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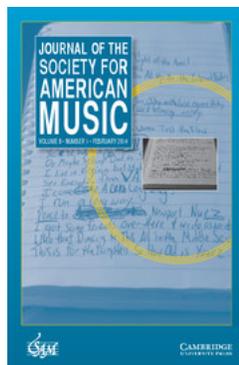
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***Paul's Boutique* and *Fear of a Black Planet*: Digital Sampling and Musical Style in Hip Hop**

AMANDA SEWELL

Abstract

The Beastie Boys' Paul's Boutique (1989) and Public Enemy's Fear of a Black Planet (1990) often draw comparisons because of their profuse and eclectic use of digital sampling. These two hip hop albums, however, use sampling in markedly different ways, a fact that is obscured because no well-developed language exists to differentiate how and why their sampling styles differ. To account for these differences, this article proposes a typology for sample-based hip hop, a systematic terminological and conceptual approach to this repertory. Using these two classic albums by the Beastie Boys and Public Enemy as case studies, this typology offers a way to describe and distinguish in concrete terms the richly varied musical styles that make up sample-based hip hop.

Introduction

In a 2011 study on copyright law and digital sampling, Kembrew McLeod and Peter DiCola calculated how much it would cost to release the Beastie Boys' *Paul's Boutique* (1989) and Public Enemy's *Fear of a Black Planet* (1990) had all the dozens of samples been licensed.¹ They estimated that *Fear of a Black Planet* would cost over six million dollars and *Paul's Boutique* nearly twenty million dollars.² It is not surprising that McLeod and DiCola chose to compare these two albums. Released within a year of each other, they each contain over one hundred identified samples and are both critically recognized as masterpieces.³ Neither album was a debut effort; rather, both groups had solidified elements of their musical styles and approaches to sampling in previous releases.⁴

¹ Beastie Boys, *Paul's Boutique*, Capitol CDP 7 91743 2, 1989, CD; Public Enemy, *Fear of a Black Planet*, Def Jam 314 523 446-2, 1990, CD.

² Kembrew McLeod and Peter DiCola, *Creative License: The Law and Culture of Digital Sampling* (Durham, NC: Duke University Press, 2011), 203–12. McLeod and DiCola calculated a “cost matrix for sample licenses” in which they divided samples into two categories: the profile of the sampled work (low, medium, high, famous, and superstar) and the use in the sampling work (small, moderate, and extensive). Their cost matrix application for each album lists the title of the track and the number of “identifiable samples” in that track (see 206–7). They assume a selling price of \$18.98 per album when calculating the costs.

³ See “100 Best Rap Albums of All Time,” *The Source*, 100 (January 1998) and “500 Greatest Albums of All Time,” *Rolling Stone*, <http://www.rollingstone.com/music/lists/500-greatest-albums-of-all-time-19691231>; *Rolling Stone's* list ranks *Paul's Boutique* at #156, and places *Fear of a Black Planet* at #300. Note that the *Rolling Stone* list includes all genres, artists, and time periods. In 2005, the Library of Congress selected *Fear of a Black Planet* as one of fifty recordings to be included in the National Recording Registry of albums that are “culturally, historically, or aesthetically significant.” “Librarian of Congress Names 50 Recordings to the 2004 National Recording Registry,” 5 April 2005, <http://www.loc.gov/today/pr/2005/05-087.html>.

⁴ Beastie Boys, *Licensed to Ill*, Def Jam P2-27351, 1986, CD; Public Enemy, *Yo! Bum Rush the Show*, Def Jam CK 40658, 1987, CD; Public Enemy, *It Takes a Nation of Millions to Hold Us Back*, Def Jam 527 358-1, 1988, CD.

