, as opposed to the
usual rhymed groups of 1-4 syllables.
Kendrick Lamar

Straight sixteenths

\( \frac{7}{4} \)

I made my way through crisis

I made my tape and recorded portraits in front of sirens.

You can't escape the tyrant you can't retrace where I've been

in ninety-eight my problem actin' too grown and shit cap-pin' at bitches ya__ y__ my religion through songs and shit.

on me, that's on me raise up nigga you are not the homie bitch I'm well connected

ec_ted from my section down to Long Beach fumblin' with Tetris if your block neglectin' your kids ev'ry day I
Example 2.24b. The second verse of “On Me” (2015, 0:44-1:50), performed by featured rapper Kendrick Lamar.

The Game’s final verse in “On Me” (Example 2.24c) which proves to be the longest verse on the track by a considerable margin, features a combination of the rhythmic/metrical techniques at play in the song’s first two verses. Little of Lamar’s mixing of beat divisions is at play, and when brief instances of compound division occur in mm. 10, 13, and 15, they seem more to be a fleeting result of cramming additional syllables into a phrase than a purposeful shift in beat divisions. Much like in Example 2.24a, The Game shows a tendency to perform “clusters” of corresponding rhymed syllables, many of which arrive in inconsistent metrical
positions. This is at play through most of the verse, but perhaps most so from mm. 13-15, in
which a two-syllable word (“Piru”) is rhymed in a burst of six different metrical locations in two
measures, not including multiple one-syllable fragments that also occur during that section.

That said, The Game’s final verse seems to reflect some of the qualities of Lamar’s prior
verse in terms of rhythmic motives and metric placement. For example, mm. 1-4 of Example
2.24c feature a rhymed group (highlighted in blue) that appears consistently on the fourth beat of
each measure (in addition to additional occurrences in mm. 3 and 4). Mm. 5-8 is nearly as
consistent, with the majority of rhymes (highlighted in yellow) falling on the fourth beat in a
normative fashion. Other analogous uses of rhythmic motive occur throughout the verse, but
especially prominent are mm. 23-24, in which The Game rhymes a six-syllable phrase (“eight
balls on the corner”) with a subsequent phrase (“ate y’all on the corner”) that is placed in the
exact same metric location. The two phrases are additionally set to the same rhythm, which
serves to separate each phrase from the general background texture of steady, swung sixteenth
notes.
can I rap for a minute black on the track for a minute look in my rhyme book see murder like when I was a fan of Notorious B.I.G., ain't no gimmicks round here, this Compton, Me Doc and Ken drick Chronic, Good Kid, my first year, three Documentaries, now I'm block in' sen tries sixteen Impala they bounce like they I gou da - la that's on my ma ma nig gas up and did me a solid I put that on me, that's on me, you get a bullet fuck-in' with the little homie Think-in' back then, like fuck your rules, nigga this Pi - ru slide-through with the Er - y - kah Bae - du West side Compton nigga don't mind if I do from Pi - ru street to my old street, nigga this Compton, grew up on a dead end, got an armful dead friends round here Crips be sweat-in' us nigga like a headband, like what's up cuz? No time to stop and think pull your strap before they do or you get shot before you blink. Straight out - ta
Comp ton three times I told you the third time I said it with T D E moth-er fuck er I'll make you eat ever y let ter spoon feed you nig gas like tod lers from the cit y of Imp a las where shot call ers take they pit bulls and feed them nig gas rott wel ers My clip full

I quick pull no more sling - in' eight balls on the corn - er and all them nig - as I used to free - style with I ate y'all on the corn - er call the cor - o - ner nig - gas dead out here hang - in' on to life by a thread out here them nig - gas wear - in' all that red out here P snap-backs on nig - gas heads out here so don't you come fuck-in with the lit - tle ho - mie So O - G, they call me Ton - y Mon - ta - na no French my red ban - dan - a le - git my Un - cle told me 'fore he died just keep your hand on the brick so I did
Example 2.24c. The third verse of “On Me” (2015, 2:12-3:49), performed by The Game.

“On Me” serves as an example of contrasting rhythmic approaches to flow on a single track. While both rappers have distinguishing characteristics to their verses, the track is unified by many of the rhythmic characteristics that I have identified earlier in this chapter that are common in hip-hop. It will be apparent to readers that decoupling rhythm and rhyme in rap analyses is impractical at best. While rhythm is an important parameter of hip-hop, an extended analysis of a track dedicated solely to rhythm would necessarily ignore many aspects of rhyme. As rhythmic motives are rarely used without additional rhyming correspondences, it is important for analysts to analyze rap holistically whenever possible, emphasizing the strong relationships that often exist between both rhyme and rhythm. In the following chapter, I will elaborate further on aspects of rhyme in hip-hop, while bearing in mind the framework established in this rhythm-focused chapter.
Chapter 3: Rhyme in Rap Flows

“There’s so many words in the English language, I’ve never come to a point where I can’t express how I feel and make it rhyme at the same time.”—MURS

Rhymes are the bedrock upon which rap music is built. Despite this, determining which aspects of rhyme can be considered strictly musical is not an easy task. In this chapter, I will discuss rhyme as a parameter of flow inasmuch as rhyme can impact the musical characteristics of a rapper’s delivery, such as metric placement, emphasis, rhythm, and form. Features such as semantic meaning of lyrics, punchlines and double-entendres, and intertextual references fall outside of the purview of this chapter, despite each of these being important for the holistic understanding of rap music.

After an introduction, I will present analyses that highlight aspects of rhyme with musical ramifications, including frequency, regularity, and uniformity. Then, the bulk of the chapter will analyze various rhyme schemes as miniature musical forms occurring multiple times in a verse or track and combining to form larger and more complex structures. I will conclude with some brief thoughts on non-English rap music, and how rapping in languages other than English may impact rhyme schemes and song structure.

Section 3.1: Introduction

As rhyme is so integral to rap music, it has received a significant amount of scholarly attention. When discussing rhyme, hip-hop scholars have confronted issues such as secondary rhythms implied by rhyme, rhyme perception and memory, and the linguistic and cultural significance of rhyme in rap music. Adams has considered rhyme as a musical parameter, most notably in his 2009 article “On the Metrical Techniques of Flow in Rap Music,” in which he

describes the significance of the metrical placement of rhymes, noting that in Blackalicious’s track “Blazing Arrow,” rhymes create a “rhythm of their own” against a steady delivery of sixteenth notes, allowing for listeners to get the impression of rhythmic variety when a rapper is delivering syllables at a regular and mostly unchanging rate.

Corpus studies published in *Empirical Musicology Review* have also dealt with rhyme in hip-hop. Condit-Schultz (2016) analyzes his data based on the three basic musical categories of “rhythm, phrasing, and parallelism,” considering rhyme to be a form of “phonemic parallelism as well as a crucial device for structuring phrases and creating rhythmic emphasis.” Condit-Schultz co-opts the term “motive” to refer to parallel phonemes in rhyme—for example, the motive of the rhymed couplet “grace/lace” would be “ace.” He also notes some pitfalls in rhyme analysis, pointing out that determining what rhymes and what doesn’t can be a subjective endeavor. Rap lyrics will often contain more literal rhymes than perceived rhymes. For example, in this sentence, there are numerous syllables that technically rhyme with one another (“in/this,” “rhyme/like”), but if one were to read it aloud, a listener would likely not note these syllables as rhymed. For rhymes to be noted by listeners, Condit-Schultz suggests that prosodic and structural parallelism (inflecting syllables similarly and placing syllables in similar metrical locations, respectively) is necessary. Using his corpus, Condit-Schultz demonstrates that approximately 25% of syllables in rap music are rhymed, and that while couplets are the dominant rhyme scheme in rap, longer rhyme chains become more popular around 1998.

Ohriner (2016) makes several observations that are relevant to the present chapter. Ohriner asserts that there is a “lower limit for durations that allow for rhyme between similar syllables.” In short, two syllables may technically rhyme but not be perceived as such due to their close proximity to one another—for example, the two syllables of “flapjack” rhyme, but are
unlikely to be noted as doing so, due to their consecutive positions. Ohriner also suggests that an “upper limit” for rhyme perception must exist as well—if two syllables rhyme, but are many measures away from one another, listeners may not note the rhyme. Additionally, Ohriner coins the concept of “rhyme projection,” which is “a measure of how frequently the sound of a rhyme will be repeated after a certain duration.”

Of course, rhyme (including rhyme in rap music) has been studied extensively outside music academia, especially in the field of linguistics. Linguist Jonah Katz (2008) has undertaken some corpus-assisted study of rhyme in rap music, and focuses especially on rhyme’s function as a structural component of verse. In fact, Katz borrows from Lerdahl and Jackendoff’s seminal 1983 text, using rhymed syllables as an implicatory of secondary or tertiary-level prolongation in hip-hop. Katz argues that “the independence of rhyme from rhythm is formally identical to the independence of musical prolongation from rhythm.” Katz’s work results in “time-span reductions” of rap lyrics such as his example show in Example 3.1.

![Example 3.1. From Katz (2008).](image)

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56 Ohriner uses the example of “downtown.”
H. Samy Alim’s 2003 article in the *Journal of English Linguistics* focuses on the “linguistic inventiveness and innovativeness of contemporary African American lyricists” through the music of rapper Pharoahe Monch. Alim’s writing categorizes various rhyming techniques, including “compound internal rhymes” and “bridge rhymes.” Additionally, Alim discusses several non-musical aspects of rhyme, including the literary techniques that are employed by rappers, such as metaphor, irony, and imagery.

One implicit thread in much scholarship on rhyme, though it is seldom addressed outright, is the subjectivity involved in judging whether words rhyme with one another. There are numerous factors that should be weighed when making these decisions. I would assert that when a listener determines a pair of words or syllables to have rhymed with one another, they are weighing two primary factors: Phonetics and time.

Let us consider the phonetics of rhyme. Taken broadly, rhyme can typically be defined as “a correspondence between words.” However, what we consider to be rhyme is often defined by more specific parameters. Specifically, a “perfect” rhyme exists between two or more syllables when both syllables end with the same vowel and (if applicable) consonant sound. For example, the words “pan” and “tan” are perfect, single-syllable rhymes, for they contain the same vowel sound in their only syllable and terminate with the same consonant. Perfect rhymes can also exist between multisyllabic words or syllable groups—for example, the words “dashing” and “mashing” are two pairs of conjoined syllables that contain the same vowel sound and terminate with the same consonant.

One step removed from perfect rhyme would then be “imperfect” rhymes, sometimes referred to as “slant rhymes” or “half rhymes.” The term “slant rhyme” is often used as an umbrella term for any imperfect rhyme, but can mean either A) multisyllabic rhyming groups
with one syllable altered (e.g., “tie my lace” and “buy a vase”), B) words that end with the same consonant but different vowel sounds (e.g., “bridge” and “grudge”), or C) words that end with the same vowel sounds but different consonants (e.g., “flow” and “cold”).

Alliteration, or the same sound occurring at the beginning of multiple words within a short space of time (e.g., “cup of coffee”) is not as common as traditional vowel rhyme in rap music. Nonetheless, I consider alliteration to be a loose type of rhyme, as rhyme can be broadly defined as a correspondence between words. Table 3.1 below shows three examples of alliteration in rap music.

<table>
<thead>
<tr>
<th>Rap Track Details</th>
<th>Rap lyrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raekwon ft. P.U.R.E., “M&amp;N” (2017, 0:21-0:31)</td>
<td>&quot;Multimillion-dollar mansions manufactured melanin mud, through this metropolis / Millimeters are met with the mufflers / My method is meditative musical medicine / With sergeant mentality mechanisms&quot;</td>
</tr>
<tr>
<td>Lowkey, “Alphabet Assassin” (2008, 0:33-0:43)</td>
<td>“Batter babbling battlers with a bag of batteries / Ban these bias blaggers because they're badly backwards b / Batty bible bashers get baddled Basra to Brackenbury / Baffle backpackers with bars bad as a big of b”</td>
</tr>
<tr>
<td>Run the Jewels, “Blockbuster Night Part 1” (2014, 1:03-1:10)</td>
<td>“No hocus pocus, you simple suckers been served a notice / Top of the morning, my fist to your face is fucking Folgers”</td>
</tr>
</tbody>
</table>

Table 3.1.

The flexibility of vowels and pronunciations of words based on regional dialects and/or rapper preference further complicates the issue of rhyme. Certain words may rhyme only when spoken using certain regional accents—for example, a rapper from many parts of the Southern United States could rhyme “think” with “tank,” while a rapper with either an Australian accent or

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58 In this track, rapper Lowkey actually raps twenty-six “verses,” with one dedicated to alliteration based on each letter of the alphabet.
a Brooklyn accent could rhyme “horse” with “sauce.” Regardless of their accents, rappers will often bend vowels in certain words in order to create a rhyme without altering the word beyond recognition. Consider the following excerpt from Eminem’s guest verse in 50 Cent’s “My Life” (2012), also featuring Adam Levine.

“I think you fucking meatballs keep on just forgetting
Thought he was finished, motherfucker, it's only the beginning
He's buggin' again, he's straight thuggin', fuck who he's offending!
He'll rip your vocal chords out
And have them bitches plugged in the
Motherfucking wall with 3000 volts of electricity.”

The end-rhymes in this excerpt revolve around the three-syllable vowel series “ʌ-ɪ-i.” In order to make the final word of the excerpt (“electricity”) align with the established rhyming pattern, Eminem purposefully mispronounces the third syllable, rapping the word as “electruhcity.”

Rappers can also create the impression of rhyme where there would normally be none by using a process that I will refer to as “rhyme shift.” Rhyme shift refers to a process where rappers perform a series of rhymes in which rhymed syllables are gradually altered over the course of an excerpt, leading listeners to hear an entire unit as being unified by rhyme even if the first and last rhyme in that unit don’t strictly rhyme. Consider the following excerpt from Lil’ Wayne’s guest verse on Chris Brown’s “Look at Me Now” (2011), also featuring Busta Rhymes.

“Man, fuck these bitch-ass niggas! How y’all doin’?
I’m Lil Tunechi, I’m a nuisance
I go stupid, I go dumb like the Three Stooges
I don’t eat sushi, I’m the shit, no, I’m pollution, no substitution
Got a bitch that play in movies in my jacuzzi, pussy juicy.”

In this excerpt, Lil’ Wayne begins his series of end-rhymes with a focus on the two syllable vowel pair “u” and “i” (“doin’,” “stooges,” etc.). In the fourth line, however, Lil’ Wayne introduces an altered version of this rhymed pair with the word “sushi,” which eventually becomes the primary rhymed pair for the rest of the excerpt (“movie,” “jacuzzi,” etc.). In
gradually shifting from a “u” and “i” to a “u” and “i” pairing, Lil’ Wayne gives listeners the impression of the entire unit rhyming cohesively, even if the first rhyme (“doin’”) does not rhyme with the final rhyme (“juicy”).

In addition to phonetics, also important to understanding rhyme in hip-hop are issues of time, meter, rhythm, and emphasis. I have already mentioned Ohriner’s concept of upper and lower limits for perceiving rhyme. In my own analyses of rhyme in rap music, I will use subjective judgement to determine when a potential rhyme has surpassed either of these limits, resulting in it not being perceived as a rhyme by most listeners. Metric placement is another important consideration to weigh when identifying rhymes. Consider Examples 3.2 and 3.3 below, excerpts from Migos’s “Bad and Boujee” (2016) and Ice Cube’s “The Nigga Ya Love to Hate” (1990). In Example 3.2, Migos member Offset sets up a regular rhyme scheme in which rhymed syllables occur on the second half of beats two and/or four. Because of this metric organization, the syllables “drop” (from “raindrop”) and “top” are markedly rhymed in the first measure of the example. In Example 3.3, Ice Cube’s end rhymes are “program” and “Brougham,” both marked by their placement on the fourth beat of a measure. However, the same two syllables as in Example 3.2, “drop” and “top” occur in the second measure of Example 3.3. In the case of Example 3.3, these syllables are de-emphasized by the metric placement of rhymes in the surrounding texture. Thus, the exact same two syllables occur in both examples, but in Example 3.2 they are markedly rhymed, while in Example 3.3 they are not. These examples show the power of musical context to shape our perception of rhyme—an idea that I will return to later in this chapter.

The terms “rhyme shift” and “rhyme transform” were suggested to me by Mark Chilla in personal correspondence.
When one considers issues of both phonetics and time, it becomes clear that defining rhyme is ultimately a partially subjective endeavor. When identifying rhymes in this chapter (and throughout this dissertation), there were many circumstances where I was unable to state with absolute certainty whether or not a pair of syllables rhymed. Thus, as I move forward into subsequent sections of this chapter, readers should bear in mind that my analysis of rhyme in hip-hop will reflect the criteria outlined above, but also be influenced by an unavoidable portion of subjectivity. In cases of possible ambiguity, I will try to justify my claims as much as possible.

