Hip-Hop Sampling as Analytic Act

Jeremy Tatar

In der Musikproduktion bezeichnet Sampling die Praxis der digitalen Weiterverwendung von Elementen aus bestehenden Aufnahmen, um neuartige Musik zu erschaffen. Seitdem es Mitte des 20. Jahrhunderts innerhalb der Musique Concrète entwickelt und in den 1970er und 1980er Jahren von Discjockeys in der Bronx übernommen wurde, ist das Sampling zu einem allgegenwärtigen Merkmal der zeitgenössischen Musiklandschaft geworden. Auf Grundlage von Konzepten aus dem Bereich der Performance-Analyse wird in diesem Artikel untersucht, inwiefern die Produktion samplebasierter Hip-Hop-Beats als eine Form von Musikanalyse fungieren könnte. Ich argumentiere dafür, dass samplebasierte Beats – wie auch andere analytische Handlungen – a) Produkte eines ebenso geschulten wie genauen, von Expert:innenwissen geprägten Hörens sind und b) das Potential aufweisen, auch das Hören und Interpretieren *anderer* Musik zu beeinflussen. Meine Analysen konzentrieren sich vor allem auf Fragen des Metrums und der Phrasierung und gehen auf folgende Themen ein: Wie interpretieren Produzent:innen eine metrisch mehrdeutige Quelle? Wie rekontextualisieren sie Material in einem anderen Metrum? Und nicht zuletzt: Wie kann die Betrachtung dieser Praktiken unsere eigenen Interpretationen des ursprünglichen Materials bereichern (und verändern)? Anhand von Beispielen von Usher (»Lil' Freak«, 2010), Slum Village (»Raise it Up«, 2000), Disiz (»Une Histoire Extraordinaire«, 2005) und Nas (»I Can«, 2002) zeige ich, wie Sampling ein lebendiges Archiv erschafft, das die Hörpraktiken einer musikalischen Expert:innengemeinschaft bezeugt.

In music production, sampling is the practice of digitally repurposing elements from existing recordings to create new musical works. Pioneered by *musique concrète* studio traditions in the mid-twentieth century and later adopted by disc jockeys in the Bronx in the 1970s and 80s, sampling has since become a ubiquitous feature of our contemporary musical landscape. Drawing on concepts established in the field of performance analysis, this paper explores the potential for sample-based hip-hop beats to function as a form of musical analysis. I argue that – just like other analytic acts – sample-based beats are a) products of skilled, close listening informed by expert knowledge; and b) commentaries with the potential to shape how *other* music is heard and interpreted. Focusing particularly on issues of meter and phrasing, my analyses consider issues such as: How do producers interpret a metrically ambiguous source? How do they recontextualize material from one meter for another? And, most importantly, how might attending to their choices inform (and transform) our own interpretations of these source materials? Through close readings of examples by Usher ("Lil' Freak," 2010), Slum Village ("Raise it Up," 2000), Disiz ("Une Histoire Extraordinaire," 2005) and Nas ("I Can," 2002), I demonstrate how sampling creates a living archive that documents the listening practices of an expert musical community.

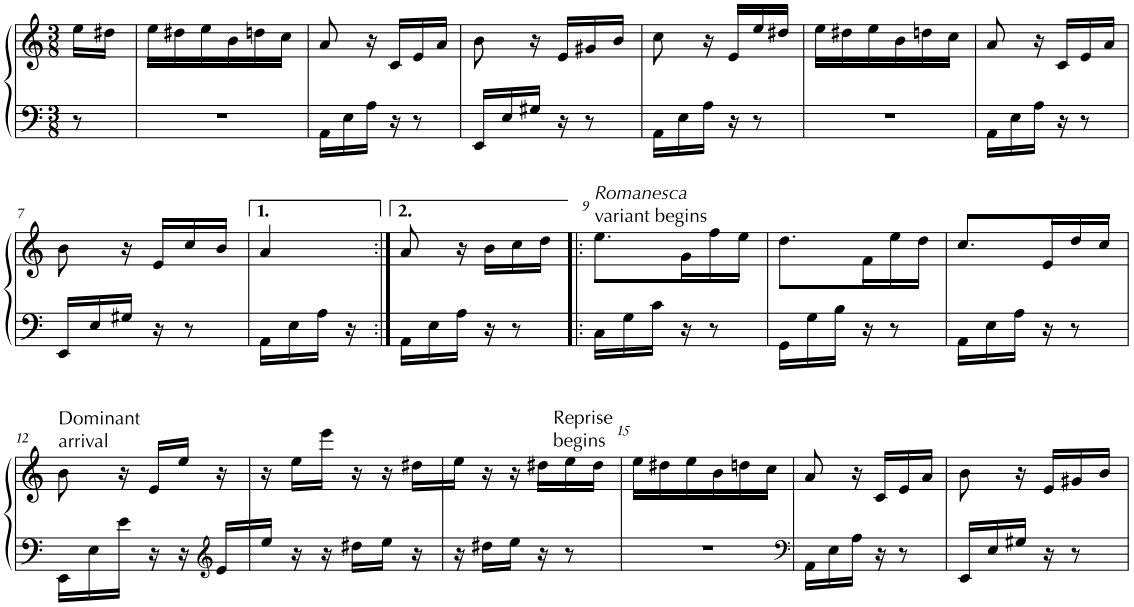
SCHLAGWORTE/KEYWORDS: Analyse; analysis; Hip Hop; meter; Metrum; music production; recontextualization; sampling

Introduction – and "Für Elise"

In a 2015 article concerned mainly with music theory pedagogy and the relative neglect of musical meter within standard models of conservatory education, Richard Cohn closes with a brief analysis of Beethoven's bagatelle for piano popularly known as "Für Elise."[1] Cohn focuses on the passage linking the arrival of the dominant in measure 12 (which follows a brief *Romanesca* variant that begins in measure 9) with the reprise of the sec-

1 Cohn 2015, 17.

tion's main theme in the pickup to measure 15.[2] Across these three measures, the music rockets upward in register through a series of repeated Es before settling on an alternation between E5 and D♯5, as Beethoven's notation directs his pianist to divide these gestures between their hands (Example 1).



Example 1: Ludwig van Beethoven, Bagatelle No. 25 in A minor, WoO 59, "Für Elise" (1810), measures 1–17

Central to Cohn's analysis are recordings of "Für Elise" by two of the twentieth century's piano titans: Artur Schnabel and Alfred Brendel. Audio Example 1 presents Schnabel's recording, beginning from the second-time bar.[3] Schnabel plays one E-D♯ alternation too many before the section's reprise, effectively adding an extra eighth note and momentarily expanding the notated 3/8 meter into 4/8, as shown in Example 2. For comparison, Audio Example 2 presents Brendel's recording of the same passage.[4] Remarkably, Brendel plays one E-D♯ alternation *too few* at this moment, subtracting an eighth note and contracting the meter into 2/8, as shown in Example 3.

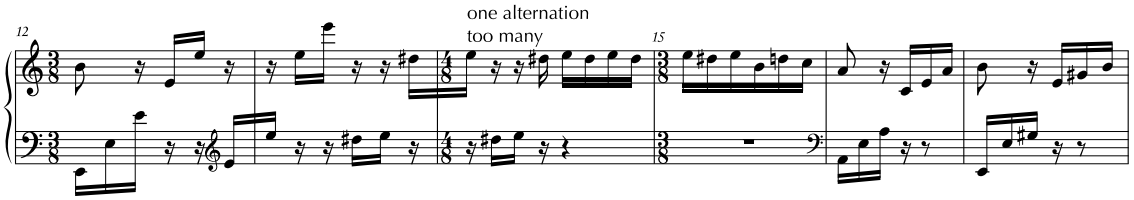
https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio01.mp3

Audio Example 1: Beethoven, "Für Elise," performed by Artur Schnabel

2 On the *Romanesca* schema and its variants, see Gjerdingen 2007, 25–43.

3 Schnabel's performance was recorded on November 10, 1938, and appears on the compact disc Artur Schnabel, *Beethoven Piano Works Volume 10*, Naxos Historical #8110764. This excerpt is from Schnabel's second pass through the section (Cohn 2015, 17, n. 17).

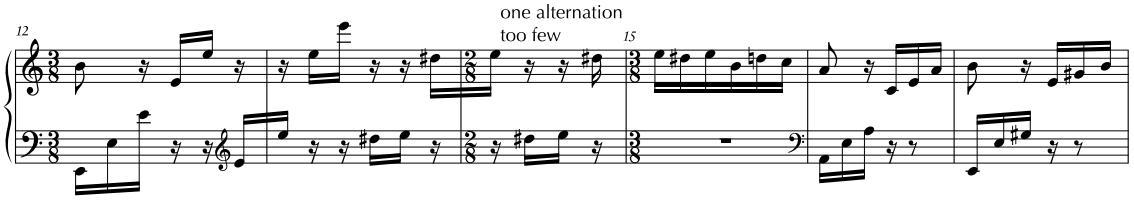
4 Brendel's performance was recorded in the early 1960s and appears on the 1992 compact disc Alfred Brendel, *Beethoven: Variations & Vignettes for Piano*, Disc 3, VoxBox 3X 3017. This excerpt is from Brendel's first pass through the section (Cohn 2015, 17, n. 18).



Example 2: Transcription of Artur Schnabel's recording of "Für Elise," which has one E-D♯ alternation too many

https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio02.mp3

Audio Example 2: Beethoven, "Für Elise," performed by Alfred Brendel



Example 3: Transcription of Alfred Brendel's recording of "Für Elise," which has one E-D♯ alternation too few

How could such esteemed musicians make such elementary mistakes? Cohn makes two important observations about these performers and their recordings. First, both Schnabel and Brendel "have well deserved reputations as among the most scholarly of musicians, for whom textual fidelity is a particularly cherished value."[5] Tellingly, these miscountings are one-off occurrences in their discographies, and it is therefore difficult to defend their deviations from Beethoven's score as forms of artistic license – Cohn argues, instead, that they are outright errors.[6] Second, he further points out that this section of the bagatelle's dominant prolongation is hardly a moment of taxing pianism, since "the left hand is inactive, and the right hand plays two adjacent pitches, one at a time, in a moderate tempo."[7] The slips of Schnabel and Brendel cannot be attributed to the technical difficulties of "Für Elise," either, and Cohn emphasizes that "if the demands are not physical, then they must be cognitive."[8]

We will return to the metric strategy that Cohn recommends as a remedy for "getting this passage right"[9] much later below, but for now I wish to concentrate on the idea that – in some shape or form – an individual's performance of a work contains important information about how they hear and understand that work. This is by no means a new idea, of course, and the potential connections between performance and cognition have long been rich areas of inquiry. Writing in 1973, for example, Leonard Meyer makes the connections between performance and analysis explicit:

5 Cohn 2015, 17.

6 Cohn writes, for example, that in Schnabel's 1932 recording of "Für Elise" he "adopts a slower tempo and plays it to perfection" (Cohn 2017, 17, footnote 17; this recording is widely available on YouTube). Brendel, too, has recorded the piece several times, and in no other version does a similar miscounting occur. While it is true that different pianists from different generations and different schools of interpretation have different relationships with the musical score-as-text, it is nonetheless unlikely that such flexibility might apply in this case, given how faithfully Schnabel and Brendel reproduce Beethoven's score – and, indeed, the scores of other composers – on other occasions.

7 Cohn 2015, 18.

8 Ibid.

9 Ibid.

> analysis is something which happens whenever one attends intelligently to the world. Whenever stimuli are grouped, ordered, and related into coherent patterns and processes, analysis has taken place. The performance of a piece of music is, therefore, the actualization of an analytic act – even though such analysis may have been intuitive and unsystematic. For what a performer *does* is to make the relationships and patterns potential in the composer's score clear to the mind and ear of the experienced listener.[10]

Sentiments that echo Meyer's understanding of performance as "the actualization of an analytic act" abound in the subsequent literature. John Rink builds directly upon Meyer when he writes that

> While it is true that performers and analysts often speak different languages, one should not assume that the more technical and in some respects more sophisticated vocabulary necessarily describes musical phenomena *better*, only (at times) with greater precision. The vast terminological gulf between analysts and performers blinds us to the fact that good performers are continually engaged in a process of 'analysis', only (as I have implied) of a kind different from that employed in published analyses. The former sort of 'analysis' is not some independent procedure *applied* to the act of interpretation: on the contrary, it forms an integral part of the performing process.[11]

More recently, the notion that a performance proceeds from and to some extent conveys a music-analytical interpretation has been the springboard for a substantial body of research. Such studies explore a more expansive range of musical activities beyond the traditional, score-based understanding of performance that Meyer originally conceived, and some prominent strands of inquiry concern distinctly embodied forms of musicking, such as dancing and headbanging.[12] Two other publications in this vein are studies by Olivia Lucas and William O'Hara, which examine the analytical dimensions of concert light shows and cover songs posted to YouTube, respectively.[13] While both articles have been influential on my thinking for this project, for reasons of space I will focus only on Lucas's.