Yet for all their similarities, these two hip hop albums use sampling in markedly different ways. Although many scholars and critics have made significant and insightful contributions in the study and analysis of sample-based hip hop, no systematic or consistent terminology exists for analyzing the musical language of this repertory. That is not to say that scholars have ignored the differences among the various uses of digitally sampled sound. Justin Williams refers to Serge Lacasse's notions of "autosonic quotation" and "allosonic quotation" when distinguishing digital samples from re-performed material.⁵ McLeod and DiCola have used terms such as "fragmentary samples," "small sonic chunks," and "individually sampled and sliced beats" to describe samples; they moreover differentiate between looping (continuously repeating) a single phrase from a preexisting song and fusing multiple fragments from different songs.⁶ David Metzger suggests that samples come in two basic types: "isolated performance sounds" that are "edited and combined together" and "longer, more involved section[s]" that are more readily identifiable.⁷ In his ethnographic study of sample-based hip hop, *Making Beats*, Joseph Schloss takes a different approach, citing the language that his consultants use when describing the sounds of their samples, such as "off the wall," "upbeat and danceable," and "funky as hell."⁸ Although the work of these and other scholars is valuable, and indeed provides a foundation for the present study, I propose that a more systematic, comprehensive terminology would better help us describe and understand musical form and style in sample-based hip hop. To that end, I offer a typology of digital sampling practices in hip-hop, using the landmark albums *Paul's Boutique* and *Fear of a Black Planet* as particularly rich case studies.

Methodology

The typology I offer arose from a study of the relationships between source tracks and samples in hundreds of hip hop tracks released between approximately 1985 and 2011. It was developed through a process of identifying sampled sources, discerning which elements (instruments, lyrics, or other sounds) of the source track were sampled, and then analyzing how the producer—the person who creates the instrumental or non-lyric parts of a hip hop track—incorporated those sampled sounds.⁹ Producers tend to rely on several specific formulas when creating sample-based hip hop; I identified the various types by observing patterns in sample-based hip hop production, and then verified these types and approaches in interviews with a number of producers. The typology names extant musical practices rather

⁵ Justin Williams, *Rhyming and Stealin': Musical Borrowing in Hip Hop* (Ann Arbor: University of Michigan Press, 2013), 3.

⁶ The quoted phrases are drawn from Kembrew McLeod, *Freedom of Expression©: Overzealous Copyright Bozos and Other Enemies of Creativity* (New York: Doubleday, 2005), 68, 81, and 83; as well as McLeod and DiCola, *Creative License*, 26.

⁷ David Metzger, *Quotation and Cultural Meaning in Twentieth-Century Music* (New York: Cambridge University Press, 2003), 163.

⁸ Joseph G. Schloss, *Making Beats: The Art of Sample-Based Hip-Hop* (Middletown, CT: Wesleyan University Press, 2004), 95, 92, and 94.

⁹ Amanda Sewell, "A Typology of Sampling in Hip-Hop" (Ph.D. diss., Indiana University, 2013).

than creating artificial categories or imposing theoretical distinctions when there are no corresponding sonic differences.

With the typology, we can separate and identify—and thus hear and understand—samples in new and precise ways. We no longer have to reinvent the wheel every time we describe the role of samples in the construction of a sample-based track. Instead, we can start from a common terminology. As Theodore Gracyk, writing about the ontological distinction between the terms “rock ‘n’ roll” and “rock,” notes:

As with most other concepts through which we organize experience, classification of a specific case depends upon the range of contrasting concepts available. Consider the task of classifying the color of a patch of paint. If I have only the most basic color terms in my vocabulary (e.g., “red,” “blue”), I may have no problem in saying that the paint is red. But offer me more categories, such as light red versus red versus dark red, and I may well reclassify the same [patch of paint]. Offer me a color wheel of the sort used by professionals for mixing paint, and I may well tell you that the color falls between “holly red” and “antique ruby.”¹⁰

The typology, like Gracyk’s color wheel, helps us differentiate between sampling’s “holly reds” and “antique rubies” rather than just its light and dark reds. Now, instead of simply describing samples as “fragments” or “collages,” we can speak of surface sample types, aggregate component sample types, and recurring lyric sample types, to name a few of the types from the typology. This level of specificity draws our attention both to the individual samples as well as to how various samples and sample types interact in a track. Furthermore, differentiating individual sample types and their interaction can help us define and differentiate the musical styles of hip hop artists who sample.

My own listening and analysis form the basis of the typology and the differentiation of sample types. I used online resources such as Who Sampled, The Breaks, Crate Kings, and Wikipedia, as well as CD liner notes and artists’ websites, to identify the source tracks of the samples.¹¹ All other aspects of the analyses, including the sample type classification and the specific location of the sampled material in the sample-based track, are entirely my own, and I take full responsibility for any misidentifications. When I could not locate an existing identification for a sample, I did not include it in my analyses. In sample-based hip hop, copyright-infringement lawsuits lurk around every corner, and I have no intention of drawing attention to any sampled material that might provoke in a lawsuit. I have not been able to identify every sample, but I took advantage of all available resources to identify as many samples as possible.