Section 3.2: The Musical Aspects of Rhyme

In the following section, I will consider various aspects of rhyme that have ramifications for musical analyses. Each category will cover several implied “norms” in rap music, as discussions will necessarily revolve around practices that are most commonplace in the genre.

Frequency

The rate at which rhymed syllables occur plays an important structural and perceptual role in our hearing of rap music. While it is difficult to form generalizations about the genre as a whole, a typical pace for rhymed syllables is about one rhymed syllable (or syllables in a rhymed multisyllabic group) every four beats, usually occurring on the fourth beat of a given measure, and given that the typical tempo for rap tracks falls within the range of 85-115bpm, listeners can
expect a rhyme approximately every 2-3 seconds (Condit-Schultz 2016). Example 3.4a shows an example of an extended passage of typical rhyme frequency from Lady Leshurr’s “Queen’s Speech 4” (2015). With the exception of the first measure of the excerpt, Lady Leshurr consistently places one rhymed group per measure, each occurring on the fourth beat.  

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Example 3.4a. A transcribed excerpt of Lady Leshurr’s “Queen’s Speech 4” (2015, 0:14-0:30).
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A visualization of the rhyme frequency in Example 3.4a can be seen in Example 3.4b, in which all non-rhyming syllables are removed from the transcription in order to highlight the consistent rhythm and metrical placement of each rhymed group. A further reduction of the same passage can be seen in Example 3.4c, which shows only the metrical placement of each rhymed group. Example 3.4c perhaps most clearly conveys the effect of a regularly-occurring rhyme pattern in which rhymes occur in predictable locations and demonstrates the secondary rhythm that is projected by the excerpt’s rhyme scheme.

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60 I have not marked the syllable “fam” on beat 3 of the first measure as rhymed due to the absence of the verse’s signature rhythmic motive. While this syllable does technically rhyme with others I have marked in this section, I believe the absence of rhythmic motive makes this rhyme less salient.

61 This style of rap lyrics, in which rhymes are set up by seemingly disconnected phrases through association, is colloquially referred to as “hashtag rap.” See https://tvtropes.org/pmwiki/pmwiki.php/Main/HashtagRap.
Example 3.4b. A rhyme and rhythm reduction of Example 3.4a.

Example 3.4c. A further rhyme reduction of Example 3.4a.

A quicker secondary rhythm can be projected when a rapper places rhymed syllables closely together. Example 3.5a shows an excerpt from rapper Ludacris’s track “Roll Out (My Business)” (2001). This excerpt begins with a fairly normal pattern, as Ludacris rhymes at a leisurely pace and places rhymed syllables near the end of the third beat in two consecutive measures. By the third measure of Example 3.5a, it appears that Ludacris will continue this pattern—however, instead of concluding this quatrain with another single rhymed syllable in
m. 4, he instead delivers a flurry of five rhymed syllables in a single measure, falling at inconsistent points within each beat.


Example 3.5b shows that Ludacris’s usage of closely-spaced rhymes functions as a musical motif throughout “Roll Out (My Business).” As in Example 3.5a, a regular rhyme pattern is established, then disrupted by numerous rapid-fire rhymed syllables in Example 3.5b. The extremely close proximity of some of the rhymes in m. 4 of Example 3.5b is noteworthy. While Ohriner theorizes a “lower limit” to rhymes, the three words “chillin’,” “winnin’,” and “drillin’” all can be heard as rhyming with one another, despite happening in extremely rapid succession. By setting up this rhyme scheme as a musical motif earlier in the track, Ludacris was able to condition his listeners to expect many rapid-fire rhymes at the end of phrases, thus allowing him to temporarily decrease the lower limit of his listeners with respect to rhyme. As with Examples 1 and 2 in this chapter, Ludacris’s rapping in the previous examples demonstrates the ability of rappers to influence what listeners perceive as rhymed by shaping the context in
which rhymes are delivered.


While relatively frequent and back-to-back rhymed syllables are moderately common in rap music, rhymes that are separated by more than two measures are much rarer. This is most likely due to the phenomenon that Ohriner describes as an “upper limit”: As end rhymes are placed further and further apart from one another, listeners are less and less likely to hear these syllables as related.

Rhyme Regularity and Rhyme Density

In addition to features like speed and rhythmic complexity, complicated and sophisticated rhyme schemes are often considered to be indicators of quality flow, written by experts of the craft. However, modeling what exactly makes a rhyme scheme interesting, complex, or varied can be difficult. In this section, I propose untangling two related concepts: regularity and density. I define rhyme regularity as the degree to which end-rhymes occur in a “regular” (or “default”) metrical location as defined contextually within a verse. I define rhyme density as the average number of rhymed syllables per measure.
As a musical parameter, rhyme regularity can be used by rappers to create a sense of stability (or lack thereof) within a given verse. Example 3.6 shows the entirety of the first verse of rapper Eve’s “Let Me Blow Ya Mind” (2001). The verse is a study in regularity, as nearly every rhyme occurs on the fourth beat of each measure. Furthermore, each end-rhyme is a two-syllable rhymed group set to the same rhythm and even the same two vowel sounds, allowing listeners to settle into a regular rhyme structure that is as predictable as the track’s looped beat.
Listeners may well have a sense that the rhyme scheme shown in Example 3.6 is quite regular, while other rhyme schemes may be more irregular. Regularity of rhyme can impact questions of musical style, accessibility, and judgements regarding the complexity of a hip-hop track. Rhymes can be predictable in terms of lyrical content and metrical placement, or they can arise seemingly spontaneously, peppered throughout a metrical texture at irregular intervals. This brings me to the question: Can we measure exactly how regular a rhyme is over the course of a given excerpt?

The excerpt shown in Example 3.6 contains seventeen end-rhymes over sixteen measures, each rhyming with the initial lyric “glasses” in m. 1. We can say with mathematical specificity how regular the rhymes in Example 3.6 are. First, we must determine the “default” metrical position of end-rhymes—as in most rap, in the case of this example, the majority of end-rhymes fall on beat 4. Then, we simply determine what percentage of occurrences of this default metrical position contain the excerpt’s primary end-rhyme. In Example 3.6, every fourth beat of every measure is occupied by one of Eve’s end-rhymes. Thus, the regularity of the excerpted rhyme scheme in this example is 100%.

Example 3.7 shows a transcribed portion of the track “Come Correct” (2017) by rappers Gifted Gab and Blimes Brixton. While Blimes Brixton begins the track by initiating a series of

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62 The perceived complexity of a hip-hop track is important, as rap aficionados tend to venerate artists regarded as “complex.”

63 The three brief rhymes in m. 11 are insignificant in the larger rhyme scheme of the verse. They are highlighted in yellow and blue in Example 3.6 for the sake of completeness, but I am excluding them from my discussion of end-rhyme regularity in this example.

64 While Example 3.6 features an end-rhyme that is continued for the duration of the sixteen-bar verse, the same technique of determining regularity could be applied if Eve switched to a different end-rhyme for a portion of the excerpt. While in Example 3.6, the rhyming phoneme placed on the fourth beat is consistent throughout the entire excerpt, this is not necessary for a track to be 100% regular. That is to say, if Eve had used a series of contrasting end-rhyme couplets, each of still landed on beat four of each measure, the excerpt would still be entirely regular.

65 “Gifted Gab” is the rap alias for Gabrielle Kadushin—not to be confused with Timothy Parker, also known as “Gift of Gab,” of the rap duo Blackalicious.
end-rhymes with the lyrics “haven’t slept,” Gifted Gab completes the eight-measure rhyme series with a pair of lines of her own. When considering the regularity of rhymes in Example 3.7, we must first determine the “default” position of end-rhymes, which in this case is unsurprisingly on beat four, on which a plurality of rhymes is placed.

Further comparison of metrical positions of end-rhymes shows Example 3.7 to be considerably less regular than Example 3.6—rhymes occur in a total of five different metrical positions within the eight-measure excerpt. By analyzing the rhyme regularity of Example 3.7 using the same method, we can specify that this excerpt of “Come Correct” is 62.5% regular. Put simply, three of the eight occurrences of beat four in this example do not contain a complete end-rhyme, making Example 3.7 a much less regular example.
Example 3.7. A transcribed excerpt of “Come Correct” by Gifted Gab and Blimes Brixton (2017, 0:22-0:45).
One thing not accounted for by method of determining regularity is additional rhymes that are outside of the default metrical position. Return to Example 3.6, which contains more than one end-rhyme in the first, third, and eleventh measures. In my analysis, I consider moments such as these to not impact rhyme regularity but do consider them to be impactful for the parameter of “rhyme density,” or the average number of rhymes per measure in a given excerpt. Thus, the while the verse from Eve in Example 3.6 has a rhyme regularity of 100%, it has a rhyme density of approximately 1.4 rhymes per measure, because there are twenty-three rhymes over the span of sixteen measures.

In other words, rhyme regularity refers to the percentage of rhymes that fall in a default metrical location, while rhyme density refers to the percentage of syllables that are rhymed. In sum, I propose to quantify the regularity of rhymes in a verse as follows:

1. Determine the most common (“default”) beat-classes on which rhymes occur.
2. Divide the number of occurrences of rhyme in that location by the total number of those beat-classes in the verse.
3. The resulting decimal, expressed as a percentage, gives the rhyme regularity. If the percentage is less than 50%, the verse is “irregular,” meaning that rhyme regularity is not a salient feature of the verse.

Finally, there are moments in rap music where rhyme density may be so great that it is difficult or impossible to determine a default metrical location for end-rhymes. Example 3.8 below shows a transcribed excerpt of MF DOOM’s “Rap Ambush” (2009), in which the texture is so saturated with rhymed syllables that it is difficult to rationalize any one metrical location as primary. The rhyme density of this excerpt, which features thirteen rhymed syllables over the space of two measures, is 6.5 rhymes per measure. In instances like this, I consider determining rhyme regularity to not be a useful metric and discard it in my analyses. I also discard rhyme
regularity when rhyme density is very low—a sparsely-rhymed verse also makes it unhelpful to determine a default metric position for rhymes.

Example 3.8. A transcribed excerpt of MF DOOM’s “Rap Ambush” (2009, 0:30-0:35).66

Quantifying the rhyme regularity of rap excerpts allows us to empirically verify (to an extent) the level of complexity and unpredictability in rap flows. This is a useful consideration when analyzing rap music, due largely to the high importance that rappers and listeners often place on complexity in flow, equating it with sophistication, talent, and mastery of the craft.

There are, however, examples of rap verses that give the impression of a certain level of complexity even though they are quite regular. Example 3.9 shows one such verse by rapper Missy Elliott, in which the downbeat of every bar in the sixteen-measure verse is unified by the same rhymed vowel (u as in “you”). Using the method I established above, Missy Elliott’s performance in this example is 100% regular, but unpredictability and liveliness come in the form of the buried couplets throughout the verse that add to the excerpt’s rhyme density without impacting its regularity. As the rhyme density in this example increases from 1.3 rhymes per measure in the opening six bars to approximately 2.7 rhymes per measure in the verse’s final eleven measures, listeners may perceive an increase in complexity or even tension.

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66 Rhythmic values are approximate in Example 3.8, as MF DOOM does not rap with a great deal of rhythmic precision.

Correspondence of Rhymes with Other Musical Features

The majority of rap music is comprised of rhythmicized lyrics delivered over a repeated background beat, with repeated sections typically ranging from one to four measures in length. It is thus useful analytically to consider the degree to which rhymed syllables correspond with a
track’s background beat. Noting relationships between a track’s text and its musical background is not a particularly new approach to rap analysis—Adams first espoused a similar methodology in his 2008 article, in which he noted various instances in which MCs reflected motivic elements of the background beat in their delivery of the lyrics. More recently, Ohriner (2016) wrote about “the relation between metric ambivalence in the instrumental parts of a rap track” and a rapper’s delivery.

Binary rhyme schemes are predominant in rap. As rap beats are usually either repetitions of either a single measure or an even number of measures, there is generally a high level of correspondence between repeated musical sections and rhymed syllables due to the binary construction of both elements. Whether these rhyme/music correspondences are coincidental or not is not always clear.

As a musical parameter, however, rhyme occasionally has more sophisticated relationships with the background beat. In Example 3.10, rapper Leikeli47’s rhyme scheme begins with a steady stream of four rhymes over four measures. The background beat is sparse during these measures, consisting only of a repeated bass line and claps. Signaled by a drum fill in the fourth measure of the excerpt, the background beat markedly changes in m. 5, incorporating a bass drum and snaps. At this moment, Leikeli47 changes her rhymed vowels as well, adding a degree of synchronization between her rhymes and the musical features of the background beat.
A similar correspondence between rhyme and beat can be seen in Example 3.11, an excerpt from Dr. Dre’s “Forgot About Dre” (1999). In the excerpted quatrain, Dr. Dre places rhymed syllables in the first, second, and fourth measures, with a contrasting interior couplet in the third measure. Dr. Dre’s rhyme placement corresponds directly with the harmonic
characteristics of the background beat. The beat of “Forgot About Dre” is a repeated four-measure harmonic oscillation in which a G minor harmony can be heard in the first, second, and fourth measures, contrasting an Eb major harmony in the third measure. In this example, the measure of contrasting harmony coincides a measure of contrasting rhyme in this scheme, establishing a relationship between music and rhyme.


It can also be analytically useful to note instances in which a rapper’s rhyme scheme is markedly asynchronous with the background beat. Ohriner (2016) has already remarked on Outkast’s “Mainstream” (1996), noting an unusual background beat that supports both simple triple and duple hearings, and remarking on the ways in which rappers T-Mo and André 3000 reflect either hearing of the meter depending on whether the majority of their rhymes occur every three or four beats. For simpler examples of a rhyme scheme seemingly at odds with the background beat, we can turn to any of numerous examples of enjambment in rap music. Adams (2009) refers to enjambment as “a syntactic connection that overrides a musical boundary.” For an example of enjambment, see Example 3.12, in which rapper Ill Camille delivers a quatrain in which a final rhymed syllable “overflows” into the fifth measure, placing the rhyme scheme momentarily at odds with the regularly looped, four-measure background beat.
A similar instance of a rhyme scheme overriding a binary metrical boundary occurs in Example 3.13, in which The Notorious B.I.G. allows an “extra” syllable rhyming with a couplet in the first measure to fall at the beginning of the second measure, encroaching on the metrical space of the example’s second couplet.

Non-Musical Aspects of Rhyme

It is important to note that many aspects or parameters of rhyme have little impact on rap music in the categories of rhythm, meter, and form, and thus will have little emphasis in this chapter. Perhaps the most glaring omission is the semantic meaning of any given set of lyrics, which, while often essential to fully understanding a rap track, cannot be said to be “musical” in any meaningful way. Furthermore, rhetorical devices (such as metaphor, double entendre, and other word play) often have a central role in rhyme schemes, though they too do not have any specifically musical ramifications. A final non-musical (but significant nonetheless) rhyme technique is the manipulation of vowel sounds to create rhymes. This can occur due to a rapper’s
regional accent—for example, a Brooklyn native could naturally rhyme “text it” and “record,” while a Minneapolis native could not. Vowel manipulation can also occur due to a conscious effort on the part of a rapper to make a syllable conform to a rhyme scheme. A particularly blatant example can be seen in Example 3.14, in which Eminem alters the pronunciation of the lyric “twice,” normally pronounced with the diphthong vowel “ai” (as in “why”), so that the vowel sound is “i” (as in “fleece”) in order to make the line fit in with a stream of three-syllable end-rhymes for comedic effect.  


Section 3.3: Rhyme and (Miniature) Musical Forms

Perhaps the most direct musical impact of rhyme on the musical characteristics of rap is the creation of small musical phrases and forms due to a rapper’s use of rhymed syllables. Just as an eight-measure melody reaching a half cadence at the end of its fourth measure can signal an interrupted period, the placement of rhymed syllables can result in a myriad of small forms being created in each rap verse. Thanks to poetry, many basic rhyme schemes are widely known outside of rap scholarship. It is important to identify these basic rhyme forms in hip-hop music, for rappers will often either rely on basic forms, and sometimes alter them conspicuously. Thus,

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68 The rhythms performed by Eminem are more complex than shown in this transcription, but in interest of a simple discussion of his rhyming techniques, I have quantized his attack points to the nearest sixteenth note.
in the subsequent section I will provide numerous examples of many of the most common rhyme schemes as they occur in rap music, creating musical phrases and forms.

**Couplets**

Couplets, or pairs of rhymed endings, are extremely common in rap music. Example 3.15 shows a rhymed couplet in N.W.A.’s “Straight Outta Compton” (1988). Couplet schemes can also be referred to as “AA” rhyme schemes.