Lucas presents an innovative study of the light shows that accompany concert performances of the Swedish metal group Meshuggah. Created by lighting designer Edvard Hansson, these visual spectacles are tightly choreographed with Meshuggah's music. Yet, as Lucas argues, the light shows often go "beyond *coordination* with musical events to *communication of abstract ideas about the music*."[14] Choreographing these light shows depends on Hansson's extensive knowledge and understanding of Meshuggah's music, and he uses various techniques – such as strobing, color-coding, and changes in intensity and direction of movement – to convey particular interpretations of features like rhythm, grouping structure, and form within Meshuggah's songs. Lucas writes that "the design and preparation of the shows [involves] close, expert listening, followed by decisions about how to enhance the sonic experience visually, followed by the technical labor of putting together the actual show."[15]

10 Meyer 1973, 29; emphasis in original.

11 Rink 1990, 323; emphasis in original. In his subsequent paragraph, Rink quotes directly from the same passage of Meyer's text ("analysis is something which happens…") shown above.

12 On dancing/choreography, see Gain 2023, Short 2019, Simpson-Litke 2021, and Simpson-Litke and Stover 2019; on headbanging, see Capuzzo 2020 and Hudson 2022.

13 Lucas 2021; O'Hara 2022.

14 Lucas 2021, paragraph 2.4; emphasis in original.

15 Ibid., paragraph 2.2.

When Lucas's descriptions of Hansson's craft are compared with Meyer's statements about performance, several shared concerns emerge that illuminate the very core of any analytical endeavor. First, both Lucas and Meyer identify the period of close, expert listening that precedes and informs the different activities that they discuss. Second, there is an element of considered choice in the parameters of focus for both activities – not just any solution or presentation will do. And third, there is the outward communication of this work to others, which itself involves particular and often highly specialized forms of labor.

Lucas also highlights a fourth feature of analysis via Hansson's light shows: its potential to transform how listeners hear Meshuggah's music. As Lucas writes:

> By emphasizing one rhythmic percept over another, the light show can offer clarity where the musical experience on its own might be more ambiguous […]. In addition, by leading the audience's attention from one percept to another, the light show can also play with expectations, create musical climaxes, and generate understandings of form. In many ways, Hansson's light show determines *how* listeners hear the music.[16]

Just as our favorite and most cherished analytical readings can shape, guide, and even transform how we hear a piece of music, Lucas focuses our attention on the similarly transformative power of Hansson's practice.[17] And, once again, it is worth emphasizing how this kind of language has previously been mobilized in praise of performers, particularly those working in Western art music traditions. For example, in Daniel Barolsky's article tellingly titled "The Performer as Analyst," he writes that "[w]e often come upon performances that surprise us, interpretations that challenge our expectations and, if we are lucky, renditions that inspire us to hear and understand the music in a new light."[18] As we move through the examples discussed below, I ask that you keep Barolsky's words in mind; I believe that you'll soon agree that we are quite lucky indeed.

With this framework in place, we can now turn to sample-based hip hop, and to the figure of the producer at the heart of this musical culture.[19] My overall goal is to highlight the explicit connections between hip-hop sampling and the other kinds of "analytic acts" described above.[20] Through their repurposing of elements from existing recordings to construct new musical works, producers are expert listeners who possess many forms of expert knowledge. Likewise, the beats that producers create are the result of multiple interpretive choices, and represent, in many respects, the ways that they *hear* their sources. These beats themselves are also deft communications of these hearings, a tangi-

16 Ibid., paragraph 5.3; emphasis in original.

17 My framing of "analysis" here echoes Kofi Agawu's (2004, 270): "analysis sharpens the listener's ear, enhances perception and, in the best of cases, deepens appreciation. Detailed and intensive scrutiny of a work brings one into close contact with the musical material, leaving the analyst permanently transformed by the experience. No subsequent hearing of the work can fail to reflect this new, heightened awareness of its elements."

18 Barolsky 2007, paragraph 3.

19 Both "hip-hop" and "hip hop" (without the hyphen) are commonly used in the literature. Following Ohriner (2019a, xxv, footnote 2), I use "hip hop" when referring to the genre and cultural practice, with the hyphen only used for the adjectival form. In direct quotation, however, I retain the form used in the original text.

20 Pioneered by *musique concrète* studio traditions in the mid-twentieth century and later adopted by disc jockeys in the Bronx in the 1970s and 80s, sampling has since become a ubiquitous feature of our contemporary musical landscape. According to a survey by the music licensing company Tracklib, for example, 17% of all the songs to chart on the *Billboard* Hot 100 in 2022 featured sampling of some kind (Tracklib 2022).

ble object that others can engage with. And, finally, these beats have the potential to change how audiences hear and understand the source materials used to create them. Importantly, this is how some hip-hop producers see themselves and their work, too, even if they might not use language framed explicitly in these terms. According to DJ Evil Dee, for example, "once you DJ… it's like you automatically become a producer. When you take a record and you're cuttin' it up, when you're blending it, that's your interpretation of that record. You produced that interpretation of that record."[21]

In the scholarship of hip hop (and of Black music more generally), this engagement with the music of the past has often been framed in terms of Signifyin(g).[22] Theorized by Henry Louis Gates Jr., Signifyin(g) is a mode of African American rhetoric concerned with the expressive and communicative properties of repetition, irony, misdirection, and figurative (rather than literal) language.[23] As Samuel Floyd Jr. elaborates:

> In African-American music, musical figures Signify by commenting on other musical figures, on themselves, on performances of other music, on other performances of the same piece, and on completely new works of music. Moreover, genres Signify on other genres – ragtime on European and early European and American dance music; blues on the ballad; the spiritual on the hymn; jazz on blues and ragtime; gospel on the hymn, the spiritual, and blues; soul on rhythm and blues, rock 'n' roll, and rock music; bebop on swing, ragtime rhythms, and blues; funk on soul; rap on funk; and so on.[24]

The practice, in other words, involves not only the invocation of the past but also an explicit commentary on it. In his book *Rhymin' and Stealin'*, Justin Williams mobilizes Gates's Signifyin(g) to investigate "how earlier material is borrowed in primarily 1990s and 2000s US mainstream hip-hop music has unearthed questions on larger issues, most broadly questions of history (chap. 1), genre (chap. 2), space (chap. 3), death/memorial (chap. 4), and lineage (chap. 5)."[25] What I argue here, however, is that sampling also unearths fundamental questions about music *qua* music, too – questions that can lead us to our own transformative encounters with producers' source materials. If, as Joseph Schloss suggests, sampling "allows producers to use other people's music to convey their own compositional ideas," this article uses close readings of both sources and their deployments as samples in four songs released between 2000 and 2010 to examine the musical implications of these "compositional ideas."[26]

21 DJ Evil Dee quoted in Katz 2012, 122.

22 For example, see Costello and Wallace 1990, Diaz 2023, Potter 1995, and Williams 2013.

23 Gates 1988. Concerning the orthography of Signifyin(g), Gates proposes the upper-case "S" to distinguish it from the standard (read: white) sense of signification – as in, the blue areas on the map signify bodies of water – as well as the parenthetical "g" to better reflect its pronunciation – "signifyin'" – by speakers of African American Vernacular English (Gates 1988, 44–46).

24 Floyd 1995, 95.

25 Williams 2013, 5.

26 Schloss 2004, 138. One feature of sampling that is largely beyond the scope of this study is the question of publishing and copyright, and the consideration of how these issues might also influence the interpretations available to producers. The ever-stricter application of copyright law, coupled with the ever-expanding technological ability to detect uncleared samples, has meant that producers are continually adapting the ways in which they use borrowed material. Williams (2015, 212) suggests that "It is safe to say that copyright legislation over sampling has had a measurable effect on the sounds of hip-hop," and Claire McLeish (2020, 146) further explores how a series of prominent sampling lawsuits in the early 1990s had varied impacts on different styles of hip-hop production in the direct aftermath. The collage-heavy style epitomized by the Bomb Squad, for example, fell largely out of favor, while the synthesizers and interpolations associated with the West Coast and Dr. Dre rose sharply in prominence. For more on copyright and sampling, see also McLeod and DiCola 2011.

Before turning to these close readings, there is one additional difference to address between my approach and that of Williams. Drawing on terminology developed by Serge Lacasse, Williams distinguishes between "autosonic" and "allosonic" quotation as a means of describing how borrowed material appears in new contexts.[27] In this usage, autosonic quotation is a form of sampling that directly uses the original recorded sound, while allosonic quotation involves the re-recording or re-performance of the original material, a technique that is also often called "interpolation."[28] For Williams, and for others, this is a meaningful distinction because it can be used to signal certain kinds of aesthetic priorities on the part of producers. If a sample-based beat retains the audible hiss and crackle of vinyl playback due to its autosonic quotation, for example, we might thus infer that the producer is invested, in some way, in a form of authenticity grounded in the very use of vinyl as a medium.[29] Nonetheless, for the purposes of my argument here, I find the distinction between autosonic and allosonic quotation to be a less salient issue. Regardless of whether the "notes" of a sample are drawn directly from a source recording or re-recorded by other musicians, the fact remains that their musical features are derived from borrowed material. What is being transformed, commented on, and *analyzed*, in either case, is an earlier musical work.

"Lil' Freak"

My first example demonstrates in more concrete terms how sampling might function analytically in the sense described above. Usher's song "Lil' Freak" was released in 2010 on his album *Raymond v. Raymond*, and also supported the album as its second commercial single. Produced by Polow da Don, "Lil' Freak" features a prominent sample from Stevie Wonder's "Living for the City" (*Innervisions*, 1973) beneath its chorus.[30] The section sampled from "Living for the City" – a song in which, as in most of Wonder's recordings, he plays all the instruments himself via studio multitracking – begins at 1:09, and I will refer

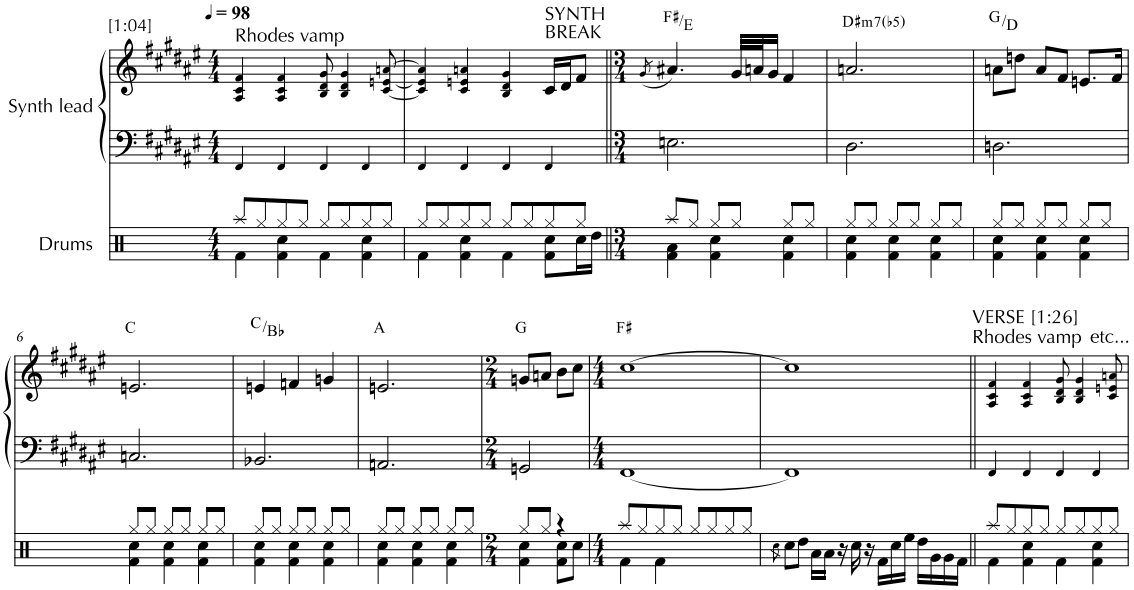
27 See Lacasse 2000. Lacasse's terms are themselves adapted from the American philosopher Nelson Goodman's notion of "autographic" and "allographic" art forms, as described in his 1968 book *Languages of Art: An Approach to a Theory of Symbols*.