I by no means intend to focus exclusively on the sound object without historical perspective or context. Schloss observed this particular problem in analyses that “focus on the results of sampling rather than the process.”¹² As Schloss noted,

¹⁰ Theodore Gracyk, *Rhythm and Noise: An Aesthetics of Rock* (London: I. B. Tauris, 1996), 2–3. Many thanks to Kerry O’Brien for bringing this passage to my attention.

¹¹ Who Sampled, operated by WhoSampled.com Limited, <http://www.whosampled.com>; The Breaks, AKA The (Rap) Sample FAQ, <http://www.the-breaks.com>; Crate Kings: Hip Hop Samples, Beats, Drums, and Production News, <http://www.cratekings.com>.

¹² Schloss, *Making Beats*, 20.

formalist analyses tend to avoid music's expression, role, and meaning. My typological approach is intended to analyze the music's form while simultaneously linking that form to the music's cultural and historical context. The typological analysis opens the door for discussion and analysis of style, history, and culture.

To avoid creating an analysis in a formalist vacuum, I interviewed hip hop producers and asked them how they understand and create sample-based music. I should note here that I conducted the majority of the interviews after I created the basic framework of the typology, so the examples and practices I discussed with producers did not inform the development of the typology. I provided an overview of the typology to each producer I interviewed, and each one agreed that my organizational system made sense but was not necessarily the way the conceived of his or her own music. We discussed specific examples as well as more general tendencies in the production of sample-based hip hop. Speaking with the producers gave me a sense of the many facets of hip hop production, and allowed me to frame my analyses with a more generalized sense of sampling aesthetics.

Comparing *Paul's Boutique* and *Fear of a Black Planet*

The Beastie Boys consist of rappers Mike D (Michael Diamond), Ad-Rock (Adam Horovitz), and MCA (Adam Yauch). *Paul's Boutique* is their second studio album, a follow-up to their smash hit *Licensed to Ill*, released in 1986. *Paul's Boutique* was produced by the Dust Brothers, Mike Simpson, and John King. The album contains a total of fifteen tracks, but the fifteenth track, "B-Boy Bouillabaisse," is divided into several sections, each with its own title. As a result, I treat *Paul's Boutique* as if it contains twenty-four total tracks, because each section of "B-Boy Bouillabaisse" can function independently.

Fear of a Black Planet is Public Enemy's third studio album, following *Yo! Bum Rush the Show* (1987) and *It Takes a Nation of Millions to Hold Us Back* (1989). Members of Public Enemy include frontman Chuck D, supporting rapper Flavor Flav, sideman Professor Griff, and DJ Terminator X. The Bomb Squad, Public Enemy's production team, consists of Chuck D, Eric "Vietnam" Sadler, and brothers Hank and Keith Shocklee. The Bomb Squad is nearly as well-known as Public Enemy itself, having also produced tracks and albums for artists such as Ice Cube, 3rd Bass, and Run-DMC. *Fear of a Black Planet* has a total of twenty tracks.

Throughout this article I refer interchangeably to "Public Enemy," "Public Enemy and the Bomb Squad," and "Public Enemy and their production team," as well as to "the Beastie Boys," "the Beastie Boys and the Dust Brothers," and "the Beastie Boys and their production team." I do not mean to diminish the role the production teams play in the creation of each group's sound, given that the members of both the Beastie Boys and Public Enemy were directly involved in the production of the albums. Each album was a collaborative effort between the group and its production team.

In the typology, I have identified three main types of samples: structural (a measure or two of sound that is looped or repeated throughout a new track); surface (a short fragment of sound that appears intermittently or unpredictably); and lyric (samples of sung, spoken, or rapped lyrics). In interviews, the producers