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**Example 3.15.** A transcribed excerpt of Ice Cube’s verse in N.W.A.’s “Straight Outta Compton” (1988, 0:12-0:18).

Related to the basic AA couplet is the AABA form, also known as the “rubai’i” in traditional poetry. Often, the AABA form in rap is most easily understood as a basic couplet with an “extra” rhymed syllable inserted in the first half of the form. Alternatively, an AABA scheme could be understood as a quatrain, or set of four lines, with all lines except the third ending with a rhyme. Example 3.16 shows an AABA rhyme scheme, also excerpted from “Straight Outta Compton.”

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**Example 3.16.** A transcribed excerpt of Ice Cube’s verse in N.W.A.’s “Straight Outta Compton” (1988, 0:18-0:22).

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Quatrains

Quatrains, or groups of four lines, are another common miniature form in rap lyrics. Two couplets are often combined to create a quatrain, in a similar way to when a compound period is created by a combination of two smaller musical periods. Quatrains can have many different configurations in rap music, but the simplest is the AAAA form (also referred to as “monorhyme”), where all four end-rhymes rhyme with one another. Example 3.17 shows one such quatrain as performed by rapper Sa Roc in the track “Forever” (2018). Rather than the most common placement of end-rhymes on beat four of each measure, Sa Roc favors placing her end-rhymes on the third beat in this example, allowing each phrase to start with a pick-up fourth beat from the previous measure.


The relatively simple template of an AAAA quatrain can sometimes contain additional rhymed syllables. Example 3.18 shows an excerpt from 2pac’s “Changes” featuring Talent (recorded 1992, released 1998). While the overall form of this quatrain is AAAA, 2pac inserts
various additional rhymes throughout, both partial and complete, greatly increasing the rhyme density of this excerpt.

2pac’s technique in Example 3.18 of inflating a basic AAAA quatrain by inserting numerous additional “A” rhymes whenever possible is exceptionally popular. Often, rappers seem to approach AAAA quatrains as a challenge, wondering how many additional rhymed syllables they can possibly fit in just four measures. In Example 3.19, Tech N9ne delivers one such quatrain, in which a series of rhymed groups are chained together in rapid succession. Not every rhymed group is a complete match to the initial three syllable lyric “froze over,” but the characteristic “oo” vowel (as in “soul”) is peppered throughout the quatrain. The effect of this high rhyme density is an obfuscation of the form of the section, and a good illustration of the interaction between rhyme density and rhyme regularity: As density increases, perceived regularity decreases, even in sections like Example 3.19, which has 100% rhyme regularity.
Another common variation of the quatrain is the AABB form. Example 3.20 shows an AABB form in Q-Tip’s “Let’s Ride” (1999). In this relatively basic example of the form, we can see that an AABB quatrain is created simply by joining two contrasting couplets.

A quatrain can also support an enclosed, or ABBA rhyme scheme. Example 3.20 shows one such form, taken from Dr. Dre’s “Forgot About Dre” featuring Eminem (1999). Enclosed rhyme schemes such as the one shown in Example 3.21 create a sense of expectancy in listeners—upon hearing the first end-rhyme (“dope beats”) in m. 1, only to have it seemingly abandoned for two measures in favor of another pair of polysyllabic end-rhymes, listeners expect the rhyme in m. 4 that completes the couplet initiated in m. 1. The sense of tension and resolution created by internal rhymes is comparable to a tonic/dominant harmonic relationship in tonal music, with the rhyme “go see” in m. 4 being analogous to a phrase concluding with an authentic cadence.
Enclosed rhymes can also be asymmetrically distributed within a quatrain, resulting in an AA(bb)A (or “limerick”) rhyme scheme. Example 3.22 shows an example of an AA(bb)A rhyme scheme in Tech N9ne’s “Caribou Lou” (2006). In this example, the four lines of a quatrain are distributed across only two measures, as is typical in Tech N9ne’s rapid-fire flow style. Just as in the ABBA scheme above, a sense of anticipation is cultivated by this enclosed rhyme, with listeners being rewarded by the resolution provided by the concluding end rhyme.

A similar but more complex example of an AA(bb)A rhyme scheme can be seen in Example 3.23. In this excerpt of Ivy Sole’s “All Mine,” there is a vague adherence to a limerick form, with “A” rhymes occurring in the first, third, and fourth lines, and contrasting “B” rhymes occurring during the third line. However, Ivy Sole uses five “B” rhymes in this excerpt (highlighted in purple), including two rhymes that overflow into the excerpt’s fourth measure. Furthermore, instead of a single “A” concluding end-rhyme, Ivy Sole delivers two in the fourth
measure of this excerpt. While the rhyme density of this excerpt is higher than a traditional limerick rhyme scheme, the general sense of asymmetry, expectation, and resolution are all present.

Example 3.2. A transcribed excerpt of Ivy Sole’s “All Mine” (2016, 1:30-1:44).

**Rhyme Clusters**

While couplets and quatrains are rhyme schemes that reinforce particular musical forms, there are several common configurations of rhymes in rap music that do not beget any form in particular. In some instances, rappers will simply deliver a dense cluster of rhymes in rapid succession, essentially independent of larger forms. Example 3.24a shows an excerpt of Eminem’s “The Greatest” (2018) in which the rapper seems to be focused more on rhyme density than building a regular musical form within a quatrain though end-rhymes placed in predictable locations. The prevalence of rhymed syllables, when combined with their rhythmic duration and pitch emphasis, results in a percussive, syncopated, quasi-drum-fill effect, as shown in the rhythmic distillation in Example 3.24b. One could still analyze Example 3.24a as a heavily-elaborated quatrain—indeed, due to the prevalence of binary forms in rap music, with some effort, nearly any excerpt could be thought of in terms of couplets, quatrains, and/or deviations from established forms.
Other Non-Binary Rhyme Schemes

It is often difficult to assign musical-poetic forms to non-binary hip-hop rhyme schemes. Example 3.25 shows an excerpt from Lauryn Hill’s performance on “How Many Mics” (1996) by the Fugees. In this example, Hill is using a speech-like rhythmic cadence to deliver her flow, and rhymed syllables occur at unfixed metric locations throughout. In Hill’s rap style, which invokes spoken word, it stands to reason that rhyme schemes are extremely loose, if they are present at all. The rhyme organization in Example 3.25 is invocative of freestyle rap, in which rappers give the impression that they rhyme a chain of syllables until a new vowel catches their interest, then proceed to a new series of rhymes, with little or no overlap between rhymed groups, and little concern for regular binary forms common in recorded rap.
Rhyme schemes that are both regular and non-binary are exceptionally rare in rap music. One possible example is shown in Example 3.26. In this example, rapper Pos adjoins two three-measure units, each unit having multiple rhymed connections to the other, in order to create a six-line phrase, or sestet. This arrangement of 3+3 measures prevails through much of the track, and is utilized by Pos’s collaborator Dove, as I have noted in a 2017 article. However, as novel as this non-binary arrangement may seem, it is important to note that at a deeper level, the basic structure of the rhyme groupings in “D.A.I.S.Y. Age” is still binary, as pairs of three-measure lines (or couplets) are joined via rhyme to create symmetrical musical phrases.

An additional example of a non-binary rhyme scheme is shown in Example 3.27, an excerpt from A Tribe Called Quest’s “Electric Relaxation.” While the track is primarily composed of rhymed couplets, there is one instance where rappers Q-Tip and Phife Dog team up to create a three-bar rhyme scheme. As I have noted above, moments like these are exceptionally rare in rap music, and the production of “Electric Relaxation” seems to acknowledge this fact, as the background beat completely cuts out for Q-Tip’s first line in the rhyme scheme, highlighting the fact that this rhymed group has one rhyme “too many.”

Extended Monorhyme

While many rap verses are comprised of series of couplets and quatrains in the configurations I have listed above, it is also somewhat common for rappers to rely on a single rhymed syllable for the entirety of a verse. In such instances, any perception of smaller phrases or forms are not due to rhyme, but rather to factors such as loops of the background beat, grammatical syntax, and rests. The overall effect of such extended monorhyme can be an emphasis on the larger verse as a formal unit, rather than emphasizing smaller intra-verse forms and phrases. Example 3.28 shows one such verse by Ludacris, in which the fourth beat of every bar in the sixteen-measure verse is unified by the same rhymed vowels. While there are several “extra” couplets buried in single measures of this verse, the principal rhyming syllable is
unvaried, and thus the section cannot easily be partitioned into smaller sub-sections on the basis of rhyme alone.\textsuperscript{70}

\textsuperscript{70} For additional examples of extended monorhyme, see Missy Elliott’s “Joy” (2005), Eve’s “Let Me Blow Ya Mind” (2001), and “Bombs Away” by B.o.B. (2012).
Example 3.28. A transcribed verse from Ludacris’s “#1 Spot” (2004, 0:29-1:21).
Section 3.4: Rhyme in Non-English Rap

Rap music has become a globally popular genre. As hip-hop culture and style has made its way into countries and cultures worldwide, American hip-hop has been refracted through the lens of new languages, shared cultural experiences, music industries, and artistic goals. While American rap music looms large over the global hip-hop scene, in recent years, gradually more academic study has been devoted to non-English rap. In the closing pages of this chapter, I will briefly address some aspects of non-English rap with respect to rhyme. Even in narrowing the discussion solely to rhyme, I could never hope to address the multitude of languages, styles, and analytical issues that arise with all non-English rap music. Instead, I will treat this section essentially as a primer for future work on rap outside of the Anglosphere, and as a comparison between non-English examples and some of the English-language examples that I have introduced earlier in this chapter.

Many non-English rappers use rhyme to similar structural effect as English speakers. Couplets, quatrains, and binary forms more generally still reign supreme in most non-English rap. Example 3.29 shows an excerpt from German rapper Namika’s track, “Nador” (2015), in which she creates a traditional AAAA quatrain by adjoining two couplets, in a way analogous to earlier English-language examples.
Example 3.29. A transcribed excerpt of Namika’s “Nador” (2015, 0:18-0:36).

Example 3.30 shows a slightly modified ABAA quatrain, performed by rapper Kanyi in Xhosa, one of the official languages of South Africa. While the language and perhaps the meter are novel to English listeners, Kanyi’s technique of setting multi-syllabic rhymes to the same rhythm in the same metric position is little different from Ice Cube’s rapping in Example 3.3.

Example 3.30. A transcribed excerpt of Kanyi’s “Ingoma” (2011, 0:30-0:37).

Enclosed rhyme is also used with some regularity in non-English rap. Example 3.31 shows an excerpt from French rapper MC Solaar’s “AIWA” (2017). In this example, MC Solaar is employing the same limerick rhyme scheme shown in Tech N9ne and Ivy Sole’s performances in Examples 3.22 and 3.23, respectively. In my investigation of rhyme in French rap, I found rhyme schemes to be somewhat more difficult to apprehend than in other languages, possibly
due to the many phonologic vowels used in the French language, including thirteen oral vowels and four nasal vowels. I suspect that this is more of a problem of my English-speaking background than of the French language, though I certainly anticipate further study on vowel blending in French hip-hop to substantiate my suspicions.


Rhyme chains/clusters are another rhyme technique that have been imported from American hip-hop into rap music in various languages. Example 3.32 shows an instance in which Brazilian rapper Fabio Brazza, rapping in Portuguese, chains together nine rhymes within the space of a single quatrain, not very different from 2pac’s previously shown flurry of end-rhymes used to elaborate an AAAA quatrain in Example 3.18.

Example 3.32. A transcribed excerpt of Fabio Brazza’s performance on the track “Estopim” (2017, 0:42-0:52), which was a collaborative effort rather than being released under the banner of a solo artist, and included other Brazilian artists Nocivo Shomon, Spinardi, Eloy Polemico, and Rap Box.

It is common for rap in non-English languages to incorporate English words, phrases, or entire lines. One such example is shown below, in which rapper Klassy raps in both Filipino and English, freely intermingling words that rhyme in either language. It stands to reason that Klassy rhymes in this way, as she is a Filipino-American woman who lives in Los Angeles.
Furthermore, listeners should be unsurprised whenever they hear intermixing of Filipino and English, as both are official languages of the Philippines. One likely reason for rap in any language to incorporate English is the cultural and artistic history of hip-hop—as a genre that originated in the United States, many references, sayings, colloquialisms, and techniques have an American history, and these are often so inextricable from hip-hop that incorporating them into one’s rapping could be perceived as adding an aura of rap authenticity.


Some languages present exceptional challenges to rappers. While rhyme (and even more generally, repetition) are staple novelties in much of both English-language poetry and rap, the same cannot be said for all languages. Japanese in particular has presented rappers with a unique set of challenges to overcome. Noriko Manabe details these in her 2006 article “Globalization and Japanese Creativity: Adaptation of Japanese Language to Rap.” In her article, Manabe explains that rhyme has traditionally not been a priority in Japanese poetry or popular song. The reason for this is due to the trivial nature of rhymes in Japanese syntax. Manabe states: “While English sentences can end with nouns or verbs, which are unlimited in number, Japanese
sentences must end with auxiliary verbs.”71 “Only a fixed number” of these auxiliary verbs exist, and thus, many phrases and sentences in Japanese rhyme without any special attention being paid to their phrasing, word choice, or construction. As a result, much of early Japanese rap was not purposefully rhymed, as was true in Japanese pop music as well.72

Manabe explains numerous ways in which Japanese rappers have worked around the trivial nature of rhymes in their language in order to display skill with wordplay and a faithfulness to rap music’s origins. One such technique is to simply alter the grammatical syntax of a phrase, eliminating the correct verb endings.73 Like rappers from many countries, Japanese rappers will also creatively insert English words to create end-rhymes and small rhyme forms.74

Homonyms, which rhyme by definition, are also used in Japanese raps—Manabe gives the example of “yume/夢” (dream) and “yuumei/有名” (fame). In a 2018 presentation, Jinny Park made several comparisons between Manabe’s work on Japanese rap and her own research on rap music in Korean. Park discussed methods used by Korean rappers to imbue their flows with complexity to avoid trivial end-rhymes, including flexible syntax/word order, indefinitely chaining independent clauses, enjambment, or artificially confining oneself to a particular vowel. Park used the track “Aeiou Eo?!” by Soul Company (2004) as an example of artificial vowel constraints, in which a rapper delivers an entire stanza that only uses one vowel sound (Park, 2018).

German rappers can encounter similar “problems” as Japanese and Korean rappers. In both spoken and written German, the infinitive form of a verb is often placed at the end of a phrase or sentence. As the majority of German infinitive verbs end with “-en, ” the result is that

71 Manabe (2006, 5).
72 Ibid., 6.
73 Ibid., 9.
74 Ibid., 10.
much of German can be interpreted to rhyme whether the speaker/writer intended it to or not. For instance, see Example 3.34 below, which at first glance appears to be an excerpt of rhythmically varied, politically themed German rap, with rhymed syllables tending to fall on either the end of beat two or four of a given measure.

Example 3.34. A naturally rhyming addendum to an article in Bild, set to rhythm and metrically organized as if it were a section of a rap verse.

The text in Example 3.34 is not taken from any German rap, however. The lyrics shown above were simply copied directly from the pages of Bild, a German tabloid/newspaper. The writing, which was not intentionally rhymed in any way by the author, can be made to rhyme in a few minutes by writing it as flow, setting it to a relatively straightforward and utterly arbitrary series of rhythms. The text and translation are as follows:

The features of the German language in Example 3.34 are analogous to issues discussed by Manabe and Park with regards to Japanese and Korean rap, respectively. Namely, in any language in which syntax is primarily determined by word endings, rappers may have difficulty crafting rhyme schemes that are both syntactically meaningful and non-trivial.

**Section 3.5: Conclusion**

In this chapter, I have provided numerous examples of some of the most common formulations of rhyme in rap music. While scholarship of rap music is flourishing in multiple disciplines, it will be useful for scholars to be able to reference a common set of principles with respect to rhyme. Rhyme, while essentially a non-musical phenomenon, can take on musical meaning and analytical implications, perhaps more so in rap music than in any other genre. Rappers manipulate rhyme in order to toy with miniature structures within rap verses, which in turn can impact our hearing of a track, as well as our real-time listening expectations. In the final chapter of this dissertation, I will continue to discuss the music-analytical impact of rhyme in hip-hop while using a single track as a case study.
Chapter 4: Pitch in Rap Flows

“For me, when I know something is gonna work, I hear the music and I hear what my voice is sounding like on it. I don’t necessarily hear the words, but I hear the delivery and the tone and the pitch. When I hear it [sounding good] in my head, I know it’s [going to be] good [on the record].” —Brother Ali

In analyzing rap music, vocal pitch is likely not one of the first features one considers. Indeed, one of the defining aspects of rap music as a genre is its tendency to eschew the precisely pitched vocals heard in nearly all other popular music. It would not be inaccurate to characterize much of rap music as rhymed prose, spoken rhythmically over a background track—like in Example 4.1, a section of Kendrick Lamar’s “Poetic Justice” (2012). In the example below, the pitch of Lamar’s voice is not carefully pitched—as is true in most rap.