28 Williams 2013, 3. A common instance of allosonic quotation is when an MC repeats or otherwise alludes to lyrics already performed by another artist; Williams (37–38) offers the example of KRS-One riffing on the opening lines of Kurtis Blow's "The Breaks" (1980) in the song "MCs Act like They Don't Know" (1995).

29 For some producers, such as those interviewed by Schloss (2004, 109), there is a strong sense "that vinyl records are the only legitimate source for sampled material." (Schloss's interviews were conducted in the late 1990s and early 2000s with musicians based mainly around Seattle.) Schloss argues that this cultural sensibility "is closely tied to the practice of digging in the crates […] and represents an intellectual commitment to the deejaying tradition as the foundation of hip-hop" (109). More broadly, Williams (2013, 68) argues that vinyl-based samples, especially from jazz recordings, are strongly coded with "hipness and coolness." As Zachary Diaz (2023, 48) notes, however, the physical act of sampling from vinyl has declined in popularity in recent decades, even if the aesthetic and aural qualities – that is, these very hisses and crackles – nonetheless remain popular.

30 "Living for the City" is one of Wonder's most celebrated recordings and was awarded the 1974 Grammy for Best R&B Song. Timothy Hughes (2003, 21–22) argues that while the song clearly belongs within the lineage of politically active Black music-making of the 1960s and 70s associated with artists such as Marvin Gaye and Curtis Mayfield, "'Living for the City' stands alone for Wonder's use of dramatic narrative to illustrate and amplify his political message and for the combination of a broadly generalized subject with sharply pointed language."

to this material as the song's "synth break" in the discussion below.[31] Example 4 transcribes this break, also showing two measures of the preceding verse texture for context: here, the music is in a steady 4/4 anchored by Wonder's drum backbeat and a two-measure harmonic vamp in the Fender Rhodes.[32] Beginning with a pickup into the third notated measure of the example, however, the break itself appears to signal a change in meter. The harmonic rhythm speeds up, and the chords start changing every three beats across a sinuous, descending progression. The drum pattern also changes, and the backbeat that supported the verse – with its characteristic timbral, textural, and gestural alternation between bass drum and snare in a clear duple patterning – is replaced by a series of combined snare-and-bass-drum hits, with relatively little differentiation between successive beats. I hear this as a genuine change of meter that shifts the music momentarily into 3/4, as shown in the transcription. Crucially, interpreting this break in 3/4 necessitates inserting what Nicole Biamonte has termed a "partial-bar link"[33] in the notated measure 9, before 4/4 resumes in measure 10 to lead into the next verse. The "Living for the City" synth break can be heard in its entirety in Audio Example 3.



Example 4: Stevie Wonder, "Living for the City," *Innervisions* (1973). Simplified transcription of synth break (1:04–1:28)

https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio03.mp3

Audio Example 3: Stevie Wonder, "Living for the City," *Innervisions* (1973), synth break, 1:04–1:32

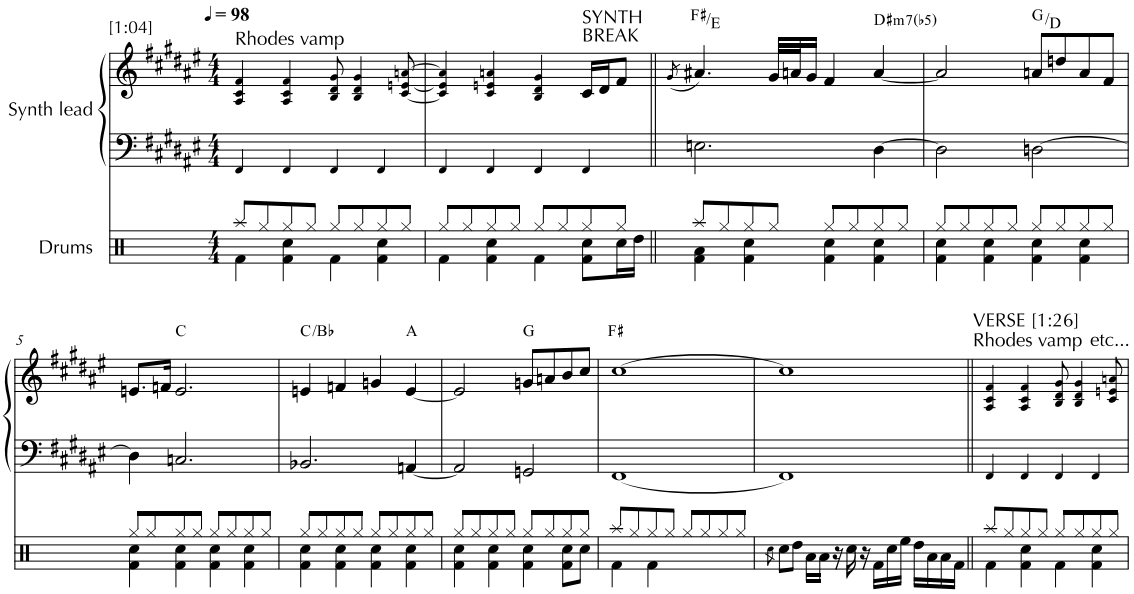
This 3/4 interpretation of the synth break privileges harmonic rhythm as the determinant of its meter, but this is not the only possible way of hearing the section. A listener with different priorities or aesthetic orientations might instead privilege the rock-steady 4/4 of

31 According to the sampling database *WhoSampled.com*, as of early 2025, "Living for the City" has been sampled or quoted in 28 subsequent releases. Usher's "Lil' Freak," however, is the only one of these to draw material from the synth break.

32 The measures in Example 4 are numbered 1–12 for simplicity, even though the excerpt is not from the beginning of the song.

33 Biamonte 2014, paragraph 7.6.

the music that came before the break. Such a listener, in other words, would entrain to the preceding 4/4 groove so strongly that they continue to hear the synth break in 4/4. This interpretation is represented in Example 5, and I encourage the reader to listen once again to Audio Example 3 but now follow along with this example. We might call Example 5 a "persistent" interpretation of this passage, after Mitchell Ohriner, since this hypothetical listener persists in hearing an established metric patterning despite conflicting cues.[34] For such a listener, the synth break spans seven complete measures of 4/4, with a harmonic rhythm that projects an extended cross rhythm against the notated meter.



Example 5: Persistent hearing of "Living for the City," after Ohriner (2019a) and Imbrie (1973), which remains in 4/4

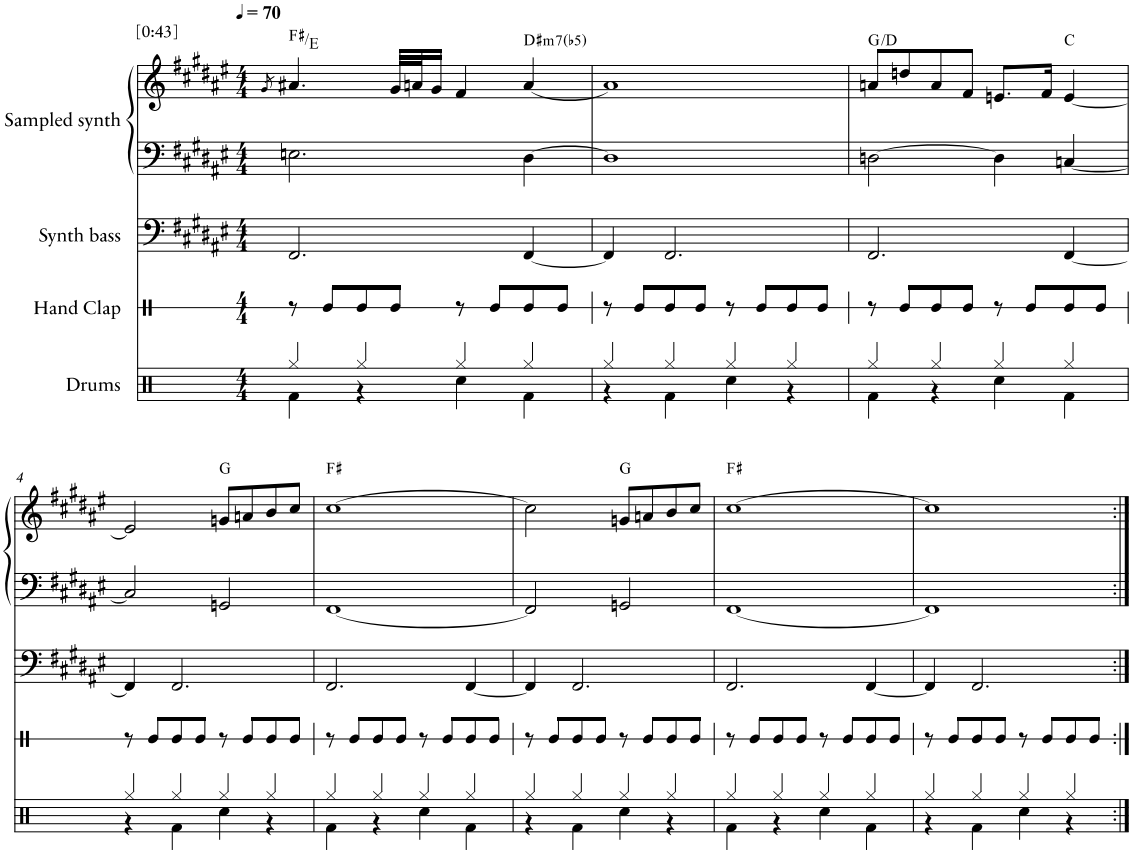
With this persistent hearing of "Living for the City" at hand, let us now turn to Usher's "Lil Freak." Example 6 transcribes the chorus of "Lil' Freak," which can be heard in Audio Example 4. Polow da Don builds this section around a sample from Wonder's synth break that has been placed unambiguously in 4/4. He leaves the sample's pitch unaltered but substantially speeds up its tempo, moving it from the quarter = 98 of Wonder's original to quarter = 140, an increase of approximately 43%.

I hear the drumbeat of "Lil' Freak" in a "half-time" feel, which is characterized by the consistent placement of the snare of beat 3 of each measure.[35] It is nonetheless also possible to hear the song with a "standard" backbeat that moves at quarter = 70, as shown in Example 7. In this version, the note values have essentially been halved, and the chorus pattern occupies four measures rather than the eight shown in Example 6. Regardless of which tactus one entrains to, however, the clearly duple setting of "Lil' Freak" bears

34 Ohriner (2019a, 95) contrasts a "persistent" listener with an "adaptive" listener, the latter of whom "seeks any chance to change the mental framework of meter." In this sense, the 3/4 interpretation previously represented by Example 4 would be an "adaptive" hearing of Wonder's synth break. A distinction between these two hypothetical modes of listening was originally proposed by Andrew Imbrie (1973), who used the terms "conservative" and "radical." As Ohriner (2019a, 96) points out, however, "these terms have unhelpful political connotations," and I thus adopt his suggested reframing of their labels.

35 On half-time drum feels, see de Clercq 2016 and de Clercq 2017.

much in common with the persistent interpretation of "Living for the City," and we might thus infer that this is how Polow da Don hears Wonder's song.