Table 1. A Typology of Sampling in Hip Hop

Sample type Subtypes	Description
Structural	Creates the track's groove; looped
Percussion-only	Borrows only non-pitched rhythmic instruments from the source
Intact	Borrows drums and various combinations of bass, keyboard, guitar, or other instruments, all of which sound simultaneously in the source
Non-percussion	Uses original bass, keyboards, or other instruments, but lacks sampled drums
Aggregate	Uses drums and various combinations of instruments, but each sampled from a distinct source
Surface	Decorates or emphasizes the structural samples
Constituent	Only a beat long, appears at regular intervals atop the groove
Emphatic	Appears at the beginning or end of a track
Momentary	Appears only once in a track but in an unpredictable place
Lyric	Adds spoken, sung, or rapped text
Singular	Appears once during a track
Recurring	Appears repeatedly during a track, usually in the choruses

of both albums have suggested approximate numbers of samples, but there are no official tallies. I have identified 105 samples in *Paul's Boutique* and 132 samples in *Fear of a Black Planet*, but I am certain that each album contains many more samples than those I have identified.¹³ Table 1 provides an outline of the typology of sampling that I have developed. The following sections will address each of the three main sample types in turn, which will then allow me to make generalizations about how the use of samples contributes to each group's musical style and sound.

Structural sample types

I identify four subtypes of structural samples: percussion-only (borrowing only drums from the source track); intact (borrowing drums and various combinations of bass, keyboard, or guitar, all of which sounded simultaneously in the source); non-percussion (borrowing original bass, keyboards, or other harmonic or melodic instruments, but lacking any sampled drums); and aggregate (borrowing drums and various instrument combinations, but each part is sampled from a distinct source; each individual sample in an aggregate groove is called an "aggregate component sample"). Structural samples create the track's groove, which is looped almost continually throughout the new track.¹⁴

¹³ Different analyses result in different numbers. For example, McLeod and DiCola identified eighty-one samples on *Fear of a Black Planet* and 125 samples on *Paul's Boutique*. See *Creative License*, 207–8.

¹⁴ In her study of rap of the Five Percent Nation, an offshoot of the Nation of Islam, Felicia Miyakawa also noted differences in the grooves of hip hop tracks. Miyakawa separates groove into two layers, melodic and percussive. My definition of groove differs from Miyakawa's, however, because the four subtypes of sample-based grooves—what I have termed "structural sample types—are differentiated on the basis of how many samples the producer includes and how those particular samples interact. Miyakawa does not make a distinction between the roles of sampled and newly-performed layers in a hip hop groove, but I differentiate the four structural sample types in the typology on the basis of which parts are sampled and which parts, if any, are newly performed. Felicia Miyakawa, *Five*

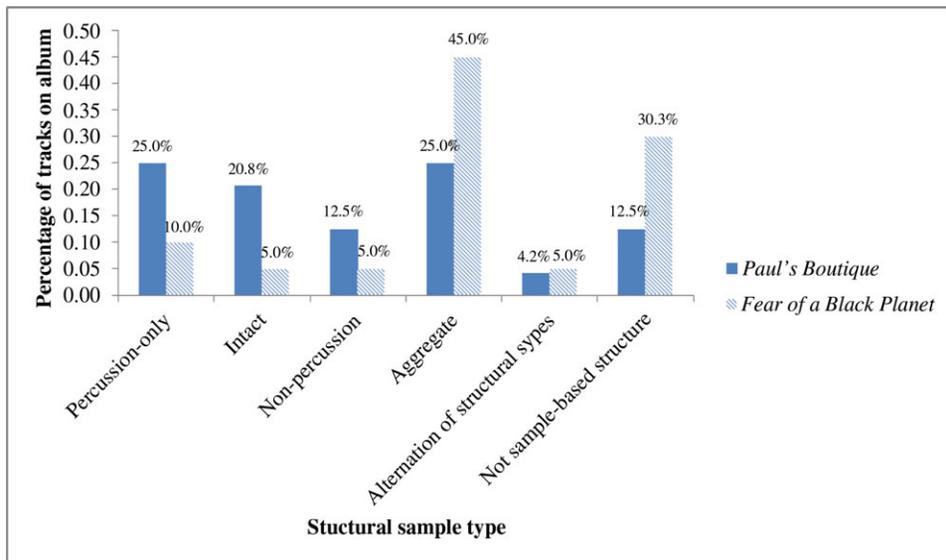


Figure 1. Structural types by percentage of tracks per album

Both Public Enemy and the Beastie Boys prefer the aggregate structural type over the other three, but the two groups assemble their aggregate tracks very differently. In Public Enemy's aggregate grooves, most or all of the individual component samples sound simultaneously. In the Beastie Boys' grooves, the individual component samples alternate rather than sound simultaneously. These approaches to structural samples help define each group's musical style.