However, there are countless examples of rap tracks in which MCs are consciously pitching their vocals using a variety of techniques—emphasizing pitch in a way that paradoxically seems at odds with one of the very defining characteristics of rap music. Example

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76 Edwards (2013, 95).
4.2 shows a song by the same artist and from the same year as Example 4.1. In Kendrick Lamar’s “Swimming Pools (Drank)” (2012), the rapper pitches his vocals so that his verse takes on the guise of a quasi-melodic chant that adheres to a B minor tonic reinforced by the backing track.


The disparity in vocal pitch between two tracks by the same artist leaves us with many questions. To what extent should vocal pitch be considered when analyzing rap tracks? How do we differentiate between rapping and singing? What techniques do rappers employ to manipulate their vocal pitch in ways that are meaningful and musically impactful? These questions are the motivation for the present chapter.

While rap music has been the subject of an increasing amount of scholarship by music theorists, almost no time has been spent discussing the importance of vocal pitch as a parameter of flow. While the pitch of a rapper’s flow is technically no less quantifiable than rhythm or rhyme, it is less readily so when using typical music notation, making pitch perhaps a less attractive subject for analysis. This could be because while rhythmic notation has theoretically infinite complexity, our standard pitch notation asks that we quantize notated pitches to one of
twelve semitones. This leaves little room to notate the rapid pitch shifts that characterize spoken word.

As such, it makes perfect sense that the majority of music-theoretical scholarly attention thus far has been focused on musical characteristics that are both more readily-quantifiable and unique to rap, such as developing a typology of flow techniques (Adams 2009), attending to various issues via corpus studies (Condit-Schultz 2016 and Ohriner 2016), and the interaction between rapped flow and produced beats (Adams 2008). While it is technically possible to quantify all pitches in a rapper’s flow with the help of software, I have chosen to ground my analyses in observance of pitch done by ear. In doing so, I have offered descriptions of pitch in rap flows that are easily replicated in a classroom setting, or by an analyst basing their work on aspects of rap music that are readily identifiable by ear.

In this chapter, I contend that pitch plays an important role in the structure and delivery of rap flows. In the pages that follow, I demonstrate the ways in which rappers manipulate pitch to create a structural parameter that can operate independently from or in tandem with rhythm and rhyme, discussed in the previous chapters. Furthermore, I argue that pitched vocals take a wider array of forms in rap music than in other genres of popular music, ranging from carefully-pitched singing of modern rap flows to the imprecise and exaggerated declamatory features of speech that distinguished rap from other genres during its formative years. I assert that all rap flows can be classified as using pitch in one of five different ways, with each type of pitched rap flow carrying its own unique set of analytical implications.

Section 4.1: Introduction

While a rapper’s vocal pitch is likely the least-discussed parameter of flow in music-theoretical scholarship, it is nonetheless mentioned briefly by several writers. Discussing
emphasis or accent in rap flows is connected to vocal declamation pitch, because one of the most common ways that rappers introduce accents is by raising the pitch of a word or syllable. Thus, nearly every rap analyst to date has mentioned vocal emphasis to some degree. Adams (2009) briefly discusses the purposefully-pitched, melodic rap flows of Nelly, aptly comparing them with psalmody since they mainly take place on one or two repeated pitches. Ohriner mentions accented syllables in his 2016 corpus study, though he stops short of including aspects of pitch in his data sets. Condit-Schultz deals more intricately with vocal pitch in his own 2016 corpus study, including three pitch intonation features. Condit-Schultz briefly discusses some of the ways in which vocal pitch can shape flows, including emphasizing certain syllables through pitch accents. Additionally, Condit-Schultz (2016) notes that “certain pitch intonation patterns contribute to the marking of phrasing boundaries,” much like the ways in which pitch impacts our perception of declamatory phrases (i.e., ending a question with an upwards glide in pitch). Finally, Condit-Schultz claims that pitch intonation can be used by rappers to create “musical parallelism[s],” working with additional parameters of rhythm and rhyme. Condit-Schultz ostensibly codes some of these parameters into his corpus analysis but does not return to the issue of pitch in his article.

Most of the published commentary on vocal pitch in rap comes from rappers themselves, through the numerous interviews transcribed by Edwards. As the many observations on pitch in Edwards’ *How to Rap* (2009) and *How to Rap 2* (2013) vary in level of detail, I think it necessary to briefly outline his relevant contributions in this section, before threading it into my classifications of vocal techniques when appropriate.

As the audience of Edwards’ *How to Rap* books is ostensibly readers who are interested in learning how to rap themselves, Edwards frames the issue of pitch in rap flow as a means by
which rappers can differentiate themselves from the competition. A unique voice, Edwards says, can help you sound “original and distinct”—and pitch is a vital component of each rapper’s voice. Edwards lists rappers who have relatively high voices, singling out both B-Real of Cypress Hill and Eminem. “A higher pitch,” Edwards states, “cuts through the other musical elements of the track well and is often used for playful, fun deliveries.” Glossing over mid-pitched rappers, Edwards moves on to discuss MCs with deeper voices, such as Method Man and 2Pac, noting the increased aura of “authority” of such rappers. Edwards’ characterization of lower rap vocals as being more authoritative may be generally true, but numerous counterexamples exist. For example, Jay-Z, Eminem, and Danny Brown all have relatively high voices, yet generally rap in a way that could be considered “authoritative.” Conversely, rapper Chali 2na of the Jurassic 5 has an exceptionally low voice, yet is not particularly authoritative, certainly not more so than Method Man or 2Pac.

Moving on from these general classifications, Edwards then discusses ways in which rappers may choose to pitch their voice over the duration of a track, ranging from monotone to frequent peaks and valleys in a rapper’s vocals. Though Edwards does not state this outright, his implication in this section is that rap vocals having a wider pitch band result in a flow that has more character and expression. Edwards includes a few apt observations about the potential benefits of monotonous rapping, however, saying that it is more ideal for speedy rapping and can make the voice sound more like a percussion instrument (not unlike the rapping that Adam Krims refers to as a “percussion-effusive” style).
Later in his book, Edwards launches into a more exhaustive discussion of pitch possibilities in rap flows—telling readers that they can deliver certain syllables higher, lower, or change pitch during a single syllable in order to emphasize or deemphasize a word. Edwards even addresses variations of pitch that are natural in English speech, such as raising one’s voice at the end of a sentence if one is asking a question or lowering the pitch at the end of a phrase to give a sense of phrasal and grammatical closure. Edwards also observes that rappers will occasionally gradually heighten their vocal pitch throughout a larger phrase or verse, giving listeners a sense of steadily-increasing urgency. Edwards’ assertion that rappers can “create patterns with pitch” is perhaps most relevant to my own discussion of pitch as a parameter of rap flow. “Often, series of lower- and higher-pitched syllables or phrases will be used to create a pattern in the delivery,” Edwards writes. “This can be done to create a structure for the verse, in a similar way to how rhythm or rhyme is sometimes used” (2009, 106). In comparing the use of pitch to rhythm and rhyme, Edwards makes a connection that few other scholars have, and one that I will return to shortly.82

Section 3.2: A Spectrum of Pitch Techniques

All phonations are pitched. Any speech, laughter, whoop, grunt, or clearing of a throat could be theoretically mapped in pitch space. That being said, not all phonations are pitched with the same level of intention—a soprano singing a heavily-ornamented da capo is more precisely pitched than an imprecise singer like Bob Dylan, who himself is more precisely pitched than the average rap verse by Lil’ Kim. When analyzing the usage of pitch in rap flows, one must become

82 This dissertation is primarily focused on English rap, and thus will not go into issues of rapping in other languages, including tonal languages. There is precious little English-language scholarship on non-English hip-hop, though Manabe (2006) writes on adapting the Japanese language to rap, which presents as a challenge due to cultural insignificance of rhyme in Japan. One would imagine that rapping in tonal languages presents an additional layer of complexity, as the meaning of words is inextricably bound to their pitch contour. However, at this time no scholarly literature exists that deals with this topic.
familiar with a spectrum of pitch techniques employed by rappers, each yielding different results for the listener.

While little scholarly writing compares rap flow to speech, the relationship between speech and song has been discussed at length in literature outside of the music-theoretical sphere, and many scholars have acknowledged that speech is much more purposefully-pitched than it might at first seem. In his article “The Boundaries of Speech and Song,” George List (1963, 1) states that both speech and song are vocally produced, linguistically meaningful, and melodic. List goes on to state that while tones of speech are “meaningful at the phonetic level,” they are “less susceptible to exact analysis than phonemes or tones” (List 1963, 2). List notates speech and song along a spectrum as shown in Figure 4.1, in which types of communication that share aspects of both speech and song exist somewhere in the middle of his diagram. While rap music did not exist at the time that List wrote his article, he differentiates between speech, song, and middleground types of communication, such as monotonous chanting or Sprechstimme.
Diana Deutsch (1995) further demonstrates the connection between spoken word and song with her well-known illusion, in which a spoken segment of a sentence is repeated until the listener perceives it as a tonal melody. In this experiment, Deutsch records herself speaking a sentence normally, then isolates a segment in which she speaks the words “sometimes behave so strangely.” Deutsch then plays the recording of her speaking this segment at regular intervals. As she does so, listeners begin to hear the sentence fragment as taking on musical characteristics. After several repetitions, most listeners hear Deutsch’s (not purposefully-pitched) recording as is shown.

Figure 4.1. George Lists’s diagram of a spectrum from speech to song.

Diana Deutsch’s Figure 1 (1995).
My proposed spectrum of five different pitch techniques in rap music is shown above in Figure 4.2. I have arranged these techniques on a line, with techniques closer to the top of the diagram being imprecisely-pitched as in typical speech, while techniques towards the bottom are more precisely-pitched as in typical song. Brief definitions of each technique are as follows:

- **Rhyme strengthening**: In a declamatory style, pitching words or syllables so that rhymed lyrics also correspond to one another in pitch.

- **Exaggerated declamation**: The deliberate distortion or magnification of naturally occurring speech patterns in rap flows.

- **Pitch-based rhythmic layers**: Deliberately and markedly alter the pitch of one’s voice at specific points in their flow to create a separate rhythmic layer that is woven in with the composite rhythm of their flow.

- **Sung interjection**: A moment in which a rapper interrupts the tonally imprecise and speech-like pitch of his or her flow and sings a segment of their lyrics.
• **Sung/chanted verses:** In which a rapper will perform the entirety of their flow on a pitch or set of pitches in accordance with the tonic from the track’s backing beat.

As rappers “move” along the continuum in Figure 4.2 from top to bottom, they rap with more specific pitches, progressing from flow that invokes speech to flow that invokes song. Rappers can and do use several of these pitch techniques simultaneously or in close proximity in a single track or verse, but for the purpose of this dissertation, I will primarily focus on passages that exemplify one technique at a time. In the following sections, I will detail each of the five techniques in turn, supplying exemplary rap verses and commenting on the potential analytical usages for each.

**Rhyme Strengthening**

Rap vocals are rhymed verses that have been rhythmized and are spoken over a background beat. It follows logically that the most speech-like of the five pitch techniques in Figure 4.2 is also the most common style of rap flow, historically speaking. “Rhyme strengthening” refers to rappers altering the pitch of certain words or syllables in order to create aural connections between rhymed groups. In the context of rap analysis, “rhyme” can refer to more than traditional poetic rhyme. Generally speaking, we can say that areas of rap flow that have a strong perceived connection can “rhyme”—even if they don’t have rhyming vowel sounds. In the same way that we would say that certain aspects of visual art or architecture may “rhyme,” so we can say general aspects of rap flows can invoke “rhyme.” This said, most mentions of rhyme in this chapter will refer to traditional poetic rhyme.

As an example of rhyme strengthening through manipulating the pitch of rap flows, see Eminem’s “White America” (2002) in Examples 4.3a and 4.3b. In this example, I have used three separate lines of notation to denote the relative pitch of Eminem’s voice at a given moment.
This method of transcription is deliberately imprecise, and each line does not necessarily represent an exact pitch. Instead of prioritizing precision, I have chosen to notate some rap flows using percussion notation, where each line represents an approximate pitch “zone” in the rapper’s voice as it is heard on a given track. Even a cursory listen to the track will reveal that Eminem uses three pitch zones in the verse. From the listener’s perspective, relative pitch levels are more salient than absolute pitches, thus an analysis of the pitch content of this verse is best aided by approximating pitch placement, rather than by attempting to pinpoint pitches exactly. If we take the middle line in Examples 1a and 1b to be Eminem’s mid-range voice, then each note head that appears on the higher or lower staff lines represents a syllable rapped at a higher or lower pitch.

By notating Eminem’s flow using this method of pitch approximation, several analytical observations come to light. While the majority of Examples 4.3a and 4.3b are rapped in Eminem’s mid-range voice, a rudimentary pitch analysis reveals that there are two separate pitch streams functioning in the same phrase, each with their own unique set of rhymed syllables.
While every syllable that rhymes with “blue” (highlighted in dark blue) is performed at a relatively lower pitch level, anything that rhymes with the lyrics “baby” or “just like yourself” is rapped closer to the center of Eminem’s vocal range on this particular track.\textsuperscript{83} Separating the rhymed groups into disparate pitch levels allows listeners to more readily apprehend Eminem’s rhyme scheme in this verse, which is characteristically complex due to the rapper’s signature polysyllabic rhymes (e.g., “sits on the shelf” and “dimples would help”). An argument could even be made that there is a multi-pitch, multi-syllable rhyme between groups like “blue baby” and “lose Shady.”

It is difficult to say whether Eminem parsed his rhymes into discrete pitch levels consciously. While little scholarship on pitch in rap exists, there is an immense amount of writing on the subject of linguistic prosody, detailing the ways in which intonation, rhythm, tempo, and articulation shape our presentation and perception of speech. From this research, we know that much of the information conveyed in speech is done through manipulation of our vocal pitch. For example, see two different versions of a question in Figure 4.3 below. The first question is polite due to the rising pitch at the end, while the second sounds ruder to our ears.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{Figure4.3.png}
\caption{From Fery’s Intonation and Prosodic Structure (2017, 112).}
\end{figure}

\textsuperscript{83} I specify that I’m referring to Eminem’s vocal range on this track, rather than in general, due to the fact that Eminem’s speaking voice is much lower than most of his recorded rapping.
I assert that pitch conveys two types of information in rap flows: In addition to simply conveying the meaning of lyrics to the listener as in speech, the pitch of rap vocals also helps to connect rhymed syllables to one another, highlighting a rapper’s rhyme scheme.

Using pitch to highlight rhymed syllables may be a conscious decision on Eminem’s part, but it could just as likely an instinctive inflection due to the rhymed syllables in his lyrics. We can test our own instinctive usage of pitch in rhymed verse by reciting a simple limerick, such as “Hickory Dickory Dock.” My own vocal inflections would follow the contour shown in Figure 4.4 below.

![Figure 4.4. A sample approximate vocal pitch diagram of a hypothetical recitation of “Hickory Dickory Dock.”](image)

As shown in the diagram above, I tend to instinctively pitch rhymed syllables at approximately the same level as one another when reciting poetry or verse. Reciting the words “dock” and “clock” at the same pitch level highlights them as a rhymed pair to listeners. Readers can experiment with pitching rhymed syllables at dramatically different levels to highlight how unintuitive this seems to our ears.

When surveying rap tracks across decades and sub-genres, it becomes clear that rhyme-strengthening pitch techniques are extremely prevalent, strengthening the impression that this
technique is to a certain extent instinctual. Example 4.4 shows an excerpted section of Tech N9ne’s “Erbody But Me” (2016), in which the rapper uses his vocal pitch to emphasize rhymed syllables.


Tech N9ne’s flow is generally pitched near the middle of his vocal range in this track. However, for every two-syllable rhyme in Example 4.4, the rapper creates a pitched correspondence in addition to the rhyming syllables. A “high-low” precedent is set on the word “drinkin’,” and each subsequent rhyme follows the same pitch pattern, with none of the connecting non-rhymed syllables intruding upon the pitch space that Tech N9ne reserves for his rhymes in this section.

As the rapper continues in this track, he exaggerates this technique further, and begins to shout rhymed syllables, making them stand in even more stark contrast against his calmer, mid-range “base” flow (Example 4.5).

Example 4.5. A transcribed section of Tech N9ne’s “Erbody But Me” (2016, 2:04-2:09). Shouted syllables are shown in all caps.