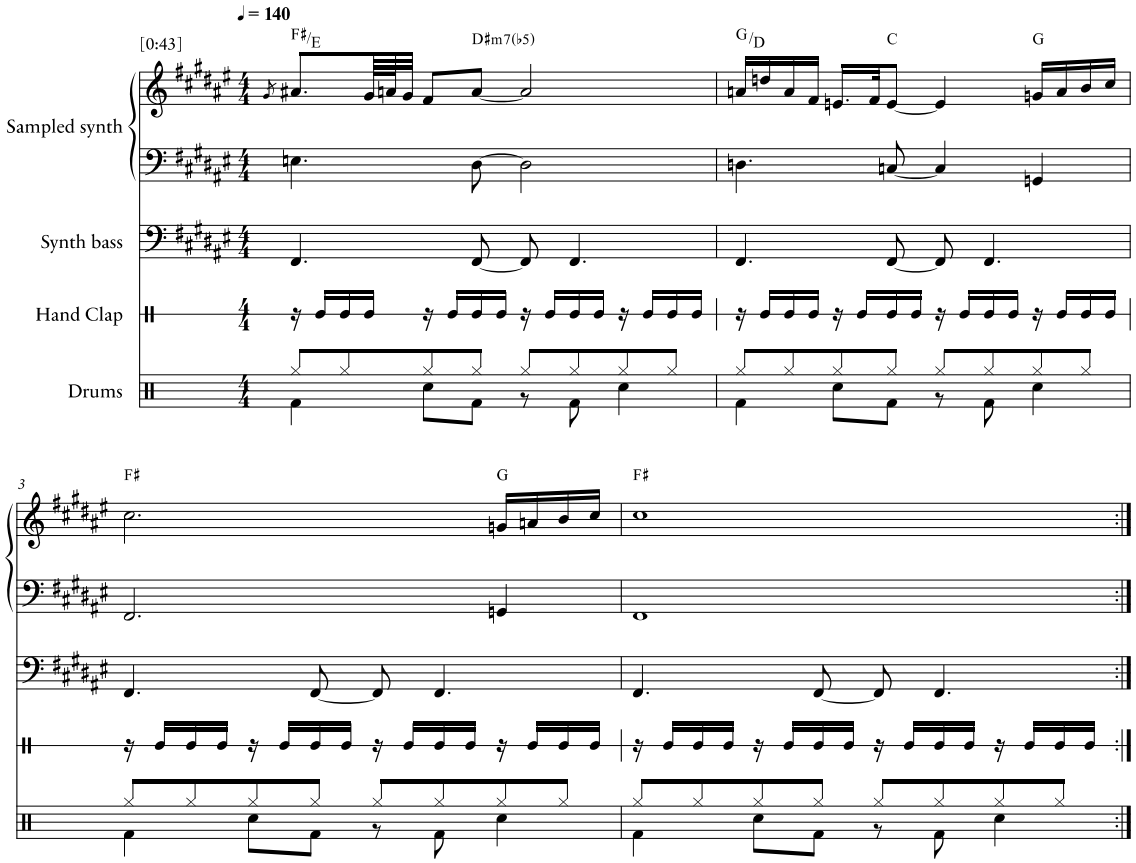


Example 6: Usher, "Lil' Freak," *Raymond v. Raymond* (2010), produced by Polow da Don. Chorus (0:43–1:10)

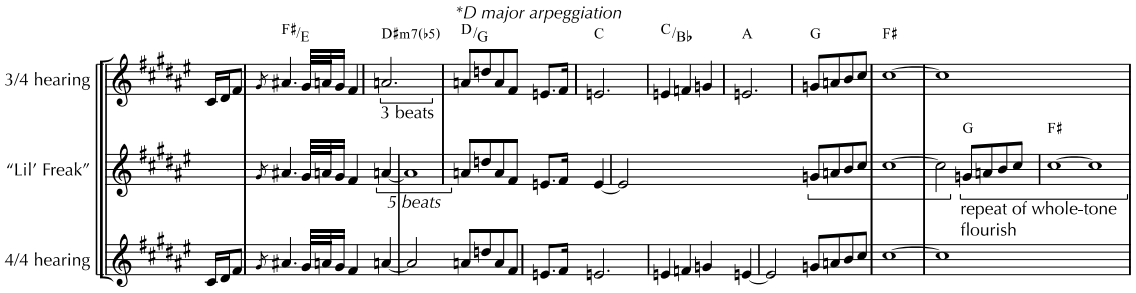
https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio04.mp3

Audio Example 4: Usher, "Lil' Freak," *Raymond v. Raymond* (2010), chorus, 0:43–1:14

Things are not quite that simple, however. Upon closer inspection, there are certain aspects of "Lil' Freak" that also appear to engage with metric features present in the adaptive, 3/4 hearing of "Living for the City." Example 8 uses three staves to compare the metric setting of "Lil' Freak," on the middle staff, with the 3/4 and 4/4 hearings of "Living for the City," on the top and bottom staves, respectively. The lines that run vertically between the staves show which barlines of the two hearings correspond with Polow da Don's pattern. Notably, the melody's arpeggiated D major triad – indicated by the asterisk above the example – occurs on the downbeat of the third measure in both "Lil' Freak" and the 3/4 hearing of "Living for the City," despite their different overall meters. This metrical alignment is facilitated by the differing lengths of the melody's sustained A♮, which is three beats in Wonder's song but extended to five in Usher's, as marked beneath the staves. In the persistent 4/4 hearing, by contrast, this arpeggiated material occurs midway through a measure and is thus metrically weaker. Attending to this interplay between these potential and realized metric characteristics suggests that Polow da Don's hearing of "Living for the City" is more nuanced than a simple "copy-paste," and that his navigation of his source materials results from a close consideration of the phrase structure of Wonder's song.



Example 7: Alternate hearing of "Lil' Freak," notated at quarter = 70 with the snare falling notionally on beats 2 and 4



Example 8: Comparison between the 3/4 hearing of "Living for the City" (top), "Lil' Freak" (middle), and the 4/4 hearing of "Living for the City" (bottom)

Taking a broader view of Polow da Don's setting for Usher's chorus, we can see that the ascending whole-tone flourish that closes the "Living for the City" break – with its associated harmonic progression from G major to F♯ major – occurs twice in "Lil' Freak," as marked by the square brackets beneath the middle staff in Example 8. In the home key of F♯ major, this G major chord is the triad built from the lowered second scale degree, which is often referred to as "♭II" or the Neapolitan chord. In a recent SMT-V publication, Eron F. Smith highlights the strong links between ♭II (as either a lone scale degree or fully-fledged harmony) and topics like confidence, sexiness, and "hotness" in post-millennial

popular music.[36] Furthermore, they argue that the affective potential of this sonority is rooted in its invocation of a "non-specific otherness" that is closely tied with colonial legacies of exoticism, orientalism, and the fetishization and objectification of Black and Brown women's bodies. Many of these themes are overtly present in the lyrics and timbres of Usher's song – "I'm about to have a menage with these here ladies / Look at those freaks at the bar, yeah, they looking for a star" – and "Lil' Freak" also contains a guest verse from Nicki Minaj, an artist who features prominently in the corpus that Eron analyzes. In the realm of harmony, too, the marked repetition of the ♭II sampled from "Living for the City" in the chorus appears to further amplify these topical resonances.

After considering Polow da Don's beat for Usher's "Lil' Freak" and its repetition of a progression involving ♭II, we might then return to Wonder's song with these topical associations in mind. Although the ♭II in Wonder's synth break seems to conjure little sense of "hotness" in the original context of "Living for the City," attending to the gendered and racialized implications of this sonority perhaps then changes how we interpret the third verse, which immediately follows its first appearance (Audio Example 5).

His sister's Black, but she is sho 'nuff pretty,
Her skirt is short, but Lord her legs are sturdy,
To walk to school, she's got to get up early,
Her clothes are old, but never are they dirty,
Living just enough, just enough for the city…

https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio05.mp3

Audio Example 5: Stevie Wonder, "Living for the City," *Innervisions* (1973), end of synth break into beginning of third verse, 1:16–1:56

On the one hand, this verse simply describes the protagonist's sister in a manner similar to the way in which the other verses introduce the unnamed male protagonist and his father, mother, and, later, brother. On the other hand, however, the verse's fixation on the sister's race, physical appearance, attractiveness, clothing, and personal hygiene – features that are completely unmentioned in the descriptions of the other family members – now takes on the undertones of an external, sexualized white gaze. The sister is described in fundamentally different terms to the rest of the family, and the appearance of ♭II directly before this verse suggestively primes us to *hear* her in different terms, too. This example illustrates how reflecting on Polow da Don's use of "Living for the City" and its prominent ♭II sonority in "Lil' Freak" prompts us to reconsider issues of harmonic rhythm, hypermeter, and even "hotness" in "Living for the City," ultimately reshaping how we understand that earlier song.

"Raise it Up"

My second example is "Raise it Up" by the Detroit-based group Slum Village. Like "Lil' Freak," "Raise it Up" offers an opportunity to attend to a producer's hearing of their source, but, as I explore below, also suggests how they might interpret and express the further possibilities for its transformation. "Raise it Up" was produced by J Dilla and appears on Slum Village's 2000 album *Fantastic, Vol. 2*. The source for the song's main

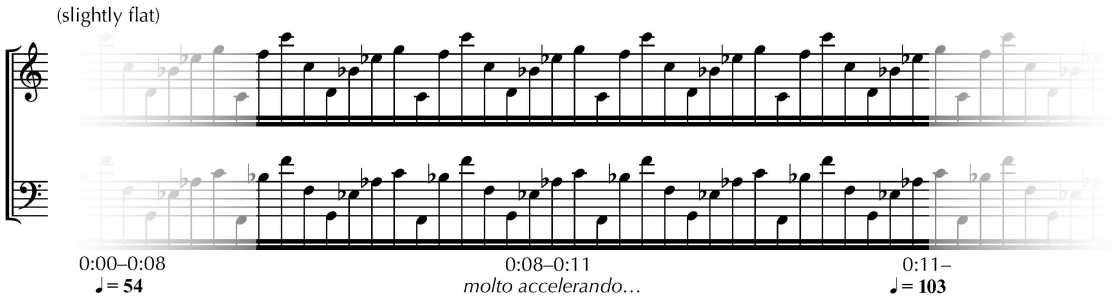
36 Eron 2022. (Note: Eron prefers to be cited by their first name and uses she/her and they/them pronouns interchangeably.)

sample is "Extra Dry," released in 1998 by the French electronic musician Thomas Bangalter, who is perhaps better known as one half of Daft Punk, alongside Guy-Manuel de Homem-Christo.[37] Audio Example 6 presents the opening of "Raise it Up," which is the section sampled by J Dilla; for now, we will leave aside the question of its transcription.

https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio06.mp3

Audio Example 6: Thomas Bangalter, "Extra Dry," *Trax on da Rocks Vol. 2* (1998), opening, 0:00–0:14

In my hearing, Bangalter's "Extra Dry" contains what Mark Butler has called an "ambiguity of beginning." As Butler writes, "One of the most common types of ambiguity in electronic dance music involves situations in which the metrical type of a pattern is clear, but the location of its beginning point is not."[38] "Extra Dry" begins with a jagged synthesizer that loops through a repeating, eight-note pattern. After about five seconds, this synthesizer is joined by another synth that duplicates its line a perfect 12th underneath. The addition of this new layer has the effect of engulfing the original pattern, and the higher line quickly seems to be swallowed up by the lower, as if it were simply one of its upper partials. Soon after the lower part enters, the pattern then undergoes a *molto accelerando*: if the opening series of notes is interpreted as sixteenths at quarter = 54, it takes just three seconds for its speed to sharply ramp up to quarter = 130. Example 9 shows a somewhat contrived representation of this repeating pattern that attempts to obscure both its beginning and ending points, and the annotations beneath the staff summarize the progression of the accelerando. Listeners with perfect pitch might notice that "Extra Dry" sits somewhat in the cracks of standard tuning. Rather than complicate matters with microtonal notations, however, I have elected to "correct" the pitch of the transcription upward by roughly a quarter of a tone.



Example 9: Eight-note loop of "Extra Dry" with beginning and ending points obscured, showing the sudden increase in tempo across the opening 11 seconds

37 According to *WhoSampled.com*, "Raise it Up" is the only song that is known to have sampled "Extra Dry." Notably, J Dilla apparently sampled Bangalter's recording without seeking the appropriate copyright permissions. As Daft Punk's manager, Pedro Winter, recalled in a 2009 interview, the musicians were nonetheless able to reach an amicable agreement without resorting to legal intervention: "Jay Dee [another of J Dilla's aliases] as usual came up with an avant-garde beat. I did not notice the sample at first sight, but a friend of us was there and say, 'Hey hey hold on, isn't it a Daft sound?' […] Instead of loosing our time and react as ass holes and ask for money or shit, I propose to the Daft boys to take care of it and ask a remix in exchange of the use of that sample. I met Dilla in Miami and he was of course up for it and was really friendly. He is from Detroit and electronic music never scared him" (Stones Throw 2009; this quotation retains the original orthography of the source). The track that resulted from this negotiation was a remix of Daft Punk's "Aerodynamic" that appeared on their 2003 remix album, *Daft Club* – J Dilla was ultimately not involved, however, and the main production duties were instead handled by Karriem Riggins (see Groovement 2017).