The graph in Figure 1 includes the total number of tracks on each album, broken down by the type of sample-based structure of each track. The Beastie Boys prefer percussion-only and aggregate structures equally (25% each), and nearly half (45%) of Public Enemy's tracks contain aggregate grooves. In other words, both groups most commonly use aggregate structural types, but Public Enemy and the Bomb Squad prefer primarily aggregate structures while the Beastie Boys and the Dust Brothers employ aggregate structures equally as often as percussion-only structures.

If both groups favor aggregate structural types, why do Public Enemy's tracks sound so much complex than those of the Beastie Boys? The answer lies in how the groups construct those aggregate structures and how the individual aggregate component samples interact in the sample-based track. Although the Beastie Boys' aggregate grooves have just as many component samples as Public Enemy's do, the Beastie Boys and the Dust Brothers alternate aggregate component samples rather than layering them. Public Enemy's aggregate structures typically contain two to six component samples heard simultaneously, and the Beastie Boys' aggregate tracks rarely contain more than two component samples heard concurrently.

Source	Sound	37	38	39	40	41	42	43	44
Lyn Collins, "Think" ¹⁵	Percussion	-----	-----	-----	-----	-----	-----	-----	-----
Wilbur Bascomb, "Feel Like Dancing"	Bass	-----	-----	-----	-----	-----	-----	-----	-----
Sound Experience, "Devil with the Bust"	Guitar riff	-----	-----	-----	-----	-----	-----	-----	-----
Mico Wave, "Misunderstood"	Ascending minor third	-----	-----	-----	-----	-----	-----	-----	-----

Figure 2. Public Enemy, "911 is a Joke," part of verse 2, mm. 37–44 (1:24–1:42); structural samples only.

Comparing aggregate tracks reveals how each group's use of aggregate samples result in very different sounds. The Beastie Boys' "Johnny Ryall" and Public Enemy's "911 is a Joke" each contain aggregate sample-based structures with equal numbers of the same sample types: each track contains four aggregate component samples in its aggregate groove, and each track contains nine total samples.

As shown in the layering graph in Figure 2, during the verses of "911 is a Joke," all four aggregate component samples in the aggregate groove sound simultaneously. In the choruses of "911 is a Joke," the sample from Mico Wave's "Misunderstood" drops out, but the remaining three samples continue to be looped throughout each measure (see Figure 3). A three-note saxophone figure, a constituent surface sample from Parliament's "Flash Light," now appears in every measure of the choruses.¹⁵ Because the saxophone sample is just a snippet rather than a continuous figure, it functions as a constituent surface sample rather than an aggregate component sample; regardless, the saxophone sample contributes to the activity of the chorus.¹⁶ Further, a layer of continuous chatter overlays the entire track—these sounds are not samples but are in fact the sounds of rapper Flavor Flav's friends, who, according to Chuck D, were invited "to do background vocals to give ["911 is a Joke"] that real back in the projects feel."¹⁷ Although not samples, the layer of chatter also heightens the track's sense of aural activity.

The aggregate groove of "911 is a Joke" always includes at least three layered component samples. During the verses, all four component samples sound

¹⁵ Parliament, "Flash Light," Casablanca Records NB 20113 DJ, 1977, 12" single.

¹⁶ In some cases, the difference between an aggregate component sample and a constituent surface sample depends largely on the listener's perception. One could certainly argue that the three-note saxophone sample from "Flash Light" is an aggregate component sample rather than a constituent surface sample. However, the sample itself is only three notes, and its continuity results from the producers placing it in every measure. The aggregate component samples are between two and four measures in length, and they are used in their entirety and are therefore more continuous. A constituent surface sample alone cannot create the groove or rhythmic continuity within a measure because of its brevity, which is the main differentiating feature between an aggregate component sample and a constituent surface sample. However, the regular looping of this constituent surface sample contributes to what Mark Katz has termed the "meta-loop" of samples in Public Enemy's music, which occurs when samples of various lengths are layered and looped. See his discussion of this phenomenon in Public Enemy's "Fight the Power" in *Capturing Sound: How Technology Has Changed Music*, 2nd ed. (Berkeley: University of California Press, 2010), 152–53.

¹⁷ Chuck D, *Lyrics of a Rap Revolutionary*, 113–14.