Example 4.6 illustrates a final example of rhyme-strengthening vocal intonation in a hip-hop track from two decades earlier than Tech N9ne’s previous excerpt. In Tupac’s “California
Love,” the lead rapper marks rhyming syllables “program” with another notable instance of “high-low” vocal pitch.84


In Example 4.6, I have chosen to notate the highest and lowest pitch zones using the spaces above and below the middle line, due to 2pac using a slightly narrower pitch band in his flow than either of the previous examples. 2pac’s use of rhyme-strengthening pitch in Example 4 is notable because of his use of pitch to create a connection between two seemingly disparate sections of his verse. After rapping four lines whose ends rhyme with “program” (highlighted in green), 2pac apparently moves on to a new rhymed syllable, beginning his next rhymed chain by rhyming with the word “say” (highlighted in purple). However, at the end of this new rhymed chain, 2pac raps the word “Oakland” at the same relative pitch level that he did his initial rhymes in green from earlier in the verse.

Example 4.6 is an example of the power of relative vocal pitch levels, even if they are imprecise, in creating aural connections within rap verses. Ohriner (2016) discusses the “upper limit” to our perception of rhyme in rap music. Ohriner’s position is a logical one: Listeners can only make connections between rhymed pairs if the pairs are within a certain temporal distance of one another. If a rhymed pair is split up by a large enough section of interpolated lyrics, we

84 While each example of rhyme strengthening that I have highlighted in this chapter uses three approximate pitch zones, rappers can and do utilize this technique while using more or fewer than three pitch zones.
won’t hear the pair as being rhymed at all. Usually, the “upper limit” for our perception of rhyme is relatively short, even more so when a verse is packed with as many rhymed syllables as Tupac’s is in “California Love.” However, in imbuing his rhymed motive with a vocal pitch motive, Tupac allows listeners to connect the lyric “Oakland” to the earlier rhymes in his verse with the same pitch contour, highlighted in green. As is demonstrated in Example 4, manipulation of pitch can not only draw attention to existing rhymes, but it can strengthen connections between slant (i.e. partial) rhymes.  

**Exaggerated Declamation**

Similar to the first pitch technique described above, exaggerated declamation is an outgrowth of speech patterns found in rap. More specifically, exaggerated declamation refers to the deliberate distortion or magnification of naturally-occurring speech patterns in rap flows. This technique is rather like the more familiar *Sprechstimme* in that both exaggerate typical speech patterns—however, exaggerated rap declamation is not determined by a score, while Schoenberg’s is (to an extent). When English speakers speak declamatory sentences, it is typical for the pitch of their voice to drop during the final few words (Celce-Murcia, Brinton, and Goodwin 1996). This phenomenon received some scholarly attention due to its contrast with the relatively new “High Rising Terminal” (HRT) speech pattern, more commonly referred to as “upspeak,” in which speakers will raise the pitch of their voice at the end of their sentences (Ladd 1996). In rap flows, normal declamation patterns (perhaps we could term them “Sinking Terminal”) are sometimes elongated or exaggerated. These declamatory drops in pitch can happen suddenly or be stretched out over entire phrases or stanzas.

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85 For an example, see “dimples would help” and “sits on the shelf” in Example 4.3b.
86 For an example of this phenomenon, imagine a judge stating “This case is now resolved.”
87 This speech pattern is also sometimes called “Valley Girl Speak,” thanks to its popularization through young actresses in television shows taking place in California in the 1980s.
Example 4.7 shows a transcription of Kendrick Lamar’s guest verse in “Vice City” by Jay Rock (2015). While Lamar’s pitch levels are imprecise, they are exceptionally marked—the ending of each line is not only separated in terms of rhythm, but in pitch as well. Indeed, Lamar purposefully and repeatedly drops the pitch of his voice at the ending of each line, sometimes lowering his voice by more than an octave—a clear exaggeration of a phenomenon that would be occurring naturally if he were simply speaking the lyrics.

Similar to the rhyme-strengthening phenomenon mentioned previously, Lamar’s dramatic drop in vocal pitch at key moments gives his verse a signature motive. Lamar’s halting, rhythmically loose flow has been referred to as “Obama flow” in some hip-hop fan circles, due to its resemblance to President Barack Obama’s occasionally halting speech cadence. Indeed, Lamar’s unconventional flow on the first verse of “Vice City”—a segment of which serves as a refrain throughout the track—seems to have influenced other rappers on the track, each one of whom structures their flow in a similar way.

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88 This example is also briefly discussed in the introduction of this dissertation (page 1).
90 For an extended discussion on rappers taking on each other’s flows in shared tracks, see Komaniecki (2017).
Example 4.8 shows an excerpt from Schoolboy Q’s verse on the same track, in which he imitates Lamar’s exaggerated declamation in his delivery. Once again, the rapper uses vocal pitch techniques familiar to us from everyday speech in order to cultivate a type of quasi-tonal resolution at the end of each phrase, as if he is finishing a thought.

Example 4.8. Transcription of a section of Schoolboy Q’s verse in Jay Rock’s “Vice City” (2015, 3:53-4:01).

Example 4.9 shows a novel intra-track development of Kendrick Lamar’s exaggerated declamation in “Vice City.” Lamar raps the first verse in the track and is immediately followed by rapper Jay Rock performing the track’s second verse. Jay Rock begins by closely parroting Lamar’s “Obama flow,” dropping the pitch of his voice on end-rhymes, and rhythmically separating these moments from the rest of his lyrics. However, after following Lamar’s vocal pitch precedent for several lines, Jay Rock inverts the pattern, speaking several end rhymes high in his falsetto range.

Raising the pitch of one’s voice during speech can convey surprise, urgency, or disbelief, and Jay Rock’s exaggerated declamation during the latter half of his verse in “Vice City” reinforces these emotions. Indeed, listeners are left with the impression that Jay Rock heard Lamar’s flow, appropriated it, and modified it so that his verse was unique.91

Similar to the rhyme-strengthening pitch technique, exaggerated declamation is common across rap genres and decades, again likely due to its close relationship to typical speech. Exaggerated declamation is not only done to strengthen rhyming groups of syllables, however. Additionally, contrary to Examples 4.8 and 4.9 above, not all examples of exaggerated declamation involve pitching one’s voice down at the end of a section of lyrics.

While Kendrick Lamar and Schoolboy Q used speech-like pitch to “resolve” phrases at the end of rhymed lines, rapper Snow Tha Product uses an exaggerated declamatory style in her track “Get Down Low” (2016) to achieve the opposite effect. Example 4.10 shows the way in which Snow Tha Product gradually increases the pitch of her voice from line to line, forgoing rhyme-strengthening vocal pitch in exchange for a sense of quickly mounting tension.

Example 4.10. Transcribed excerpt from Snow Tha Product’s “Get Down Low” (2016, 0:55-1:11).

In Example 4.10, the primary end-rhyme syllables are highlighted in green. As is shown, Snow Tha Product eschews the tendency to pitch each of these words/syllables (“state,” “shape,”

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91 It’s difficult to say with certainty the order in which verses are written and recorded on collaborative tracks like “Vice City.” What we can say for certain is that the use of pitch in this track unifies the flows of each rapper.
etc.) at the same level. Instead, every new occurrence of a green-highlighted rhymed syllable is marked by the rapper’s voice raising in pitch. Snow Tha Product is not raising her voice by a specific interval each time, nor is she rapping in a perfect monotone between pitch shifts. Thus, the net effect of this exaggerated declamation on Snow Tha Product’s flow is that it imbues the lyrics with a sense of urgency and building tension, which is not released until after the transcribed excerpt finishes on the word “spray” delivered in a high-pitched shout.  

Example 4.11 shows a similar phenomenon in Eminem’s “Without Me” (2002). However, instead of increasing or decreasing his vocal pitch in an exaggerated declamatory style, Eminem’s flow is a series of gradually-falling pitch levels.

![Example 4.11. Eminem's vocal pitch in “Without Me” (2002, 1:05-1:22) represented with contour lines.](image)

In “Without Me,” Eminem’s general pitch trajectory over time is downwards, but with frequent punctuations and interruptions as his voice races back up to return to the top of his range, as a

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92 Edwards observes the same phenomenon in How to Rap 2 (2013), page 104.
93 Exemplifying the rhyme strengthening technique, Eminem recites the lyric “feels so empty without me” several times in both verses and choruses in “Without Me,” and uses the same basic pitch motive every time he does so.
sort of “reset” for a subsequent phrase. This technique gives Eminem’s flow a more whimsical feel, calling to mind a children’s book being read aloud, exaggerating one’s vocal pitch for dramatic effect. This effect, when combined with the defiant lyrics of the track, is exemplary of Eminem’s dichotomously joking and violent rap personas.

**Pitched Rhythmic Layers**

When a rapper creates a pitched rhythmic layer, they deliberately and markedly alter the pitch of their voice at specific points in their flow to create a separate rhythmic layer that is woven in with the composite rhythm of their flow. The net effect of this technique is the sensation that two rhythmic layers are progressing simultaneously and dependently—one signified by the general pitch of a rapper’s flow, and the other signified by an altered or unusual pitch at select moments. An Edwards quote from earlier in this chapter bears repeating: “Often, series of lower- and higher-pitched syllables or phrases will be used to create a pattern in the delivery. This can be done to create a structure for the verse, in a similar way to how rhythm or rhyme is sometimes used (emphasis added)” (Edwards 2013, 106). In the examples that follow, we will see moments where rappers are able to erect two simultaneous rhythmic patterns, differentiating between the two of them using their vocal pitch.

For a relatively simple example of this technique, see Example 4.12a, in which I have transcribed several bars from Kendrick Lamar’s guest verse in “Fragile” by Tech N9ne (2013). Note that in Example 4.12a, despite the “background” patter of sixteenth notes in Lamar’s flow, the pitch of his voice is markedly raised on each strong beat. In doing this, Lamar emphasizes the simplest secondary rhythmic layer possible—that of a consistent pulse on each beat, separated from the various subdivisions therein. Example 4.12b shows a lyric transcription of the entirety of Lamar’s guest verse, in which each strong beat is underlined, and each emphasized syllable is
b Bolded. In Example 4.12b, we can see that Lamar uses the pitch of his voice to emphasize a
strong-beat pulse stream in much of his verse.


Example 4.12b. Lyric transcription of Kendrick Lamar's guest verse in “Fragile” by Tech N9ne (2:42-3:27). Underlined syllables are those that fall on strong beats, and bolded syllables are those emphasized in pitch by Lamar.

Lamar is so intent on reinforcing a steady pulse stream with his vocal pitch that he purposefully sacrifices the pronunciation of certain words to make his flow emphases fit a regular pattern. On words such as “articles,” “unconditional,” and “Jupiter,” Lamar changes the typically-accented syllable for those lyrics in order to maintain his pattern of accented strong beats. This marked regularity is highlighted when Lamar deviates from it in the second half of his verse, pushing the emphases forward from their “normative” position, giving the lyrics a rushed, urgent tone.

Examples 4.13 and 4.14 show two additional instances of pitched rhythmic layers being used by rappers to reinforce strong beats in each measure. In Example 4.13, Eminem uses his vocal pitch to strongly emphasize the first and third beat of each bar. The regularity of Eminem’s pitched rhythmic layer contrasts his usually irregular and complex rhyme schemes, and is
underscored by an atypically straightforward set of end rhymes. Similarly, Example 4.14 shows the way in which rapper Twisted Insane uses vocal pitch in the track “200 Round Clip” to emphasize all four beats of each measure, de-emphasizing the underlying patter of steady sixteenth notes in favor of the background quarter note pulse.


A more complex example of pitched rhythmic layers can be seen in Example 4.15a—another transcription of Kendrick Lamar, this time from his guest verse in Dr. Dre’s track “Deep Water” (2015). In this brief section from a larger featured verse, Lamar markedly alters the pitch of certain syllables, placing them high in the falsetto part of his vocal register, approximately an octave higher than the surrounding lyrics. The result is a moment that sounds more complex than it looks on paper—Lamar distills a secondary rhythmic stream from his rapid, sixteenth note flow. The secondary rhythmic stream can be seen in Example 4.15b—note how the more widely-spaced attack points and syncopation contrast the mostly consistent deluge of sixteenth notes in the transcription in Example 4.15a.

Example 4.15b. A distillation of the upper rhythmic layer in Example 4.15a.

Pitched rhythmic layers are by far the least common of the five types of pitch manipulation I have identified in rap music. This could be for a variety of different reasons. Perhaps its position on the middle of my spectrum that stretches from “more speech-like” to “more song-like” means that pitched rhythmic layers are least intuitive in terms of both musicality and speech. While I suggest that rhyme strengthening via vocal pitch occurs intuitively, it would be difficult to make such an argument for pitched rhythmic layers. Likewise, the pitched rhythmic layers above bear little resemblance to typical singing in pop music. It is possible that the “unnaturalness” of pitched rhythmic layers is the best way to explain their relative scarcity in hip-hop music.

**Sung Interjections**

A sung interjection is a moment in which a rapper interrupts the tonally imprecise and speech-like pitch of his or her flow and sings a segment of their lyrics. This fourth category of pitch manipulation in flow is the first in this chapter in which there is a purposeful and precise adherence to the ideas of a scale or tonic, since the pitches involved always have a clear tonal relationship to the underlying beat. Example 4.16 is a transcription from Dr. Dre’s track “Darkside/Gone” (2015), featuring Kendrick Lamar, Marsha Ambrosius, and King Mez. The
section transcribed in Example 4.16 is the seam between two verses in “Darkside/Gone,” the first performed by guest rapper King Mez, the second performed by Dr. Dre himself. The tonic key of the section is E minor, and Dr. Dre fittingly comes in on the pitch E, bouncing between two octaves in a sung interjection before continuing in a more typical declamatory fashion.

Example 4.16. Dr. Dre uses a sung interjection at the beginning of his verse in “Darkside/Gone” (2015, 0:42-0:53).

Example 4.17 is another of a sung interjection being used at an important moment in a rap verse. In “All Night” (2016), Chance the Rapper performs verses that are a standard sixteen bars in length. Example 4.17 shows that he includes a sung interjection exactly halfway through
his verse, beginning in the ninth bar. The change in Chance’s flow from a declamatory to sung style also parallels a change in the background beat. The first eight measures of Chance’s verse also have the same prolonged downwards contour in pitch heard in Eminem’s exaggerated declamatory rapping style in “Without Me” (Example 4.11).

Example 4.17. A transcription showing a sung interjection in Chance the Rapper’s “All Night” (2016, 0:35-1:01).

Example 4.18 shows that in the second verse of “All Night,” Chance the Rapper inverts the singing/rapping ratio from his first verse. Indeed, spending most of the verse singing on pitches of the D Major pentatonic collection, Chance the Rapper takes only two brief breaks from this sung style to interject vocals that are declamatory and not purposefully-pitched. In example 4.18, the lines between rapping and singing have been blurred, making it unclear
whether his performance should be classified as rapping, singing, or both—a question I will return to in the final section of this chapter.

Example 4.18. The second verse of Chance the Rapper’s “All Night” (2016, 1:25-2:00).

Mixing singing and rap is not only a recent trend. Indeed, since rap music’s advent, there have been artists that blur the line between rap and R&B genres, splitting their time in a verse between less purposefully-pitched rapping and more precise singing. Example 4.19 shows a transcription of Queen Latifah’s “Princess of the Posse” (1988). While Latifah is more active today as a singer and actress, she began her entertainment career as a rapper in the late 1980s, mixing hip-hop with soul while rapping about black women’s issues. Latifah’s sung interjection in Example 4.19 is similar to Chance the Rapper’s from Example 4.17—after several bars of
rapping in a verse, there is a brief, diatonic interjection (one that is harmonized by backing vocals, in Latifah’s case), followed by a continuation of less purposefully-pitched rap flow.

Example 4.19. A sung interjection in Queen Latifah’s “Princess of the Posse” (1988, 0:23-0:49).

Example 4.20 shows a transcription from rapper/singer Lizzo’s track “Good as Hell” (2016). Lizzo begins her track with several bars of rapping in declamatory tone, then switches to traditional singing for the majority of the song. Freely flitting between R&B, soul, and rap tropes (sometimes within a single track) is increasingly popular with recent “crossover” acts like Lizzo, Chance the Rapper, Drake, Noname, and many others.
Example 4.20. Lizzo switches from rapping to singing in “Good as Hell” (2016, 0:11-0:31).