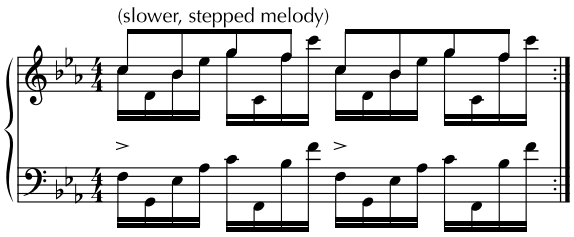
38 Butler 2006, 124. By the term "metrical type," Butler here means what are commonly called meter or time signatures, such as 4/4, 6/8, and so on.

While the pattern of "Extra Dry" is clearly duple in some sense, its orientation, as in Butler's formulation, is substantially more ambiguous. Where are the strong and weak beats? Such a question is not merely "academic," either: since a core aesthetic feature of electronic dance music concerns process-based cycles of expectation, subversion, fulfillment, and repetition, the underlying perception of metrical structure directly inflects listeners' experiences of these structures.[39] And it helps us dance, too. Audio Example 7 presents an excerpt from "Extra Dry" that I have slightly doctored, so that it loops continuously without accelerating. The reader is invited to now listen to this version and consider as it plays: where might the beginning of the pattern be, and what factors influence this interpretation?

https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio07.mp3

Audio Example 7: Edited and looped excerpt of the "Extra Dry" pattern

In principle there are eight possible locations that this looped pattern could begin – one for each of its notes – but in practice there are perhaps just four more likely candidates; I will now discuss these briefly in turn. The first option is what I will call the "octave ascent" orientation of the pattern, so named for the octave that it traverses from its first to eighth note, as shown in Example 10. (Here, as in the subsequent examples, the accidentals shown previously in Example 9 have been collected into a three-flat key signature.) This is the orientation that my mind "naturally" settles on when I listen to the loop of Audio Example 7 – especially when I come back to it after thinking of other things for several days – and I find myself particularly gravitating to the stepped melody that emerges with every second note, which has been marked by the upward-pointing stems in the top staff. Audio Example 8 presents a version of the looped Audio Example 7 that has been further edited with artificial accents, in order to assist with the recognition of this orientation.



Example 10: "Octave ascent" hearing of the "Extra Dry" loop, which interprets the loop as reaching across an octave over the course of its eight notes

https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio08.mp3

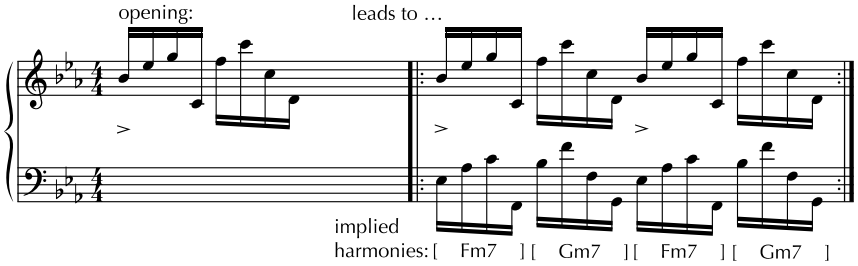
Audio Example 8: Edited and looped excerpt of the "Extra Dry" pattern, emphasizing the "octave ascent" interpretation

In contrast, another strategy for parsing this pattern might be to consider some further contextual clues. Closer examination of "Extra Dry" indicates that the track itself begins with the pitch B♭ in the melody: does the loop actually begin here, instead? Example 11 models such an orientation of the pattern, which might be called "strong beat early" after Fred Lerdahl and Ray Jackendoff's metrical preference rule (MPR) 2.[40] Audio Example 9

39 Ibid., 256; Garcia 2005.

40 Lerdahl and Jackendoff 1983, 76. As MPR 2 recommends, "[w]eakly prefer a metrical structure in which the strongest beat in a group appears relatively early in the group."

offers a correspondingly edited clip of the loop. Speaking personally, I find this orientation more difficult to entrain to, but there are nonetheless some appealing features, such as the neatness of its implied harmonic segmentation (shown beneath the staff).

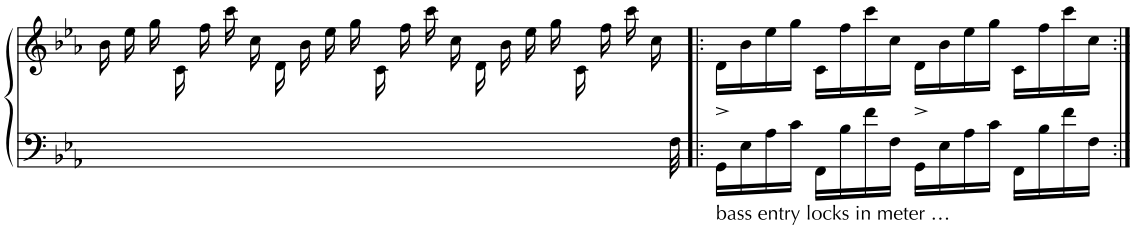


Example 11: "Strong beat early" hearing of "Extra Dry," which orients the loop according to the first pitch heard

https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio09.mp3

Audio Example 9: Edited and looped excerpt of the "Extra Dry" pattern, emphasizing the "strong beat early" interpretation

In a similar vein, the next possible hearing draws upon the contextual clue offered by the eventual addition of the pattern's lower part. As this entry changes the timbre, texture, density, and dynamic mass of the line, we might understand it as marking a point of accentuation; in Lerdahl and Jackendoff's formulation, such a moment is an instance of a "phenomenal" accent.[41] Unlike the two previous hearings, however, this "bass entry" interpretation relies on subsequent information to retrospectively (re)orient the pattern.[42] Example 12 models this understanding by notating the opening attacks of "Extra Dry" as unbeamed and unmetered sixteenths, before the entry of the bass – supported by an apparent anacrusis, which is shorter in duration than the surrounding notes – serves to lock the pattern in place. In a similar manner to the previous audio examples, Audio Example 10 plays the "bass entry" orientation of the loop with its alleged beginning emphasized by artificial accents.



Example 12: "Bass entry" hearing of "Extra Dry," which interprets the entry of the lower synthesizer line as the pattern's beginning

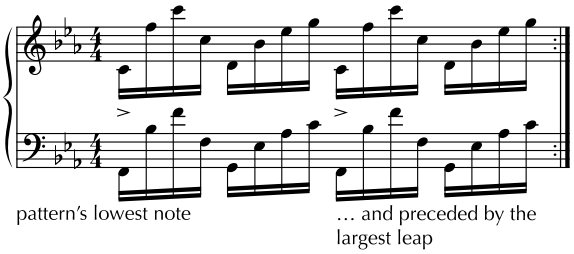
https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio10.mp3

Audio Example 10: Edited and looped excerpt of the "Extra Dry" pattern, emphasizing the "bass entry" interpretation

41 Ibid., 17. "By *phenomenal accent* we mean any event at the musical surface that gives emphasis or stress to a moment in the musical flow. Included in this category are attack points of pitch-events, local stresses such as sforzandi, sudden changes in dynamics or timbre, long notes, leaps to relatively high or low notes, harmonic changes, and so forth" (emphasis in original). Butler (2006, 125) also describes the moment at which different layers coincide as creating a "density accent."

42 This notion of a "retrospective reinterpretation" is indebted to Schmalfeldt 2011.

Finally, the fourth entry in this shortlist of possible hearings also responds to a phenomenal accent. Example 13 shows the pattern oriented with the low F in the bass as its beginning; this is both the lowest note in the entire pattern and the pitch that is preceded by the largest surface-level leap, a perfect 12th. This orientation of the pattern is similar to the "bass entry" version shown above, but shifted in phase by 180 degrees. Audio Example 11 presents an edited excerpt of the "Extra Dry" loop to emphasize this patterning.



Example 13: "Lowest note" hearing of "Extra Dry," which places its lowest note at the start of the pattern

https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio11.mp3

Audio Example 11: Edited and looped excerpt of the "Extra Dry" pattern, emphasizing the "lowest note" interpretation

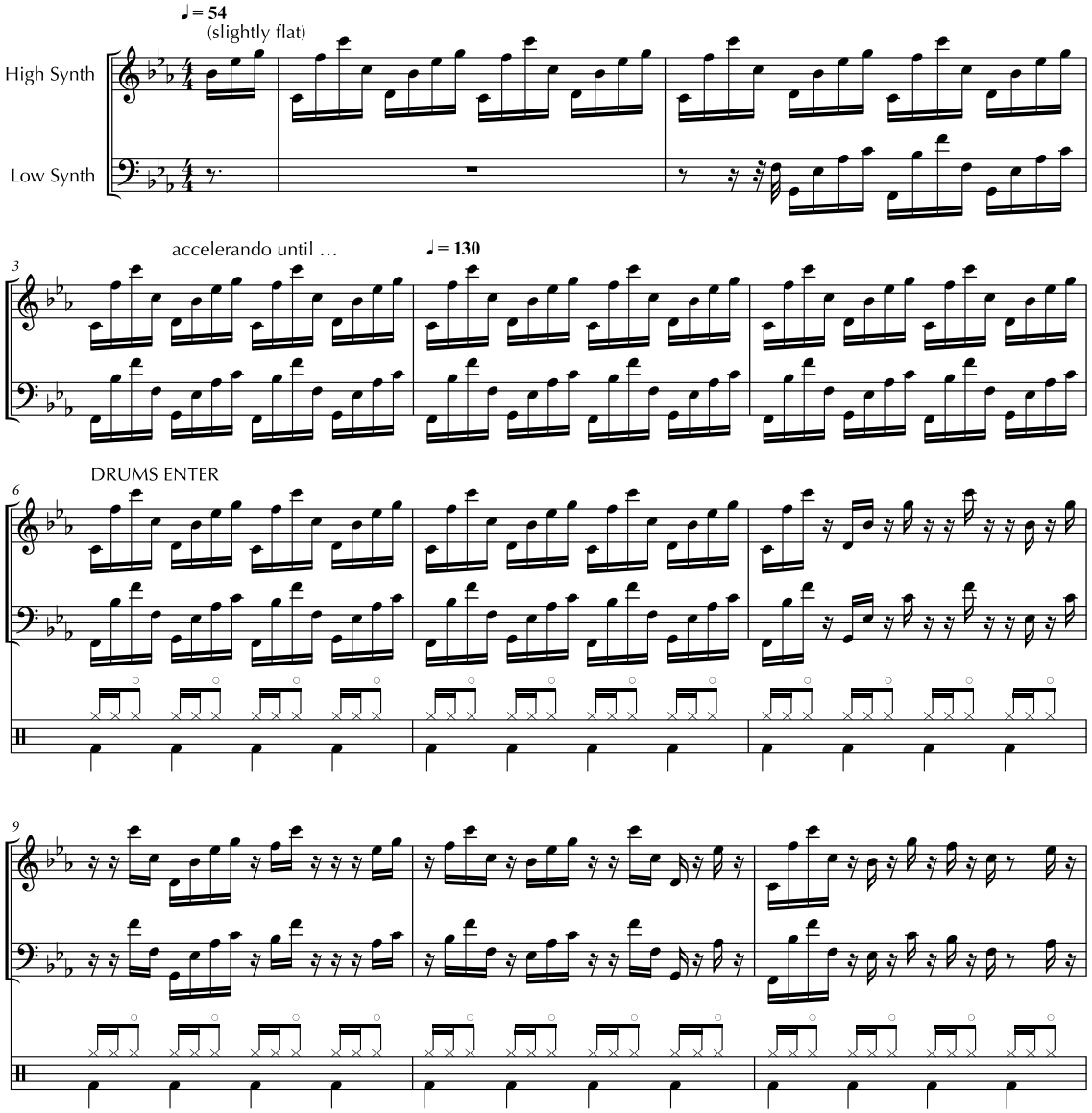
So, which of these four hearings is to be understood as "correct"? A brief period after the *accelerando* is completed, the bass drum enters suddenly at 0:15 and appears to confirm the "lowest note" hearing of the ostinato, shown above.[43] Example 14 presents a transcription of "Extra Dry" from its beginning that interprets the entry of the drums as marking a decisive downbeat. In this hearing, the song's first three sixteenths are cast as an anacrusis, while the entry of the lower synth part occurs on beat 2 of its second measure (Audio Example 12).