Source	Type	Sound	25 26 27 28 29 30 31 32
Lyn Collins, "Think"	Aggregate component	Percussion	-----
Wilbur Bascomb, "Feel Like Dancing"	Aggregate component	Bass	-----
Sound Experience, "Devil with the Bust"	Aggregate component	Guitar riff	-----
Parliament, "Flash Light"	Constituent	Three-note saxophone riff	- - - - -

Figure 3. Public Enemy, "911 is a Joke," first chorus, mm. 25–32 (0:56–1:15)

simultaneously, and during the choruses, the producers combine three of the four component samples with the constituent sample from "Flash Light."

The density of Public Enemy's grooves is not the only reason they sound noisy. If, for example, each of the four aggregate component samples in "911 is a Joke" outlined the pitches of a tonic triad, then those component samples would combine to create a pleasantly homogeneous aggregate groove.¹⁸ The four component samples, however, have completely different pitch collections, rhythmic characters, timbres, and ranges. The combination is aurally abrasive, and intentionally so. As Robert Walser noted in his study of "Fight the Power," "Noisiness is always relative to whatever articulates order in a discourse or culture, and the noisiness of hip hop contributes to its ability to express dissent and critique."¹⁹ In fact, Public Enemy and the Bomb Squad would often begin producing a track by searching for particularly grating sounds to sample. According to DJ Bobcat (Bobby Ervin), who observed (but did not participate in) the production of several Public Enemy tracks, "They were looping [a sample of] something that you would hate. Bill Stephney [of the Bomb Squad] said, 'Your brain has to process it and eventually love it after hearing it so many times, or you'll go crazy.' I don't know if that has any real scientific significance, but that's what he told me."²⁰ As Bobcat's anecdote reveals, the producers often predicated their sample choices on their potential for aural distress; in fact, Bill Stephney seems to hope for an auditory Stockholm syndrome in which the listener has to love the sound to cope with it. The lack of harmonic, rhythmic, or timbral similarity among these individual sampled parts in "911 is a Joke" creates an aggregate groove that is dissonant on many levels.

¹⁸ "Ring, Ring (Ha Ha Hey)" by De La Soul is an example of an aggregate groove whose component samples are relatively homogeneous. "Ring, Ring" contains four component samples, and the three pitched component samples (guitar from Lou Johnson's "Beat," a second guitar from the Whatnauts' "Help is on the Way," and bass from Fat Larry's Band's "Act Like You Know") all oscillate around a pitch center of F, which lends this groove a greater sense of aural homogeneity than many of Public Enemy's grooves. "Ring Ring (Ha Ha Hey)," Tommy Boy TB 965, 1991, 12" single. Further development of the typology might include a differentiation of the aural qualities of individual samples, such as "homogeneous" and "heterogeneous" aggregate component samples.

¹⁹ Robert Walser, "Rhythm, Rhyme, and Rhetoric in the Music of Public Enemy," *Ethnomusicology* 39/2 (1995): 197–98.

²⁰ DJ Bobcat, telephone interview with the author, 24 August 2012.

Source	Sound	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Donny Hathaway, "Magnificent Sanctuary Band"	Percussion	-----																			
Paul McCartney, "Momma Miss America"	Percussion										-----										
David Bromberg, "Sharon"	Guitar											-									

Figure 4. The Beastie Boys, "Johnny Ryall," intro and part of first verse, mm. 1–20 (0:00–0:48)

Source	Sound	25	26	27	28	29	30
Donny Hathaway, "Magnificent Sanctuary Band"	Percussion	-----					-----
Grandwizard Theodore and Kevie Kev Rockwell, "Military Cut-Scratch Mix"	Percussion				-----		
David Bromberg, "Sharon"	Guitar				-----		-----

Figure 5. The Beastie Boys, "Johnny Ryall," first chorus, mm. 25–30 (1:00–1:15)

The Beastie Boys' "Johnny Ryall" also contains an aggregate groove that comprises four aggregate component samples, but the track sounds very different from "911 is a Joke." As shown in the layering graph of the first twenty measures of "Johnny Ryall" in Figure 4, the producers never deploy more than two aggregate component samples simultaneously. In fact, in measures 8–9 and measure 12, only one of the four component samples is audible.

"Johnny Ryall" is typical of many aggregate Beastie Boys tracks because multiple drum samples alternate. Although a Beastie Boys and a Public Enemy aggregate structure may contain similar numbers of aggregate component samples, the Beastie Boys rarely layer more than two of those samples simultaneously. For example, the aggregate structure of "Johnny Ryall" contains four component samples, three of which are drums; the producers alternate these three drum samples throughout the track. As shown in Figure 5, the chorus also includes percussion exchange because the producers introduce a third drum sample and alternate it with the drum sample from "Magnificent Sanctuary Band."