The increased presence of singing in rap verses could be indirectly attributed to the “sung hook” gaining popularity amongst rappers and labels since the late 1990s. In rap’s earlier years, there little consensus on what should constitute a chorus (i.e. “hook”). Hooks could be comprised of a rapped refrain, singing, scratching, or a sampled instrumental. Some tracks omitted a refrain entirely. Despite this variety of refrains, it was the sung hook that eventually became predominant in the hip-hop sphere. “It Takes Two” by Rob Base and DJ EZ Rock (1988) is an early example of a sung chorus, in which Rob Base raps the verses, and the chorus is sung by Rhonda Parris. The formula of rap singles featuring a vocalist on the hooks increased in popularity, becoming what Michael Berry considers a “standard” form in hip-hop after 1995. Countless examples exist, but some notable tracks include:

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94 Rhonda Parris is actually covering Lyn Collins’s “Think (About It)” (1972) on the track “It Takes Two,” at the request of Profile Records.
95 Berry (2018, 3).
• “Where is the Love” (2003) by The Black Eyed Peas, hook sung by Justin Timberlake (and Fergie, group member)
• “Slow Jamz” (2003) by Kanye West feat. Twista, hook sung by Jamie Foxx
• “Pimpin’ All Over the World” (2005) by Ludacris, hook sung by Bobby V
• “Empire State of Mind” (2009) by Jay-Z, hook sung by Alicia Keys

Additionally, as sung hooks became more common, rappers even began experimenting with singing their own hooks. Results were mixed, as many commercially successful rappers were not trained singers. Rapper Ja Rule takes credit for this trend, saying “I think for the people, that's what made it popular, that they were able to sing along with it and they weren't intimidated by singing along to it because it was a guy that can't sing.”  

Some examples of tracks in which rappers sing their own hooks include:

• “I’m Real” (2001) by Ja Rule feat. Jennifer Lopez
• “Cleanin’ Out My Closet” (2002) by Eminem
• “P.I.M.P.” (2003) by 50 Cent

**Sung/Chanted Verses**

The fifth and final category of pitched rap flow is furthest removed from normal speech. In a sung or chanted rap verse, the rapper will perform the entirety of their flow on a pitch or set of pitches in accordance with the tonic from the track’s backing beat. Adams (2009) has remarked on this chanted flow technique in the music of rapper Nelly, noting that it is “oddly reminiscent of psalmody,” a syllabic text setting of chant or sacred canticles. Indeed, when one examines Nelly’s performance on “Country Grammar” (2000) in Example 4.21, the comparison

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97 Ja Rule and Lopez both sing on the hook of this track.
with psalmody is apt with regards to text setting. The verse is nearly completely purposefully-pitched, save for a few spoken, unaccented syllables scattered throughout. Additionally, the verse is almost entirely syllabically set, free of melisma—a characteristic shared with most of Nelly’s rapping throughout his career. If one were to place Nelly’s vocals in “Country Grammar” in the context of a complete musical scale, a likely choice would be D Dorian—which, while not entirely realized by Nelly’s vocals, is established by the song’s chorus and backing track.


In a 2010 interview with Complex magazine, Nelly framed himself as the progenitor of sung/chanted rap verses. Interestingly, Nelly characterizes his choruses as being sung, while the verses are rapped, despite both being deliberately pitched in the majority of his music.

It's crazy; we did *Billboard*'s "top artists of the decade," and they asked me, "Who do you think is one of the biggest influences on music today?" And I was like, ‘Shit...me!’ I mean, let's just be real about it! Who else was doing it like that?
Who else was singing on hooks? And rapping on verses? Putting bridges in the songs and doing it like that? I mean whether I get the credit or not, it don't matter.  

Nelly echoed a similar (albeit less boastful) sentiment in his interview with Paul Edwards for *How to Rap 2*. Edwards, who characterizes Nelly’s delivery as “half-sung,” quotes Nelly as stating that he considers his delivery to be a combination of R&B and rap, one of the “distinctive things” that Nelly was able to do as an artist.  

Nelly’s success in the early 2000s is influential in as of itself—his 2000 debut album *Country Grammar* was certified diamond in 2016 by the Recording Industry Association of America (RIAA), placing him in an exclusive group of top-selling rappers that includes 2 Pac, Notorious B.I.G., and Eminem.  

While Nelly certainly influenced his successors with his sung style of rapping, it would be disingenuous to frame him as the first to have success using sung vocals in hip-hop tracks. In fact, sing/rapping has occurred with some regularity for decades, likely due to the genre’s close association with soul and R&B. Rapper Shock G states that “[there] was the ‘80s wave of hybrid hip-hop groups and melodic MCs, like Jimmy Spicer, Planet Patrol, Full Force, Jonzun Crew, […] and especially Queen Latifah, who took rap-singing to a whole ‘nother level of believability and harmonic accuracy when she dropped the game-changing ‘Wrath of My Madness/Princess of the Posse’ single in ’88.” Indeed, Latifah’s blend of rapping and singing in Example 4.19 is clear indication that mixing the vocal styles in a single track, or within the same verse, had an ample precedent by the time Nelly released *Country Grammar* some two decades later.

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Even Nelly’s signature style of rapping primarily on a single note with occasional motion to nearby pitches was established well before the new millennium. Hip-hop group Bone Thugs-n-Harmony popularized this style of rapping as early as 1991, calling it “rapping and singing at the same time” in interviews. Example 4.22 shows a short excerpt of group member Bizzy Bone’s verse in Bone Thugs-n-Harmony’s biggest commercial success, “Crossroads” (1996). Bizzy Bone’s flow is remarkably similar to Nelly’s—both rappers perform the lyrics nearly exclusively on a purposefully pitched set of several notes, heavily syllabic, and adhering closely to the tonic established by the backing beat. Unlike Nelly, however, Bizzy Bone primarily performs on the dominant scale degree, rather than tonic—but his fellow Bone Thugs-n-Harmony groupmates emphasize each pitch of the tonic triad in turn throughout the track.


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The chanting, syllabic, and pitched flows of Bone Thugs-n-Harmony have indirectly influenced rappers well into the 2010s. Example 4.23 shows an exemplary verse from Kendrick Lamar’s “Swimming Pools (Drank)” (2012), in which the rapper can be heard “singing” his lyrics on a highly-constrained group of pitches. Again, we can observe that Lamar’s flow strictly adheres to the background tonic of B minor. Particularly noteworthy in this example is Lamar’s tendency to use an identical melodic cell for rhymed syllables. As is shown in Example 4.23, each two-syllable rhyme is part of a larger four-note motive, which is similar in each highlighted occurrence. By using this repeated melodic cell, Lamar has created a type of “melodic rhyme” that functions concurrently with the rhymes in his lyrics. To show this, I have highlighted each “rhymed” four-note melodic cell in light red, while highlighting each of their smaller two-note lyric rhymes in dark red.

\[
\begin{align*}
\text{Kendrick Lamar} & \quad \begin{array}{c}
\begin{array}{c}
\text{Now I done grew up round some people livin' their life in bottles Grand-dad-ly had the}
\end{array}
\end{array} \\
& \quad \begin{array}{c}
\begin{array}{c}
\text{gold-en flask back-stroke every day in Chi-cago Some people like the way it feels some people wanna}
\end{array}
\end{array} \\
& \quad \begin{array}{c}
\begin{array}{c}
\text{kill their sorrows Some people wanna fit in with the pop-u-lar that was my problem I was in (etc.)}
\end{array}
\end{array}
\end{align*}
\]

*Example 4.23. A transcription of a section of Kendrick Lamar’s “Swimming Pools (Drank)” (2012, 0:25-0:39).*

Occasionally rappers will perform a precisely-pitched verse that is more melodic in character than Lamar’s chanting in the previous example. Example 4.24 shows a transcription of Chance the Rapper’s guest verse in DJ Khaled’s “I’m the One” (2017), which also features sung verses from rappers Quavo and Lil Wayne, and a sung hook by Justin Bieber. As can be seen in the example, Chance performs his verse using a G major pentatonic scale, spanning over an
octave in range, with repeated melodic motives as well as a variety of gestures. There is even a moment in which Chance injects some dissonance into the pop standard I-vi-IV-V chord progression—note his repeated singing of the tonic over dominant harmony in measure 4 and the third scale degree in measures 11 and 15 over a IV triad. Additionally, Example 21 demonstrates that Lamar is not alone in his use of “melodic rhymes” to strengthen existing lyrical rhymes. There are three primary rhymed groups in Example 4.24, shown in blue, red, and green. Chance the Rapper assigns each of these rhymed groups their own short motive, each distinct from the others. To an extent, what Chance the Rapper does in “I’m the One” is similar to the “rhyme strengthening” use of pitch shown previously—the main difference being the level of clear intention behind Chance’s purposefully-pitched melody.
Section 4.3: Genre Classification and Conclusion

The style of rap flow shown in Example 4.24 creates a genre classification problem. There are few concrete features that separate a rap verse such as this from a verse in any melodic pop music track—in fact, Chance the Rapper uses a wider array of pitches in his performance than is utilized in many verses by pop singers, which tend to be more restrained in range to contrast an inevitable belting chorus. For an example of this, see Examples 4.25a and 4.25b—transcriptions of the verse and chorus of Katy Perry’s recent single “Bon Appétit” (2016), which is arguably less “melodic” or “sung” than Chance the Rapper’s verse in Example 4.24.


This raises a genre classification issue with no easy answer. It certainly seems safe to allow performers to classify themselves: Singers sing, rappers rap. Since rapping is usually defined by the very fact that it is not singing, however, performances like that in Example 4.24 put us in a confusing situation. Thanks to the professional alias that Chance the Rapper has chosen, there can be little doubt as to whether he identifies more as a singer or a rapper. That said, what are we to make of examples like Examples 4.21-4.24 of this chapter, in which each an argument could be made that what each rapper performs is more singing than it is rapping? Could we, in an effort to compromise, agree that a performance can be considered both rapping and singing, despite the two vocal styles typically being discussed as diametrically opposed? Perhaps these borderline cases could be classified considering other factors: style, fashion, lyrics, method of production, or any indication from the artist as to which genre they feel they represent. Ultimately, the issue is more of a problem for analysts than it is for performers. Regardless of how I or anyone else classify Chance the Rapper, Kendrick Lamar, Nelly, or any other rappers that sing in their tracks, they are unaffected by said classification, and will likely continue to present themselves as rappers.
I contend that the question of rapper or singer be left to the artists themselves. If we view rapping as more of a technique that can be employed than a specific, gated genre of music, our understanding of hip-hop music is much more complete. In short: Analysts should concern themselves with what is happening in the realm of rap music and resist the urge to nitpick over whether a rapper has misclassified his or herself. If we accept that all the rappers mentioned in this chapter are indeed rappers, performing in their own unique way, we can move on to discuss a broad range of techniques and styles that are used in hip-hop music more generally.

Pitch techniques in rap flows exist on a spectrum of precision, ranging from barely-noticeable techniques that could very well be holdovers from the performers’ speech patterns to purposeful and melodic singing of rap lyrics. Despite pitch being one of the last parameters analysts typically remark upon when discussing rap flows, understanding and recognizing the techniques above are essential for music theorists hoping to become increasingly conversant with the genre of rap music.
Chapter 5: Analysis of “The Ringer” by Eminem (2018)

Section 5.1: Introduction

On August 31st, 2018, 45-year-old rapper Eminem released the album Kamikaze on digital streaming platforms. The album release was not heralded by any promotion or pre-announcement whatsoever—an unusual choice for the top-selling Eminem, who has been awarded fifteen Grammy awards over his ten-album career. Kamikaze’s release was only accompanied by a nonchalant tweet from the rapper, claiming that he “tried not 2 overthink this.”\textsuperscript{101} The album art of Kamikaze, featuring a silver jet crashing into a wall against a beige background, is a direct reference to the similar artwork on the Beastie Boy’s 1986 album License to Ill.

While critical reception of Kamikaze was mixed (Pitchfork’s Marc Hogan deemed the album an “onslaught of technical rap prowess and humorless juvenilia”), there was an overwhelming consensus that the album showcased Eminem’s technical dominance and considerable skill with wordplay, rhyme, structure, parody, and punchlines.\textsuperscript{102} The New Zealand Herald’s Siena Yates praised Eminem’s “technically flawless flows and cheeky wordplay,” as well as his “thrilling command of cadence.”\textsuperscript{103} AllMusic’s Stephen Thomas Erlewine echoed this sentiment, stating that “as sheer performance, Eminem’s vocals remain a thing of wonder.”\textsuperscript{104} Eminem himself has spoken candidly about his reputation as a master technician, stating “Rhymes are like puzzles […] I’m real into the technical part of it. I studied [Ice-T], I studied KRS[-one], I studied Treach.”\textsuperscript{105} In another interview, he stated that his “number one goal

\textsuperscript{101} \url{https://twitter.com/Eminem/status/1035379283554983938}
\textsuperscript{102} \url{https://pitchfork.com/reviews/albums/eminem-kamikaze/}
\textsuperscript{103} \url{https://www.nzherald.co.nz/entertainment/news/article.cfm?c_id=1501119&objectid=12122395}
\textsuperscript{104} \url{https://www.allmusic.com/album/kamikaze-mw0003206796}
\textsuperscript{105} The Art of Rap (2012), directed by Ice-T and Andy Baybutt.
getting into hip-hop was getting respect from other MCs. That’s kind of what I rapped for—I was very into the technical part of MCing and wanted to get respect from my peers.”

In this final chapter, I will use the analytical techniques that I have developed in previous chapters to conduct a comprehensive analysis of the opening track of Eminem’s *Kamikaze*, entitled “The Ringer.” This track’s title ostensibly stems from a brief lyric in the final seconds of the song where Eminem complains “they’ve been puttin’ me through the wringer,” but could be more significant. Eminem could have been referencing the idea of a “ringer” as it is sometimes used in sports, to refer to a skilled person brought in as a substitute. While I cannot make a definitive claim, it is possible that Eminem intended the title of this track to enforce the idea that he is more skilled than his rap contemporaries and could substitute for any of them.

The lyrics of “The Ringer” are a lengthy series of disses, lamentations, brags, and expressions of disapproval of the hip-hop scene in 2018. This track in particular is fertile ground for an extended analysis of flow for several reasons. Firstly, “The Ringer” spurns the verse/chorus form so common to both rap and pop music. Instead of having any clearly-marked formal units, the track is a single extended verse of 156 measures, with no refrain or interlude. Secondly, Eminem’s main purpose in recording “The Ringer” seems to have been proving his technical prowess while indulging in a lengthy series of responses to his critics and enemies. The track clocks in at a lengthy five minutes and thirty-seven seconds of nearly uninterrupted rapping, over the course of which Eminem can be heard employing a myriad of techniques differentiated by their rhythm, rhyme, and vocal pitch.

In what follows, I will detail Eminem’s varied and complex flow techniques in “The Ringer.” For the analysis purposes, I have divided the track into three “verses,” further

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106 [https://youtu.be/QOjRIwG5RLk?t=51](https://youtu.be/QOjRIwG5RLk?t=51)
subdivided into subsections A through M, basing my formal divisions around moments in the track where Eminem notably shifts from one style or technique to another. As I discuss Eminem’s interactions with the various parameters of flow, I will demonstrate the utility of my prior analyses of rhythm, rhyme, and pitch when they are applied holistically to a single track. A complete transcription of “The Ringer” appears at the end of this chapter (Example 23). The examples I use in the main body of this chapter will be shorter excerpts, with additions made to visually emphasize any or all of the parameters of flow.

Section 5.2: Form

Table 5.1 below outlines the form of “The Ringer.” Despite the track having no clear formal sections as found in most pop songs (i.e., verse, bridge, and chorus), I have divided the track subjectively into three verses, with each verse divided into smaller subsections based on noticeable shifts in Eminem’s flow style. Note that not all significant style shifts resulted in a new subsection, and as a result, there are several subsections that contain more than one “style” of flow.

Additionally, Table 5.1 shows that each subsection of “The Ringer” primarily aligns with one of four categories determined by the lyrical content of that subsection. The basic lyrical message of “The Ringer” is not complex: Eminem is responding to critics. His response is delivered in a mixture of bragging about his own skills, dissing specific or nonspecific detractors, mocking other rappers by parroting their styles, or generally complaining about the lukewarm response to several of his recent projects. While the borders between subsections are not always clearly defined, in general Eminem tends to switch from one semantic category to another as he switches from one flow style to the next, and when adjacent categories have the same semantic
content (E/F, J/K, and L/M), they are separated due to a marked shift in rhythmic motives, vocal pitch, and rhyme.

<table>
<thead>
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<th>Subsection</th>
<th>Timestamp</th>
<th>Category</th>
</tr>
</thead>
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<tr>
<td></td>
<td>B</td>
<td>0:36</td>
<td>Dissing</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>1:09</td>
<td>Mocking</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>1:41</td>
<td>Dissing</td>
</tr>
<tr>
<td>Verse 2</td>
<td>E</td>
<td>2:14</td>
<td>Complaining</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>2:30</td>
<td>Complaining</td>
</tr>
<tr>
<td></td>
<td>G</td>
<td>2:48</td>
<td>Mocking/Bragging</td>
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<tr>
<td></td>
<td>H</td>
<td>3:23</td>
<td>Dissing</td>
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<tr>
<td></td>
<td>I</td>
<td>3:43</td>
<td>Bragging</td>
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<tr>
<td>Verse 3</td>
<td>J</td>
<td>4:00</td>
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<tr>
<td></td>
<td>L</td>
<td>4:32</td>
<td>Complaining</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>5:14</td>
<td>Complaining</td>
</tr>
</tbody>
</table>

Table 5.1.