As Edward T. Cone once wrote, concerning the concert performance, "Every valid interpretation thus represents, not an approximation of some ideal, but a choice: which of the relationships implicit in this piece are to be emphasized, to be made explicit?"[44] J Dilla's "choice," in interpreting "Extra Dry" for "Raise it Up," is *not* the "lowest note" hearing that is eventually confirmed by the drum entry. Rather, he uses the "bass entry" orientation of the pattern (shown above as Example 12) for his sample, as indicated by the primary "Raise it Up" loop transcribed in Example 15. Here, J Dilla lowers the pitch and reduces the tempo of the excerpt by about 29%, which transposes it down by ap-

43 As Butler (2006, 127–128) writes, "the entrance of the bass drum in an EDM track often results in a decisive metrical interpretation." Butler nonetheless emphasizes that he rarely seeks a prescriptive position when discussing passages with potentially ambiguous metrical settings: "Rather than demanding a particular way of hearing from the listener, […] [I] encourage each of us to seek out our own preferred interpretation – to actively participate in the construal of our musical experience. In highlighting these qualities, and in choosing not to endorse a singular interpretation in situations in which multiple hearings are possible, I am […] seeking to highlight a characteristic that is central to the aesthetics of electronic dance music – namely, its structural and interpretive openness" (127). For an example of such "interpretive openness" played out in a hip-hop track, see Ohriner's (2016) study of the song "Mainstream" by OutKast, which investigates how different emcees attend to the different affordances of a metrically multivalent beat.

44 Cone 1968, 34.

proximately a tritone.[45] As a result of this slowing, I have chosen to re-notate the ostinato's sixteenths as eighths, where they are accompanied by newly added drums. In this setting, J Dilla uses the presence and absence of the lower synth part to articulate a larger sense of two- and four-measure phrases, and the continual ebb-and-flow of textural and dynamic intensity is mirrored in the group's delivery of the "raise it up / RAISE IT UP" hook. Audio Example 13 presents the passage notated in Example 15 followed by the beginning of the first verse, which is also rapped by J Dilla.

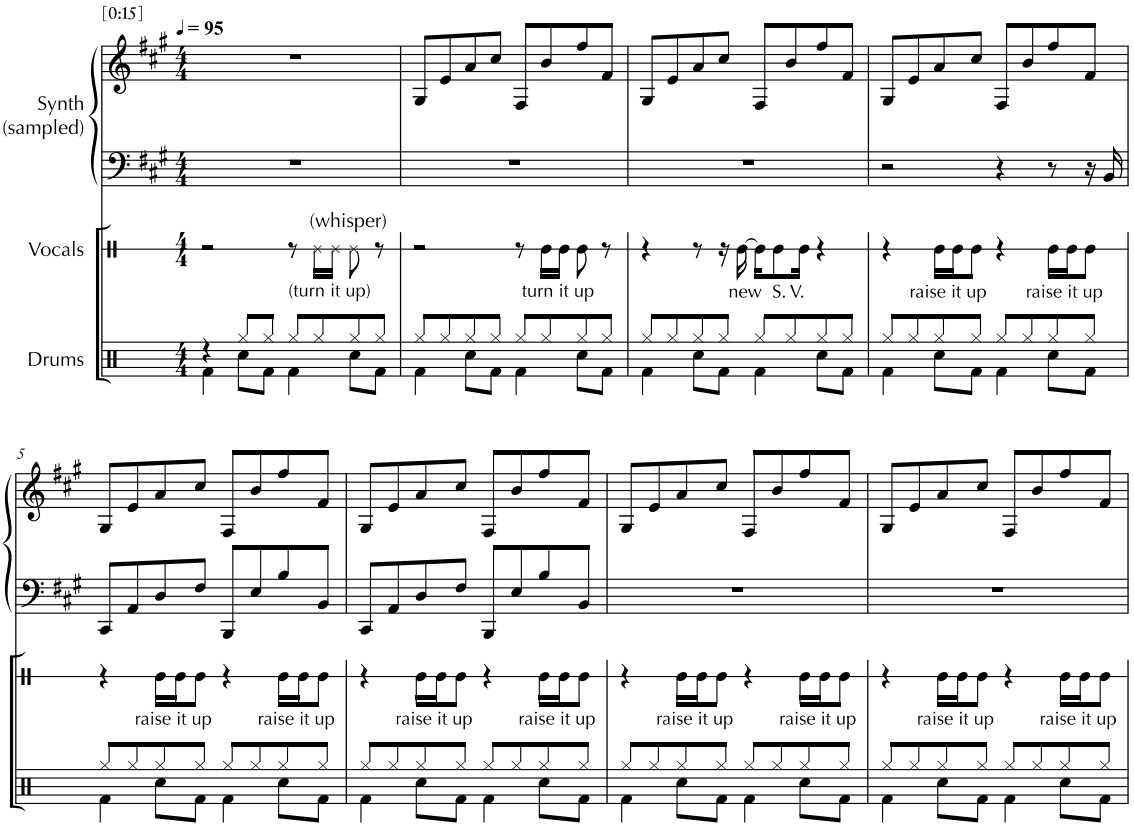


Example 14: Thomas Bangalter, "Extra Dry," *Trax on da Rocks Vol. 2* (1998), 0:00–0:22, transcribed such that the drum entry articulates a downbeat

https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio12.mp3

Audio Example 12: Thomas Bangalter, "Extra Dry," *Trax on da Rocks Vol. 2* (1998), opening, 0:00–0:22

45 In "Raise it Up," unlike in "Lil' Freak," the pitch and the tempo of the sample are manipulated by the same amount in the same direction. One might imagine a similar effect to a vinyl record meant for playback at 33 1/3 revolutions per minute (rpm) being played at 45 rpm, where the speed and pitch would be increased by the same amount.



Example 15: Slum Village, "Raise it Up," *Fantastic, Vol. 2* (2000), 0:15–0:35

https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio13.mp3

Audio Example 13: Slum Village, "Raise it Up," *Fantastic, Vol. 2* (2000), intro into beginning of first verse, 0:15–0:56

In this example, J Dilla's interpretation of "Extra Dry" asserts a metric patterning that is ostensibly at odds with the orientation suggested by the entrance of the drums in Bangalter's track. When compared with Usher's "Lil' Freak," "Raise it Up" thus marks a shift away from merely a "hearing" of a source to what might be better described as a "performative *re*hearing." Schloss notes that one appeal of sample-based production is the opportunity that it offers "individuals to demonstrate intellectual power," and this dimension is certainly at work in J Dilla's rendering of "Extra Dry."[46] In a move that bears the traces of play and misdirection that are characteristic of Signifyin(g), J Dilla effectively asks what it might *mean* to hear a downbeat in a location other than the one asserted by the original recording. What J Dilla is hearing and communicating, in other words, is his interpretation of the sample's potential for transformation. As Christopher Reynolds writes (albeit in reference to a completely different musical tradition), "Allusions are a source of musical ideas for a composer, ideas to play with or play against. They are a spur to creativity, even originality."[47]

When I return to "Extra Dry" after considering "Raise it Up" and entraining to this new orientation of the synth pattern, I am particularly struck by how this drum entrance will often catch me by surprise. Yet, crucially, this sense of "where" the downbeat is located

46 Schloss 2004, 138.

47 Reynolds 2003, 181.

ultimately proves to be quite fleeting. As "Extra Dry" continues and the synth line starts to fragment (as seen in the final measure of Example 14), it becomes increasingly difficult to parse its texture into meaningful groupings at levels above the pounding quarter note. Butler describes such situations, when there is insufficient musical evidence by which to decide on an excerpt's meter or downbeat, as being "underdetermined."[48] To demonstrate, Audio Example 14 offers a clip drawn from 1:05–1:29 of "Extra Dry," where the sense of grouping and orientation has once again – to my ears at least – been lost, with nothing but the repeated articulation of the kick drum remaining. By pegging the synth pattern of "Extra Dry" to a given orientation, then, J Dilla's "choice" for "Raise it Up" paradoxically serves to remind us of the very fragility of its meter in the first place.

https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio14.mp3

Audio Example 14: Thomas Bangalter, "Extra Dry," *Trax on da Rocks Vol. 2* (1998), 1:05–1:29

"Une Histoire Extraordinaire"

My third example is somewhat shorter than the two previous discussions, but re-engages with some of the issues concerning the change in a source's metrical type that were first discussed in the context of "Lil' Freak."[49] "Une Histoire Extraordinaire" is a song by the French emcee Disiz (formerly Disiz La Peste) that was released on his 2005 album *Les Histoires Extraordinaires d'un Jeune de Banlieue*.[50] "Une Histoire Extraordinaire" was produced by Madizm and Sec.Undo, and Example 16 shows the four-measure loop that repeats for the duration of the song. The main melodic line is a compound pattern whose upper part is emphasized by a syncopated hi-hat, and the phrase is supported by a relatively sparse bass line.[51] The final eighth note in measures 2 and 4 is bracketed and marked by an asterisk, for reasons to be discussed below (Audio Example 15).

The source of the sample in "Une Histoire Extraordinaire" is Mike Oldfield's "Tubular Bells - Pt. I" (hereafter simply "Tubular Bells") from his landmark 1973 album of the same name – specifically the famous opening melody, which was also used in the soundtrack for William Friedkin's 1973 film *The Exorcist*.[52] For "Une Histoire Extraordinaire," Madizm and Sec.Undo increase the speed and pitch of "Tubular Bells" by roughly 33%,

48 Butler 2006, 111. In a subsequent passage, Butler also notes that some listeners and DJs "cherish the stark neutrality of ungrouped beats," and that such passages of underdetermined meter "reflect [EDM's] tendency to foreground beats in themselves apart from any larger metrical context" (115).

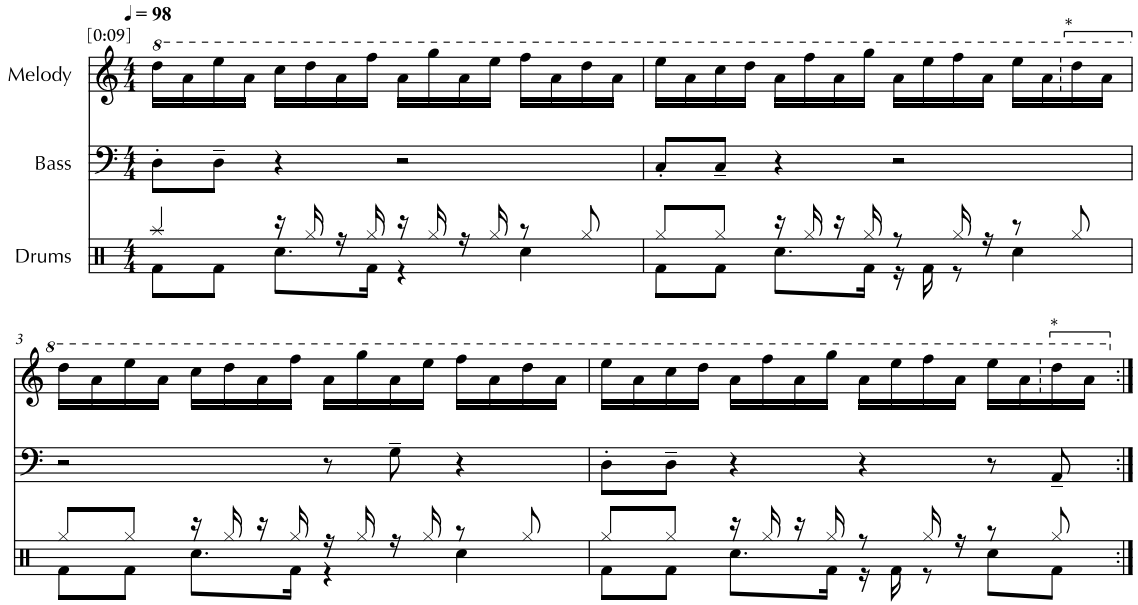
49 With this example I have also sought to include a discussion of a song from outside the Anglosphere.