In measure 28 (1:07), the guitar sample drops out, leaving only the drum sample. Eliminating all melodic or harmonic samples for a measure or two and leaving just the drums is also a stylistic characteristic of the Beastie Boys' aggregate structures.

Even though Public Enemy and the Beastie Boys and their production teams frequently create aggregate structures, both the number of component samples and the ways the producers layer those component samples affect the sonic character of each group's aggregate grooves. The Beastie Boys' aggregate structures tend to sound sparser than those of Public Enemy because the former alternate component samples while the latter layer them. Further, Public Enemy and the Bomb Squad

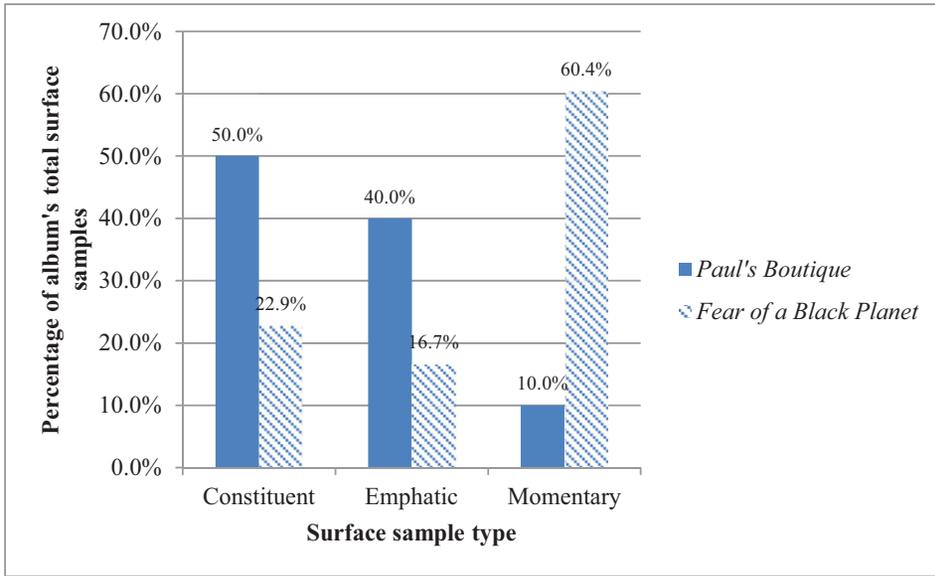


Figure 6. Surface sample distribution in the Beastie Boys' *Paul's Boutique* and Public Enemy's *Fear of a Black Planet*

choose structural samples based both on their individual sonic abrasiveness as well as how chaotic those samples sound when combined with each other.

Surface sample types

Surface samples decorate or punctuate a track's groove without necessarily participating in the track's primary loop, as seen in the above example from "911 is a Joke" in which a three-note saxophone sample from Parliament's "Flash Light" augments the groove. Surface samples do not contribute to the rhythmic or harmonic propulsion of the track, but they are valuable samples for rhetorical emphasis, historical context, and formal articulation. Figure 6 compares the percentages of each subtype of surface sample on both albums. Surface sample subtypes can be categorized as momentary (appearing a single time during a track), emphatic (beginning or ending a track or a section within a track), or constituent (occurring at regular intervals but without the same sense of continuity as a structural sample, as in the saxophone sample just described).

The majority of Public Enemy's surface samples are the momentary subtype, whereas the Beastie Boys' music includes very few momentary surface samples. Public Enemy and the Bomb Squad overwhelmingly favor momentary to all other subtypes of surface samples: just over 60% of the surface samples on *Fear of a Black Planet* are the momentary subtype. In fact, of the total number of samples on the album, over one-fifth of those samples are momentary surface samples. *Paul's Boutique* contains only two momentary surface samples. Momentary surface sample types prevail on *Fear of a Black Planet* for two reasons: Public Enemy's penchant for collages and quodlibets, and Public Enemy's use of samples to frame