**Beat Transcription**

The beat of “The Ringer,” co-produced by Eminem, Ronny J, and Illa da Producer, is quite sparse, comprised of only several layers at any given moment. Example 5.1 is a transcription of the beat as it is heard through the majority of the track. There are small variations in this beat throughout “The Ringer,” which include things like sound effects, audio filters, distant piano fills, and low-pitched synth glissandi. On the whole, the sparse production of “The Ringer” is in keeping with much of Eminem’s career up to 2018, in which he has tended to favor uncluttered beats. In my transcription, I have chosen to stretch the typical backbeat pattern of a snare on beats two and four over two measures instead of one. I made this decision simply because it limits the flow to primarily sixteenth notes, as opposed to less-legible 32nd notes (and even 64th notes). Despite my transcription, it is very possible that Eminem conceived of “The Ringer” as being 78 measures long instead of the 156 that I’ve notated.
Section 5.3: Verse 1 (0:20-2:12)

After a 20-second introduction, Eminem begins “The Ringer” with a series of braggadocious statements about his rapping prowess—a theme that runs through most of the track. The entirety of Subsection A is transcribed below in Example 5.2.\textsuperscript{107} The section begins with Eminem establishing a motive that combines rhyme, rhythm, and pitch.

\textit{Example 5.1.} A basic transcription of the background beat in “The Ringer.”

\textsuperscript{107} All transcriptions are quantized to the nearest 32\textsuperscript{nd}-note.
From the outset of “The Ringer,” Eminem establishes an initial pair of rhyming syllables as well as a rhythmic motive, shown in Example 5.3. This rhythm is primarily used to accompany rhymed syllables as they occur on beats 3-4 of a given measure. However, the subsection begins with the rhythmic motive in Example 5.3 occurring on a downbeat, establishing its importance. Over the next three measures, an expanding effect occurs, as Eminem pushes the metrical location of this rhythmic motive to the second beat in m. 2, before eventually permanently placing the figure so that it begins on the third beat for the rest of the subsection beginning in m. 4.

There are two principal rhymed vowels in Subsection A, namely “ɛɪ̯” (as in “day”), and “äʊ̯” (as in “now”). As the track begins, these two rhymed syllables are apparently unbound to one another—that is, they do not arrive in a consistent order, they are not set against a consistent rhythmic figure, and they do not occur in a consistent metric location. However, as Eminem progresses through the first few bars of “The Ringer,” the rhyme density greatly decreases (from 4.5 rhymes per measure in the first four bars to 2.5 rhymes per measure in the next four measures), and the two rhymed syllables begin to fall in a regular rhythmic location on beats 3 and 4, paralleling the gradual emergence of the rhythmic motive shown in Example 5.3.

The separation of the two rhymed syllables in Subsection A is further underscored by Eminem’s intentional usage of vocal pitch. As is diagrammed in Example 5.2, Eminem raps nearly all his “ɛɪ̯” vowels on a markedly higher vocal pitch than the rest of the subsection. My spectrum of vocal pitch techniques in rap music from Chapter 4 is reproduced below as Example 5.4. In this instance, Eminem is primarily employing the “pitch-based rhythmic layers”
technique. The at-first irregular, then gradually regular placement of each “əɪ̯” vowel gives the impression of an additional percussion line being added to the background beat—and indeed, after the metric position of the rhythmic motive in Example 5.3 is established, each occurrence of the higher-pitched “əɪ̯” vowel coincides with a snare hit in the track’s beat. The two distinct pitch levels running concurrently through this subsection give the impression of Eminem managing two simultaneous rhyme schemes—something he was likely eager to demonstrate at the outset of a track dedicated to reestablishing his reputation in the hip-hop genre.

Example 5.3.

Almost as soon as the rhythmic motive shown in Example 5.3 is established through regular occurrences, Eminem discards it as he moves into Subsection B (Example 5.4), with the transition marked by a short series of triplets, a rhythmic value that will prove significant later in the track. Eminem seems to lyrically tread water in the first four measures of Subsection B, with a few irregularly-placed and relatively unremarkable rhymes, such as rhyming “talent” with “talent,” and “oh” with “know.” However, the rhyming goal of Subsection B comes into focus
beginning in its fifth measure, as Eminem embarks on a remarkably densely packed series of multisyllabic rhymes. The principal rhyming group of Subsection B is set to a new rhythmic motive, pictured in Example 5.5.

Example 5.4.

Example 5.4.
The principal rhymed group of Subsection B, highlighted in magenta, has four syllables, the first (“ɪ” as in “win”), second (“ɪ” as in “win”), and fourth (“u” as in “threw”) of which are rhymed. The third syllable of each rhymed group is itself unrhymed and de-emphasized, primarily heard as an unstressed schwa (“ə” as in “mom-ent”) and set to a sixteenth note, the shortest note value in the rhythmic motive. These partially-rhymed groups are “slant” rhymes. As Adams (2009) defines the term relating to rap music, slant rhymes are “rhymes in which one syllable of a multi-syllabic group is altered.”

In Subsection B Eminem engages in a tactic he often uses with multisyllabic rhymed groups, in which he peppers his lyrics with additional single or two-syllable rhymed fragments in addition to numerous fully formed, four-syllable groups. I have highlighted these fragments in light pink. When one includes these rhymed fragments in a rhyme analysis, there is scarcely a beat of this subsection that does not rhyme at least partially with the main rhymed group. In order to obtain this level of saturation, Eminem alters the pronunciation of many words to fit the rhyme scheme. For example, “ten” is pronounced as “tin,” “just” as “jist,” and “get” as “git.” This technique of vowel-bending is common in Eminem’s flow, and mirrors an interview with 60 Minutes in which Eminem expresses frustration over the widely held belief that no English words rhyme with “orange.” As a means of demonstration, Eminem pronounces “orange” with the second syllable as a pure “ɪ” vowel, going on to rhyme it with “door hinge,” “porridge,” and “four-inch.”

Subsection C (Example 5.6) marks the first moment in “The Ringer” in which Eminem engages in flow-based mocking of those he sees as his opponents. As Eminem raps “do you have any idea how much I hate this choppy flow,” he dramatically shifts his rhythmic delivery,

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108 Slant rhymes are also called imperfect, sprung, or inexact rhymes. See Ousby (1996, 8).
109 https://www.youtube.com/watch?v=IPcR5RVXHMg
imitating the triplet-based flow pervasive in much 2010s “trap” music (see Chapter 2). While not all of Subsection C is dedicated to mocking such rappers, Eminem does stay in this triplet-based flow for the entirety of the section, even as he moves on to new targets and boasts.

Example 5.5.
As Eminem uses and condemns triplet flow in a single breath, he criticizes many mainstream rappers. He singles out Lil’ Yachty, an Atlanta-based trap rapper twenty-four years Eminem’s junior. A cursory skim through Lil’ Yachty’s discography will reveal numerous tracks with triplet-based flow, one of which is transcribed as an excerpt in Example 5.7 below. Eminem’s use of triplets in Subsection C seems to be aimed at demonstrating to rappers such as Lil’ Yachty how easy it is for a rapper as seasoned as Eminem to imitate their style—implying that the largely rhythmically unvaried triplet flow so prevalent today is uncomplicated and undeserving of attention. Of course, an irony in Eminem’s mocking of triplet flow is the fact that his flow is, while rhythmically simple, rather nuanced in other ways—much like flow of some of the artists he is critiquing.

Example 5.6. A transcribed excerpt of Lil Yachty’s “Riley From the Boondocks” (2018, 0:47-0:54).

Eminem’s rhyming technique in Subsection C is irregular and complex. In a short span of several measures, there several instances of what might be termed “rhyme overlap,” in which Eminem dovetails separate rhymed groups. Eminem’s rhyme technique is further aided by his use of both rhythm and pitch in this subsection. In the final six measures of Subsection C, Eminem begins a series of two-beat motives that incorporate rhythm, pitch, and rhyme. Beginning with the lyrics “Paul wants me to chill,” Eminem pitches the first syllable of every other group of eighth note triplets noticeably higher in his vocal range, giving each a shout-aided emphasis (Example 5.8). In addition to this regular pitch pattern, every two-beat rhythmic cell in
the last six measures of Subsection C is nearly identical. The impression left upon the listener is that Eminem is rhyming groups of four to five syllables twice each measure, when in fact the main correspondences between each cell are in pitch and rhythm, rather than vowel rhyme. This feature allows Eminem to again bend our perception of what rhymes, which is further aided by Eminem’s signature vowel mixing as he matches seemingly incompatible syllables like “poss(ibly)” and “like.”

Example 5.7.

Example 5.9 also demonstrates a pitch-based accentual pattern that is unusual for Eminem. Typically, Eminem raps with a rhythmically precise but irregular flow that allows him to place rhythmic or pitch accents on the same syllables that would typically be accented in spoken prose. In this section, however, Eminem’s triplet flow is ostensibly mocking the way that rappers who rely on triplet flow will often end up with stressed syllables in the “wrong” location. The fourth and fifth measures of Example 5.9 are good examples of this phenomenon, as Eminem’s strictly regular accent pattern strays from the likely accent pattern that would be achieved with speaking the same lines as prose. Eminem’s pitched accent also has a metric displacement effect for the listener, as each measure of Example 5.9 could be heard as combining two measures of $\frac{3}{4}$ meter in which Eminem is rapping in a straight duple rhythm (imagine measures starting on the syllables “Paul,” “y’all,” “I,” “prob,” etc.).

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110 See Example 5.11 later in this chapter for an example of this.
Example 5.10 (below) is a transcription of Subsection D, the final component of what I call Verse 1 of “The Ringer.” As Eminem comically elaborates on various methods of torture that he would find preferable to being forced to listen to his opponents, he resumes his heavy reliance on vocal pitch to signal rhymed syllables as he did in Subsection A. In this subsection, Eminem primarily uses the “rhyme strengthening” technique of vocal pitch, markedly raising the pitch of his voice on nearly all “äɨ” (as in “my”) rhymes. The “äɨ” rhymes in Subsection D function as the primary generator of rhyming groups throughout—initially, the syllable signals a predictable two syllable rhyme (highlighted in red in Example 5.10). However, as the subsection progresses, Eminem treats the “äɨ” syllable as a type of rhymed module that can be reused in different in different contexts. In the twelfth bar of Subsection D, he switches to a three-syllable rhyme (highlighted in blue) in which “äɨ” is moved to the middle syllable. Despite this reordering, Eminem consistently places this familiar syllable at approximately the same pitch as in previous rhymed groups. Then, in the final two measures of the subsection, Eminem attaches an additional syllable to the two-syllable grouping, giving the impression of a longer rhymed pair in “bashed you upside it” and “smash like a night stick.”
A brief and easy-to-miss moment in Subsection D strongly demonstrates the power of pitch and rhythm when perceiving rhyme in rap flows. In the sixth measure, after a series of two-syllable rhymes (“ice pick,” “vice grip,” “spike fence,” etc.), Eminem delivers a line that should contain three rhymes: “Mike Pence,” “my shit,” and “sidekick.” However, I assert that only two rhymes are apparent in this measure, as shown in my transcription above. The absence of Eminem’s usual higher-pitched “äɪ” syllable, combined with the lack of a familiar rhythmic
motive assigned to all other instances of the two-syllable rhyme in this subsection, make the syllables “my shit” exceptionally difficult to hear as a rhyme, despite the phrase rhyming perfectly on paper. This is yet another demonstration of the power of pitch and rhythm to impact our hearing of rhyme—in some cases, Eminem can rap phrases that rhyme well but they don’t sound so to the listener, and in other instances, he can force listeners to perceive a strict rhyme when there is none through his use of vowel inflection, vocal pitch, and rhythmic cells. In fact, Eminem engages in a game of subverted listener expectations by manipulating a rhythmic cell. In measures 3-5 of Example 5.10, Eminem establishes a repeated rhythmic idea, with four sixteenth notes on beats one and three leading to an end rhyme on beats two and four. The moment of subversion comes when Eminem places the syllables “Mike Pence” on the first beat of the sixth measure of the example, violating the pattern he just established.

Section 5.4: Verse 2 (2:14-3:59)

The second “verse” of “The Ringer” (Example 5.11) begins with a flow that mocks through derisive imitation. Subsection E begins with a quotation from another hip-hop track—Eminem chants the lyrics “turn down for what” from DJ Snake and Lil Jon’s song “Turn Down for What” (2013), making his delivery align rhythmically with that of the referenced track (Example 5.12). Using the rhythm of this lyric as a motive, Eminem then sets the remaining rhymed syllables in Subsection E as three-syllable rhymes set to the same rhythmic motive. Also on display is more vowel-bending to create rhymes out of words and syllables that would not typically do so. For example, Eminem manages to rhyme the lyrics “vol-ume up” and “cal-i-ber” by purposefully mispronouncing both. “Vol-ume up” is pronounced as “Val-i-um up,” and “cal-i-ber” is pronounced “cal-i-buh.”

111 While the string of ten three-syllable rhymes in Subsection E

111 Eminem’s wordplay around Valium in this section is likely a reference to a time in the rapper’s past where he struggled with prescription drug addiction.
is impressive, it seems that this decision could have resulted in a decrease of rhyme density, as Eminem’s rate of rhymes per measure briefly drops to just over one rhyme for each bar of this example.

Example 5.11.


Subsection F marks a moment in “The Ringer” that is unique with respect to other subsections, as Eminem embarks on a sung interjection (see Example 5.13). In this section, Eminem exhaustively repeats a single-beat rhythmic and pitch motive. As in other less-purposefully pitched subsections, Eminem uses his vocal pitch to emphasize rhymed connections throughout his sung interjection. A series of rhymed syllables (“week,” “me,” etc.) are consistently placed on the pitch B flat. Furthermore, each of these rhyming syllables is always placed at the same location within a beat. While Subsection F is not particularly virtuosic in its
construction or delivery, it is the point in “The Ringer” when it becomes clear that Eminem signaling to his listeners (including the “ex-fan” mentioned in the lyrics) that he has no intention of returning to his old style of flow from previous albums.

Example 5.13.

Subsection G (Example 5.14) begins with yet another quasi-direct quote from a prominent rap song. Eminem takes a shot at modern rap culture by parroting the repetitive rhythms of one of the most popular tracks of 2017, “Gucci Gang,” as performed by teenaged, neon-haired rapper Lil Pump (Example 5.15). Regardless of Eminem’s opinion on the quality of “Gucci Gang,” he is clearly aware of the cultural significance of the song, as evidenced by the fact that his reference in Subsection G makes no outright lyrical reference to the track he is parodying. Instead of using his lyrics to call out “Gucci Gang,” Eminem relies solely on rhythm and rhyme—his repeated rhythmic cell in the first three measures of Subsection G is identical to the main rhythmic motive in the referenced track, and each of his rhymed syllables in these measures (“chicken wang,” “imitate,” etc.) rhyme with the oft-repeated lyric “Gucci Gang” from
the song he is mocking. It is apparent that Eminem thought that Lil Pump’s “Gucci Gang” was culturally pervasive enough that he could draw the attention of his listeners to it without ever mentioning it directly.\footnote{Eminem does mention Lil Pump in his lyrics in this subsection, alongside Lil Xan, a similar young rapper known for rapping about drugs.}

\footnote{Eminem does mention Lil Pump in his lyrics in this subsection, alongside Lil Xan, a similar young rapper known for rapping about drugs.}
Example 5.14.

Example 5.15. A portion of the refrain from Lil Pump’s “Gucci Gang” (2017).

Eminem’s reference to “Gucci Gang” only lasts three measures before he moves to another rhythmic style. Measures 4-18 of Subsection G are connected via either vowel sounds, rhythmic motive/metric placement of rhymes, or both. Beginning in the fourth measure, Eminem embarks on a series of two-syllable end rhymes (“rumble,” “humble,” etc.) that occur on either
the first or third beat of a measure and are followed by a sixteenth rest. As he enters the eighth bar of this subsection, however, Eminem begins something which could be called “rhyme morph,” as he begins a new series of rhymed syllables (“pummel you,” “comin’ to,” etc.) that share a vowel sound (“ə” as in “run”) with the previous rhyme series. For the listener, the net effect of the shared schwa vowel in this transition is the impression that Eminem is continuing the series of rhymes he began in measure four, despite the fact that the new rhymed group beginning in measure eight does not have the same number of syllables or metric placement as the previous rhymed group.