50 I thank Kyle Adams for bringing this example to my attention (personal communication, 19 May 2020).

51 The drum pattern has been slightly simplified in the transcription, and Madizm and Sec.Undo use a wider array of hi-hat sounds than what is implied by the notation.

52 The opening melody of "Tubular Bells" has been sampled or subsequently referenced a relatively large number of times – 84 by the current count of *WhoSampled.com* – and some notable (Anglophone) examples that predate "Une Histoire Extraordinaire" include "Gotta Lotta Love (Tubular Bells Mix)" by Ice-T (1993), "Threesixafix" by Three 6 Mafia (1997), "Assassin" by Big Ed (1998), "Self Conscience" by Nas and Prodigy (2000), "Be Warned" by Tech N9ne (2002), and "All I Wanna Do" by Royce Da 5'9" (2003). In general, it appears that many of these examples deploy Oldfield's minor-mode piano melody for its sense of menace and "hardness" – affects that are no doubt bolstered through its associations with *The Exorcist*. On the potential intersection between minor and menace in a hip-hop beat, see Williams 2013, 197; on "hardness" as a topic more generally, see Krims 2000, 71–75.

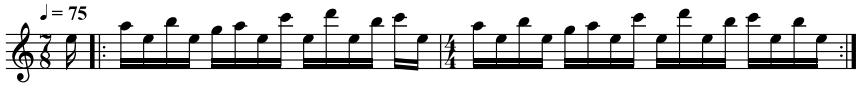
transposing it up five semitones. Oldfield himself describes the metrical structure of the melody as alternating between measures of 7/8 and 8/8, as shown in Example 17 at its original pitch and speed.[53] Partitioning the phrase in this way emphasizes the melodic parallelism between the measures, and the beaming of the sixteenths shows how interpreting the first measure in 7/8 means that the second half of the pattern essentially duplicates the first but extends it by an additional eighth note (Audio Example 16).



Example 16: Disiz, "Une Histoire Extraordinaire," *Les Histoires Extraordinaires d'un Jeune de Banlieue* (2005), produced by Madizm and Sec.Undo. Main loop (0:09–0:30)

https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio15.mp3

Audio Example 15: Disiz, "Une Histoire Extraordinaire," *Les Histoires Extraordinaires d'un Jeune de Banlieue* (2005), end of intro into beginning of first verse, 0:09–0:30



Example 17: Mike Oldfield, "Tubular Bells," *Tubular Bells* (1973). Opening melody parsed as 7+8, counting in eighth notes (0:00–3:45).

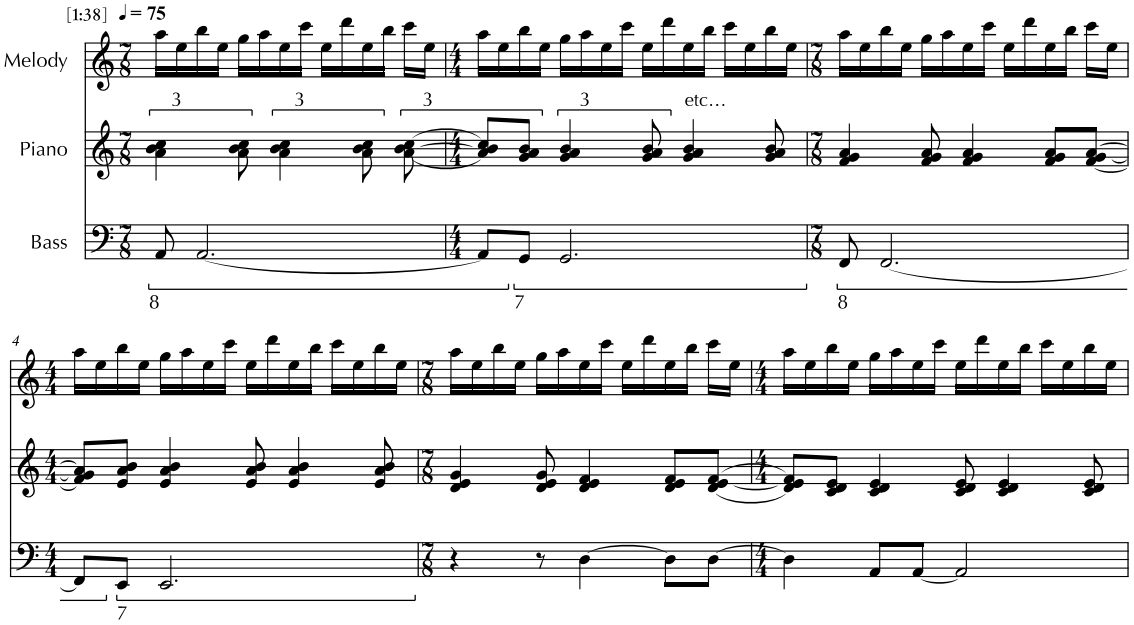
https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio16.mp3

Audio Example 16: Mike Oldfield, "Tubular Bells," *Tubular Bells* (1973), opening melody, 0:00–0:21

Despite Oldfield's statement, there are nonetheless other ways of hearing the melody's underlying metric structure. As more musical layers are added over the course of "Tubular Bells," several competing interpretations of this melody are implied. Although Madizm and Sec.Undo only sample the very beginning of "Tubular Bells" (and flesh out the texture by adding other instruments and lines), I believe that a slightly later section in Old-

53 Oldfield discusses the structure of the "Tubular Bells" melody in the following clip, between 44:52–45:02, and he counts out the eighth notes while the melody plays in the background: https://youtu.be/UQLDGpcgNTM?si=m2_ZOIjOl_68aijV. As he explains, "it's one bar seven, one bar eight." I have interpreted the "eight" that Oldfield refers to here as eighth notes in 4/4.

field's composition offers a clue as to how they might have settled on the final structure of the sample for their song. Their listening, in other words, was informed by sustained engagement with their source. Beginning at approximately 1:38 in "Tubular Bells," the initial melody is joined by gently repeated clusters in the piano and a descending line in the bass. Example 18 shows how this bass line suggests partitioning the melody as 8+7 (counting in eighth notes), while the consistent groupings of three in the piano clusters move in and out of phase with the harmonic rhythm (Audio Example 17).

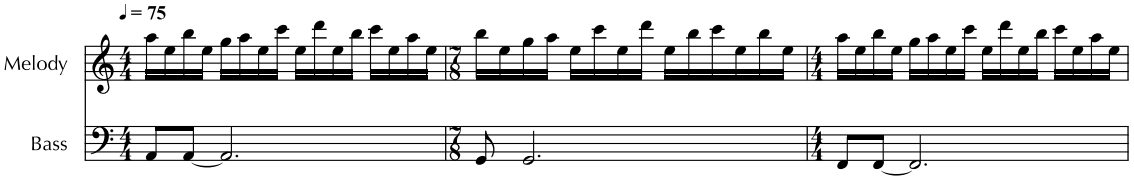


Example 18: Mike Oldfield, "Tubular Bells," *Tubular Bells* (1973), new piano layer (1:38–1:56)

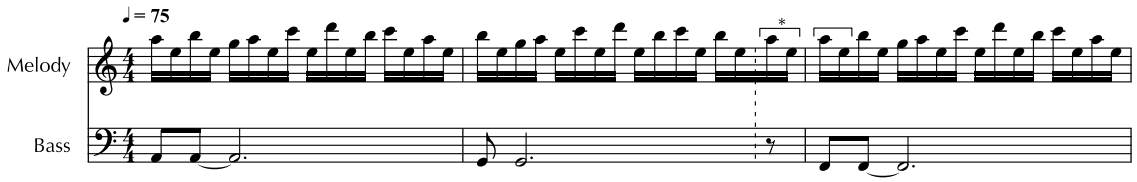
https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio17.mp3

Audio Example 17: Mike Oldfield, "Tubular Bells," *Tubular Bells* (1973), new piano layer 1:38–2:00

For comparison, Example 19 re-notates the first three measures of the "Tubular Bells" melody (showing only the melody and bass lines) to reflect the 8+7 hearing implied by the bass. The melodic parallelism at the measure-to-measure level that characterized the 7+8 hearing of Example 17 is now largely obscured, though its resemblance to the pattern of "Une Histoire Extraordinaire" is substantially clearer, especially with respect to the bass line. Madizm and Sec.Undo's final change is to add an extra eighth note to the second measure of the melody, so that it fills out a complete 4/4 measure. This added eighth note is drawn from the very beginning of the melodic pattern, and this sense of anticipation – in a very literal sense – creates a feeling of anacrusis that gives forward motion to the looped melody. Example 20 shows this modification, using a dotted barline.



Example 19: Re-notated hearing of "Tubular Bells" melody, now parsed as 8+7



Example 20: "Tubular Bells" melody expanded into 8+8 through the anticipation of its first two sixteenths

By privileging the bass patterning from a later section of "Tubular Bells," Madizm and Sec.Undo disrupt the ready parallelism and composer-sanctioned reading of the melody. They make a choice, not unlike J Dilla in the case of Bangalter's "Extra Dry," that explores the musical potential of material that would otherwise have remained fixed, and their interpretation can likewise be understood as a performative rehearing. In particular, the metrical setting of "Une Histoire Extraordinaire" brings a new sense of syncopation to the piano melody and helps foreground the subtle rhythmic play that emerges across "Tubular Bells" as other layers are added. As in the previous examples, we see here how a source and its sample become intertwined through the producers' interventions, where the interpretation of one in turn inflects the interpretation of the other.

Conclusion – and "Für Elise" once more

In this paper, I have argued that sample-based hip hop shares much in common with other more widely recognized forms of musical "analysis." Hip-hop producers are expert listeners and communicators, and their beats offer us transformative opportunities for engaging with the sources that they draw upon. In several respects, the literature of performance analysis offers a ready template for understanding this aspect of producers' craft. Indeed, it is relatively untaxing to substitute "performer" with "producer" in many such contexts:

> Even the simplest passage – a scale or perfect cadence, for instance – will be shaped according to the [*producer's*] understanding of how it fits into a given piece and the expressive prerogatives that he or she brings to bear upon it. Such decisions might well be intuitive and unsystematic, but not necessarily: most [*producers*] carefully consider how the music 'works' and how to overcome its various conceptual challenges.[54]

Recognizing the analytical capacities of producers is perhaps most vital in light of the historic exclusion of hip hop's perspectives from the mainstream enterprise of academic music research. Although things are beginning to change, we – and I do mean "we," and count myself among those culpable – have generally refused to acknowledge the diverse expertise and craft of this music community. Writing in her 1994 book, *Black Noise*, Tricia Rose reflects on a seemingly innocuous exchange that, in many respects, remains remarkably familiar:

> In the spring of 1989, I was speaking animatedly with an ethnomusicology professor about rap music and the aims of this project [i.e., *Black Noise*]. He found some of my ideas engaging and decided to introduce me and describe my project to the chairman of his music department. At the end of his summary the department head rose from his seat and announced casually, "Well, you must be writing on rap's social impact and political lyrics, because there is nothing to the

54 With apologies to Rink 2002, 35.

> music." My surprised expression and verbal hesitation gave him time to explain his position. He explained to me that although the music was quite simple and repetitive, the stories told in the lyrics had social value.[55]

Things have changed in the intervening 35 years, to be sure. In 2024 I completed a PhD at a large, research-oriented school of music in North America with a music-of-hip-hop topic that would likely have been rejected by the anonymous music department that Rose describes. The study of popular music in general, and hip hop in particular, has become a major growth area for both music theory and musicology, and there are many signs of its increasingly mainstream position within these disciplines. In popular culture at large, too, hip hop has become a dominant and highly profitable force. Since 2017, "R&B/Hip-Hop" has been the most-consumed genre in the United States,[56] and, in 2023, Spotify reported that the genre accounted for "nearly a quarter" of global music streams.[57] Yet Rose's encounter with this department chair still stings, I think, because many of us nonetheless have friends, family, or colleagues who might harbor similar opinions – that hip hop is "quite simple and repetitive," with "nothing" to it. Perhaps we might even have held such a position ourselves at an earlier time. I know that I once did.

Rose's comments – or, rather, those of the department chair – are also oddly prescient because, even within this broad milieu of expansion, the theoretical study of hip hop has mainly focused on the activities of vocalists, with producers relegated to a very distant second.[58] This asymmetry of interest is all the more remarkable, however, if we consider that the "social impact and political lyrics" of the songs examined by such studies is rarely their explicit analytical focus.[59] In other words, if the sole redeeming qualities of hip hop (at least according to the department chair) appear to have had little bearing on music theory's bias toward vocalists, what other ideologies might instead be at work here? To be sure, hip hop's vocal components (often referred to as "flows") contain a wealth of properties that are ready marks for analytical engagement, including (but not limited to) rhythm, rhyme, pitch inflection, syntax, breathing patterns, syllabic density, and narrative. In comparison, the often-looped musical accompaniments (already subordinated by their name!) seem to offer fewer treasures, or, at the very least, far less interesting ones. But, as Schloss suggests in his ethnographic study of hip-hop producers, *Making Beats*, certain perceptions of musical value also sneak into the ways that we often engage with hip hop, even independently of its social meanings. Whenever Schloss talks about his work, one of the first issues that he finds himself being questioned on – after "what's the difference between rap and hip-hop?" – is whether or not hip hop is "really" music.

55 Rose 1994, 62.

56 According to Nielsen's data, R&B/Hip-Hop accounted for 24.5% of "Total Volume" listening, which includes physical album sales, digital track purchases, and on-demand streaming. The second most-consumed genre was Rock, which accounted for 20.8% of listening (Nielsen 2017, 31).

57 Spotify 2023. Unfortunately, however, I have been unable to find further details of the precise breakdown of this figure.

58 See, for example, Adams 2009, Condit-Schultz 2016, Duinker 2019, Duinker 2022, Komaniecki 2021, Mattessich 2019, Oddekalv 2022, Ohriner 2019a, and Ohriner 2019b. The notable exceptions to this trend, however, are Adams 2008, Adams 2016, and Manabe 2019.

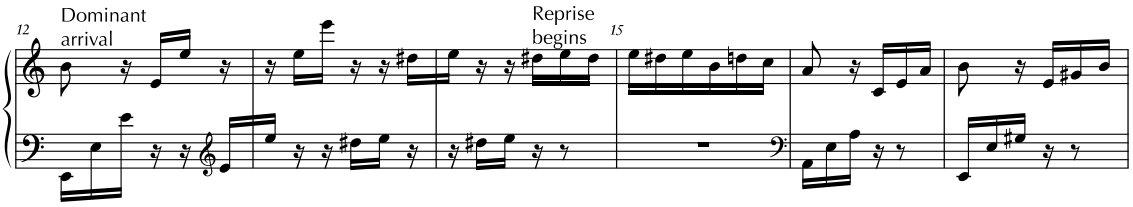
59 This topic is nonetheless foregrounded in Bungert 2019.

> As I take pains to point out, it is actually a question about what the word 'music' means, and it contains the hidden predicate that music is more valuable than forms of sonic expression that are not music. If one believes that only live instruments can create music and that music is good, then sample-based hip-hop is not good, by definition.[60]

While I don't wish to claim that music theory's relative neglect of hip-hop producers is due to the widespread perception of them as "unmusical," it is nonetheless clear that the general trajectory of research is doing little to change this narrative. Over the past five years, music theory, especially in the United States and Canada, has made significant investments in issues of diversity, equity, and inclusion. Although substantial work remains to be done in order to redress the legacies left by generations of discriminatory ideologies within this discipline, I have argued here that engaging with the analytical capacities of producers is a vital component in the recognition of their craft. Coincidentally, Meyer's comments about the analytic acts of performers were published in the very same year – 1973 – that is commonly cited as the "birth" of hip hop.[61] It is therefore fitting that, just over 50 years later, his ideas might now offer one of the paths forward.

We still also have some unfinished business with Beethoven's "Für Elise."

Example 21 reproduces the third system of Example 1, showing measures 12–17 of the bagatelle. The "problem" with this passage, recall, concerns the number of E-D♯ alternations before the reprise of the main theme in the pickup to measure 15. Despite the spareness of the dominant prolongation and the untaxing pianistic demands of the passage, this number apparently eluded both Artur Schnabel and Alfred Brendel.



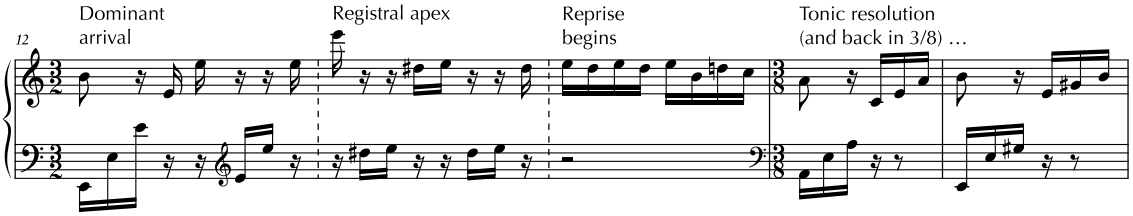
Example 21: "Für Elise," measures 12–17

Cohn's solution to this E-D♯ problem is as follows. Beginning from the downbeat of measure 12, which marks the arrival of the dominant, imagine that the running sixteenths are grouped into eighths (themselves parsed as 4 + 4). The half-note pulse that arises from these

60 Schloss 2004, 23.

61 In the popular imagination, hip hop culture was born on 11 August 1973, the night that Kool Herc – an eighteen-year-old born in Kingston, Jamaica – first performed as a party DJ. Billed as a "Back to School Jam," the party took place in the basement-level community room of 1520 Sedgwick Avenue in the Bronx, and was organized by Kool Herc's sister, Cindy. Recently, in 2023, this date has been further memorialized by a series of events and media campaigns celebrating hip hop's "50th anniversary" (e.g., Brown et al. 2023, McMillan 2023, Morris 2023, Reeves 2023, and Summers et al. 2023). As Mark Katz carefully notes, however, locating the precise birth of hip hop at *this* particular time and place is less straightforward: "There was no rapping at the party, there were no backspinning b-boys on the linoleum, and Herc wasn't scratching records, all things we might expect from a hip-hop jam. No one at the time knew this was hip-hop, and the music was not literally hip-hop as we know it today – it was largely funk, soul, and rock. Moreover, Afrika Bambaataa, one of the pillars of hip-hop culture, was spinning an eclectic mix over at the Bronx River Houses *before* Herc's first party, apparently as early as 1970" (Katz 2012, 22–23; emphasis in original).

regrouped sixteenths thus "momentarily overrides" the notated 3/8 meter.[62] This newly imposed metric value spans from the downbeat of measure 12 to the E6 on the third sixteenth of measure 13, which marks both the completion of the repeated E-octave ascending gesture initiated in the previous measure and the registral apex of the section. Projecting forward from this high E, another half note later brings with it the theme's reprise at the pickup to measure 15, and a final half note after *that* is the tonic resolution on the downbeat of measure 16. From here onward the piece locks back into the notated 3/8. Once we properly grasp what is effectively a large measure of 3/2 that is superimposed on this passage – and which neatly encompasses the successive phenomenal accents of dominant arrival, registral high-point, thematic re-engagement, and tonic resolution – Cohn writes that "there is no reason to play any more or fewer notes than what Beethoven wrote."[63] This interpretation is summarized in Example 22, which is adapted from Cohn's Figure 2.[64] This excerpt re-bars the passage shown previously in Example 21, with a single measure of 3/2 replacing what was previously four measures of 3/8. The 3/2 measure is further subdivided by dotted barlines to help mark the groups of eight sixteenths.



Example 22: Re-barring of measures 12–17 of "Für Elise" according to Cohn's analysis (with apologies to Beethoven)

Cohn then draws on Lerdahl and Jackendoff's notion of parallelism[65] to suggest that the opening of "Für Elise" should be understood in similar metrical terms to the E-D♯ alteration of the reprise: "we have strong reason to hear the opening eight-beat anacrusis as beginning at a metrically accented point, and projecting a quarter-note pulse."[66] This reinterpretation of the anacrusis is shown in Example 23, which compares the implied metrical structure of Beethoven's original (left) with Cohn's proposed revision (right). In this visualization, the "real" barline has been suppressed by the 4 + 4 grouping of the eight sixteenths, as shown by the beaming.

Example 23: Implied metrical structure of a) Beethoven's original notation of "Für Elise" and b) Cohn's proposed revision, based on a parallelism with his analysis of measures 14–16

Cohn's suggestions are illuminating, and his analysis of "Für Elise" has changed how I hear, play, and teach Beethoven's piece. His insights reveal an attentive consideration of

62 Cohn 2015, 18.

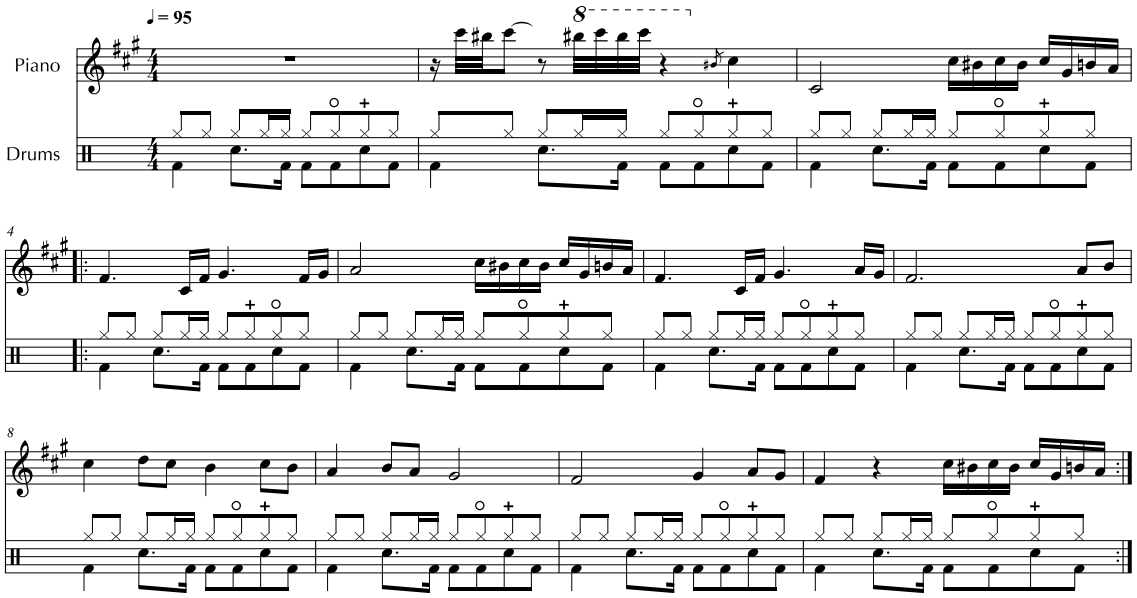
63 Ibid., 19.

64 Ibid.

65 Lerdahl and Jackendoff 1983, 75.

66 Cohn 2015, 19.

the bagatelle's metrical features and a careful presentation and communication of these ideas. What is more, there is also a certain generative quality to Cohn's reading, in which his engagement with "Für Elise" breathes new life into old materials. But perhaps the thing that I like the most about Cohn's metrical analysis is the way that it seems to agree with the reading proposed by another noted analyst of the piece, Salaam Remi. Remi published his analysis some thirteen years before Cohn's, and, like Cohn, he interprets the first eight notes of "Für Elise" as an extended anacrusis that moves in quarter notes and drives toward the tonic on the following downbeat. But where Cohn communicates his analysis using the prose and score examples that are the disciplinary norms of music theory, Remi instead uses sound. Remi's analysis is shown in Example 24, and, while his analytical representation of "Für Elise" has been transposed down by three semitones from Beethoven's original, his metrical intentions are nonetheless crystal clear (Audio Example 18).



Example 24: Nas, "I Can," *God's Son* (2002), produced by Salaam Remi; main loop (throughout)

https://storage.gmth.de/zgmth/media/1221/Tatar_Sampling_Audio18.mp3

Audio Example 18: Nas, "I Can," *God's Son* (2002), intro into beginning of first verse, 0:00–0:51

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