Beginning in measure 10 of Subsection G, Eminem shifts his primary end rhyme again, to a series of two-syllable rhymes (“Joyner,” “goner,” etc.). As Eminem makes this shift, he places each rhyme to a new default position on the third beat of each measure and follows them with sixteenth rests, recalling the rhythm and metric placement of the primary rhymes in measures 4-7 of the subsection, and making measures 10-17 100% regular in terms of rhyme. In doing this, Eminem strings together a series of three different end rhymes from measures 4-18 (highlighted in blue, purple, and yellow in Example 5.14) that, while functioning lyrically as disparate categories, each share either a vowel sound or rhythmic/metric setting with another end rhyme in the subsection. Also noteworthy is Eminem’s inclusion of exceptionally fast 32nd notes in the final five measures of Subsection G—the first moment in “The Ringer” where Eminem makes clear to his listeners that speed rap (see Chapter 2) is yet another style of flow of which he is capable.

Subsection H (Example 5.16) is noteworthy for being far and away the most rhythmically static section of “The Ringer,” as the vast majority of rhythmic durations are sixteenth notes. This relative rhythmic simplicity seems to be in response to the lyrical content of the previous
section, in which Eminem laments what he perceives to be his listener’s inability to comprehend his wordplay on recent projects. In addition to this rhythmic simplicity, Eminem also delivers the majority of Subsection H in a quasi-sung, repetitive style (see Example 5.17), in which he oscillates between two pitches a whole step apart. His vocal timbre does not seem to imply purposeful, tuneful singing—pitches are approximate, and the section has more of an air of irritated, repetitive yelling than singing. The quasi-sung nature of Subsection H is also likely related to a line in the prior section, in which Eminem raps “maybe if the vocals woulda been Autotuned you woulda bought it,” referencing the Autotuned rap that has been pervasive through much of the 2010s. Despite the rhythmic simplicity of Subsection H, Eminem manages to showcase his rhyming talents as he strings together seven consecutive six-syllable rhymes in the space of only four measures. It is also noteworthy that Eminem’s lengthy stream of sixteenth notes is virtuosic in of itself—this entire subsection is ostensibly delivered in a single breath, as a demonstration that Eminem can easily do this rhythmically straight flow in addition to the irregular flow for which he’s more well-known.
Example 5.16.
Subsection I (Example 5.18) is another example of Eminem’s utilization of rhyme-strengthening vocal pitch, similar to Subsection D. The vowel “i” (as in “see”) pervades the entirety of the subsection, and every time this vowel is set against an eighth note, Eminem markedly raises his vocal pitch. The single-syllable rhyme momentarily expands to a two-syllable group in measures 3-5, before contracting again to the single “i” syllable. The metric placement of rhymes in Subsection I begins quite regularly, but as the section continues Eminem places rhymed syllables in increasingly unpredictable locations. When combined with Eminem’s vocal pitch, this technique gives the impression upon first listening that Subsection I becomes highly syncopated, when in fact the rhythms of Eminem’s flow are quite simple.

Example 5.18.
Section 5.5: Verse 3 (4:00-5:36)

Subsection J (Example 5.19) continues to use the “i” rhyme from the previous section, slightly altering the rhythmic setting of the surrounding flow. This subsection is largely a continuation of Subsection I, with the primary difference between the two involving Eminem’s vocal tone and inflection. As Subsection J begins, Eminem shifts his attention to mocking a hypothetical critic, doing so by momentarily speaking as one of his own detractors. As he does this during measures 1-3 of the subsection, Eminem conveys his scorn by inflecting his voice with a higher, mocking tone probably intended to convey the stupidity of anybody who would criticize his rapping. When Eminem shifts back to speaking as himself in the fourth measure of this subsection, his vocal pitch shifts down again into its normal range.

Example 5.19.

Subsection K (Example 5.20) is a rare portion of “The Ringer” that doesn’t add appreciably to the catalogue of flow styles and techniques that Eminem has expanded upon during the track. It is instead a return to the style of the first few lines of Subsection G (Example 5.14), in which Eminem mocks Lil Pump’s “Gucci Gang” (2017).
Subsection L (Example 5.21) is arguably the climax of “The Ringer.” Eminem initiates a rhyme chain with the lyric “beast of burden,” which becomes a four-syllable unit that is rhymed in its entirety a stunning twenty-one times in the space of twenty measures, not including the many one-and-two-syllable fragments scattered throughout the subsection. Each complete rhyme in Subsection L is set to a new rhythmic motive (see Table 5.2). In this subsection, Eminem is again using vowel flexibility and rhythmic motives to give the impression of a series of perfect four-syllable rhymes, when his rhymed units are in fact somewhat flexible. Note that in Table 5.2, the second and fourth syllable of each rhymed unit are unstressed schwas (“ə”). Eminem uses the schwa’s flexibility as a syllable to accommodate numerous non-rhyming syllables into his rhyme scheme. Despite the literal non-rhyme of some of these syllables (for example, the second and fourth syllables of both phrases “least re-word it” and “ev-il ser-pent”), they sound to the listener as if they are part of four-syllable rhymes nonetheless, due to the unstressed nature of the non-rhyming syllables and their consistent rhythmic setting. Also noteworthy are the numerous smaller segments of this primary rhyme group that are peppered throughout.
Subsection L (for example, see the word “see” in measure 3)—Eminem marks these moments by setting the syllables to rhythmic durations that correspond to their setting in the complete rhythmic motive. Each of these rhyme segments marks a moment of misdirection, as Eminem has conditioned his listeners to expect a four-syllable rhyme upon hearing an elongated “i” vowel, an expectation that is not always fulfilled.
The final section of “The Ringer,” Subsection M (Example 5.22), has an aura of deceleration in the wake of the lyrical acrobatics that preceded it. The first line of the subsection is rapped lazily, falling out of strict rhythmic quantization. The final eight measures of “The Ringer” are more pedestrian in terms of rhythm and rhyme scheme than anything prior to this point—Eminem embarks on an entirely regular series of four couplets, each with rhymed syllables set in the same metric location and to approximately the same rhythmic cell. The final section of “The Ringer” is much less syllabically dense than any that preceded it, as Eminem
separates each phrase from its neighbors, treating the final eight measures as eight markedly separate utterances.\textsuperscript{113}

\textbf{Example 5.8.}

\section*{Section 5.6: Conclusion}

Throughout “The Ringer,” Eminem asserts his dominance over rap music with lyric after boastful lyric. It is clear, however, that Eminem never intended his assertions to be mere bloviating—instead, he endeavors to prove his skill as an emcee by taking listeners on a tour de force of all the rhythmic, lyrical, and vocal pitch techniques with which he is familiar. He flits

\textsuperscript{113} One possible reading of this final section is that Eminem is momentarily acquiescing to his critiques, allowing himself to rap in a more “old-school” style of flow.
from style to style, sometimes proving his originality, other times mocking other rappers by seemingly effortlessly appropriating the styles for which they are known.

In the analysis above, I have shown the utility of the analytical framework established in the preceding chapters of this dissertation. While new methods of rap analysis are constantly being developed within this sub-field, it is my hope that this dissertation will demonstrate to readers the value of holistic analyses of rap tracks, in which observations are shaped by a combination of rhythm, rhyme, and vocal pitch—the primary parameters of flow in rap music.

The Ringer

Eminem

Let me explain just how to make greatness straight out the gate

I'm bout to break it down ain't no mistakes allowed but make no mistake I'm bout to rape

the alphabet I might raise some brows if I press the issue just to get the anger out,

full magazine could take Staples out, Savage but I ain't thinkin' bout no bank account but bitch

I'm off the chain like Karla Brown. Motherfucker shut the fuck up when I'm talkin' lil' bitch I'm sorry wait, what's
your talents? Oh, critiquing my talent oh... bitch I don’t know who the

f**k y’all are to give a sub-par bar or even have an opinion or view, you mention

me, millions of views, attention and news I mention you, lose lose for me win win for you, billions of

views your tens cents are two, skim through the music to give shit reviews to get clicks, well

bitch you just lit the fuse. Don’t get misconstrued, business as usual shit list re-

newed so get shit to do or get dissed cause I just don’t get what the fuck half of the shit

is that you’re listening to do you have any idea how much I hate this choppy flow every one

copies though probably no get this fuckin’ audio out my Audi, yo adios I can see

why people like Little Yachty but not me though. Not even dissin’ it just ain’t for me.
All I am simply is just an Emcee. Maybe "Stan" isn't your cup of tea, maybe your cup's full of syrup and lean.

Maybe I need to stir up shit preferably shake the world up if it were up to me.

Paul wants me to chill, y'all want me to kill, I should eat a pill, probably I will,

old me killed the new me, watch him bleed to death. I breathe on the mirror, I don't see my breath,

possibly I'm dead, I must be possessed, like an evil spell, I'm E-V-I-L Jam a Crest White

Strip in the tip of my dick with an ice pick stick it in a vice grip hang it on a spike fence

bang it with a pipe wrench while I take my ballsack and flick it like a light switch like Vice President

Mitt Romney back on my shit in a side-kick as I lay it on a spike strip, these are

things that I'd rather do than hear you on a mic since nine tenths of your rhymes is about ice and

Jesus Christ, man how many times is someone gonna fuck on my bitch?
You won't ever see Ermie-y, but as cold as I get on the M-I-C I polarize shit so the temps might freeze and your skull might split like I bashed you up-side it, bitch I got the club on smash like a night stick.

Turn down for what I ain't loud enough, nah turn the volume up! Cause I don't know how I'm gonna get your mouths to shut now when it doesn't matter what caliber I spit at.

I'll bet a hundred thousand bucks you'll turn around and just be like "Man, how the fuck's soup-pass gonna get mad just 'cause his album sucks and now he wants to take it out on us?"

Last week, an ex-fan mailed me a copy of The Mathers LP to tell me to study it'll help me get back to myself and she'll love me.

I mailed the bitch back and said if I did that I'd just be like everyone else in the fucking industry especially an effing Recovery clone of me! So,

fing-er bang, chick-en wang, M-G-K, Iggy Azalea, Lil' Pump, Lil' Xan imitate Li'l Wayne
I should aim at ev-ery bod- y in the game, pick a name. I’m fed up with be-in’ hum-ble and rum-or is I’m hun-gry. I’m sure you’ve heard rumb- lings, I heard you wan-na rumbl-ie like an emp-ty stom-ach. I heard your mum-b

lin’ but it’s jum-bled in mumb-o jum-bo. The era that I’m from will pum-mel you that’s what it’s com-ing to, what the fuck you gon-na do when you run in-to it? I’m gon-na crum-ble you and I’ll take a num-ber two and dump on you if you ain’t Joy-ner. If you ain’t Kend-rick
or Cole or Sean, then you're a goner. I'm bout to bring it
to anyone in this bitch who want it. I guess when you walk into BK you expect a Whopper. You could order a
quarter pounder when you go to McDonald's but if you're lookin' to get a
quarter-house you better go get Re-vital. But y'all are actin' like I tried to serve you up a slider. Maybe the w-cals
shoulda been auto-tuned and you woulda bought it. But sayin' I no
longer got it 'cause you missed a lot and never caught it 'cause it
went over your head because you're too stupid to get it 'cause you're
mentally retarded but pretend to be the smartest with your
expertise and knowledge, but you'll never be an artist and I'm
harder on myself than you could ever regardless, what I'll never be is flawless all I'll ever be is honest even
when I'm gone they're gonna say I brought it. Even when I hit myforties like a fuckin' alcohoile with a bottle full of
malt liquor but I can’t bottle this shit any longer, the fact that

I know that I’m at the bottom if I don’t pull myself from the jaws of defeat, and rise to my feet. I don’t see why you all even started with me. I get in beefs my enemies die, I don’t cease fire till all are deceased. I’m East side never be caught sippin’ now you see why

I don’t sleep not even a wink, I don’t blink, I don’t doze off. I don’t even nod to the beats I don’t even close my fuckin’ eyes when I sneeze! “Oh, man... that BET cypher was weak, it was garbage the Thing ain’t even orange oh my God, that’s a reach!”

Shout to all my color-blind people, each and every one of you all if you call a fire engine green, Aqua- marine, or you think water is pink.”Dawg that’s a date.” “Looks like an olive to me.” “Look, there’s an apple, no it’s not, it’s a peach!” So, finger bang, Poo-tie Tang,
Burger King, Gucci Gang, dookie dang, Charlie-magne gonna hate anyway, doesn't matter what I say,

Gimme Donkey of the Day, what a way for twenty-eighteen to get under way, but I'm gonna say ev'rything that I wanna say. Welcome to the slaughterhouse, bitch. Invite 'em in like a one a day (I'm not done).

'Cause I feel like the beast of burden. That line in the sand, was it even worth it? 'Cause the way I see people turnin'sakin' it seem worthless, it's starin' to defeat the purpose, I'm watchin' my fan base shrink to thirds, and I was just tryin' to do the right thing, but word, has the court of public opinion reached a verdict, or still yet to be determined? 'Cause I'm determined to be me. Critiqued or worshiped, but if I could go back, I'd at least reword it, and say I empathize with the people this evil serpent sold the dream to that he's deserted,

but I think it's workin' these verses are makin' him a wee bit nervous, and he's too scared to answer me with words 'cause he knows that he will lyrically get murdered.
But I know at least he's heard it, 'cause Agent Orange just sent the Secret Service to meet in person to see if I really think of hurtin' him, or ask if I'm linked to terrorists. I said "Only when it comes to ink and lyricists." But my beef is more media journalists.

I said my beef is more meaty, a journalist... Can get a mouthful of flesh, and yes I mean eating a penis.

'Cause they been pan-nin' my album to death, so I been givin' the media fingers.

Don't wanna turn this to a counseling session, but they been puttin' me through the ringer.

So I ain't ironin' shit out with the press, but I just took this beat to the cleaners.

Example 5.9.
Conclusion

The goal of this dissertation has been to expand the fluency of readers with regards to rap flow, allowing future theorists to build upon my research and treat it as a foundation for their own analyses. This scholarship is meant not only to inform future research, but to fortify past publications as well, through my articulation of numerous trends, patterns, and techniques that have been used in rap flows for decades. Rap scholarship is not only an essential part of understanding hip-hop music and culture, but is also useful for studying popular music more generally. Rap music is widely influential, and its paradigms challenge much of what we believe to be typical of popular music. In fact, a 2015 study published in the Los Angeles Times asserts that “hip-hop, not Beatles, had greatest influence on pop music,” pointing to the paradigm shift initiated by sampling, harmonic, and lyrical practices brought on by rap music.  

In this dissertation, I have described in detail the ways in which rappers manipulate three main parameters of flow to shape a listener’s experience of their music. After an introductory chapter, my second chapter contains numerous analyses of rhythm as a parameter in rap flows. I show that rhythmic motives can contribute to a sense of rhyme, and demonstrate numerous complex rhythmic and metrical settings of lyrics. Chapter 3 dissects rhymes and rhyme schemes, comparing the latter to miniature forms in rap verses. Additionally, my third chapter addresses rhyming in non-English rap, an important area for further scholarship. In Chapter 4, I discuss vocal pitch in rap, a topic that has scarcely been remarked upon by previous scholars. I demonstrate that rappers manipulate vocal pitch in a variety of ways, using five techniques that exist on a spectrum from least to most purposefully-pitched. In my fifth and final chapter, I

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114 [http://graphics.latimes.com/music-evolution-hip-hop-rap/]
demonstrate the utility of these three main parameters of flow in analysis by conducting a sample analysis of a complete rap track.

There are many topics that, while worthy and fascinating, I have left out of my research in this dissertation. Issues of semantic meaning of lyrics, sampling, microtiming, race, culture, gender, and politics are largely left aside. It is my sincere hope that future rap scholarship both within and outside of music theory will continue to address these topics, and that my research on flow techniques can supplement many of these projects. I see my research as a starting point for those interested in analyzing rap music from many different angles. For example, I hope that my observations on vocal pitch in rap music will be helpful for a future study of gender expression in rap flows. Additionally, I hope that my work on vocal pitch in rap will lead to more discussions of genre, and when exactly vocals stop being “rapping” and start being “song”—if the categories are even mutually exclusive. I can imagine my discussions of rhythm in rap music proving a useful starting point for scholars interested in analyzing rap in non-English language. Furthermore, my research on rhyme in rap could be useful for scholars in music and non-music fields alike.

Indeed, it is my hope that this dissertation is but a starting point for myself and numerous other future rap scholars. I will consider my work a success if it inspires more academics to consider the nuances of rap flow, and if it deepens our collective musical understanding of rap. Ultimately, rap music is something that all music academics should be conversant with, as the genre is incredibly popular, widely-consumed, influential, and will likely continue to be so for the foreseeable future.
Bibliography


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