Source	Sound
Lyn Collins, "Think"*	"think"
Unidentified source	descending bass line with percussion
Salt 'n' Pepa, "My Mike Sounds Nice"	"one, two"
Malcolm McLaren, "Buffalo Gals"	"hoooo"
Zapp, "More Bounce to the Ounce"	synthesized bass
Herman Kelly and Life, "Dance to the Drummer's Beat"	guitar and percussion
Kool and the Gang, "Jungle Boogie"	caveman yell
Diana Ross and the Supremes, "Love Child"	"you think"
Parliament, "Flash Light"	bass, percussion, and synthesizer
Dyke and the Blazers, "We Got More Soul"	"sister, kiss my brother"
Schoolly D, "PSK – What Does it Mean?"	record scratching
Fab Five Freddy and Beside, "Change the Beat"	"fresh"
Run-D.M.C.	"you know I'm proud to"
Pleasure, "Let's Dance"	descending brass smear
The 45 King, "The 900 Number"	saxophones
Boogie Down Productions, "South Bronx"	"so why <u>don't</u> you"
Rufus Thomas, "Funky Hot Grits"	"what you say?"

*This sample is heard throughout this excerpt.

Figure 7. Momentary surface sample quodlibet in Public Enemy, "Anti-Nigger Machine," intro (0:00–0:21)

historical references in Chuck D's rapped lyrics. Consider two tracks on *Fear of a Black Planet*, "Contract on the World Love Jam" and "Anti-Nigger Machine," which include either a collage or a quodlibet of momentary surface samples. These two tracks contain nineteen identified momentary surface samples, that is, two-thirds of the total number of momentary surface samples on the entire album.²¹ The first twenty-one seconds of "Anti-Nigger Machine" include at least fourteen different momentary surface samples from African American popular music, as shown in Figure 7. A quodlibet consists of many borrowed elements, each of which share a particular characteristic yet remain distinct from each other; the main difference between a collage and a quodlibet is that a collage is created atop the piece's "basic musical structure" or "underlying structure" while a quodlibet stands alone without supporting or accompanying music.²² There is no sample-based groove in the beginning of this track, thus making "Anti-Nigger Machine" a quodlibet of momentary surface samples rather than a collage because it contains no underlying groove at this point in the track.

This quodlibet juxtaposes samples from a number of genres of African American music: the record scratching of hip hop DJing, a funky synthesized Parliament groove, and the voice of Motown singer Diana Ross. Even without recognizing the specific source of a sample, a listener can identify the styles heard in the quodlibet.

²¹ I have only been able to identify five momentary surface samples in "Contract on the World Love Jam," although it is clear from listening that there are many more than five samples present in this track. Chuck D claims that there are between forty-five and fifty voices in this track, although probably not all of those voices are samples. See Chuck D, *Lyrics of a Rap Revolutionary*, 105. Similarly, several fragments of "Anti-Nigger Machine" are samples whose sources I have not yet identified. These are labeled as "unidentified source" in the chart but were not included in total counts of samples in the albums.

²² For more on the difference between collage and quodlibet, see J. Peter Burkholder, *All Made of Tunes: Charles Ives and the Uses of Musical Borrowing* (New Haven, CT: Yale University Press, 1995), 370–76.

Of “Fight the Power,” the final track on *Fear of a Black Planet*, Chuck D has said, “That song contains a great deal of black music history from a twenty-five year period. You listen to it, and it’s like, ‘This twenty-five-year period of black music is brought to you by Public Enemy.’”²³ The same sentiment certainly applies to this quodlibet in “Anti-Nigger Machine,” which contains samples of recordings spanning twenty years: the earliest sample is of Diana Ross and the Supremes from 1968, and the latest sample is of the 45 King from 1990.²⁴ Public Enemy and the Bomb Squad encapsulated two decades of black music in this twenty-second quodlibet.

This quodlibet introduces a track about discrimination and racial profiling by the police, who, in Chuck D’s estimation, “treat us [blacks] like niggers and they’re an anti-nigger machine.”²⁵ Racial profiling uses race as a determining factor for law enforcement, or, according to political scientist William Rose, “the use of race—particularly blackness—as a proxy for criminal dangerousness.”²⁶ Over 42% of African Americans believe that they have been stopped by the police simply because of their race, and over half of all Americans believe that the practice is widespread.²⁷ As Chuck D raps, the black community perceives that the police would rather take away human rights than keep peace. “Anti-Nigger Machine” thus juxtaposes objects of African American pride (music) and anger (unfair treatment by the police).

Momentary surface samples also dominate the soundscape of *Fear of a Black Planet*. Although they may initially seem random, the brief guitar chords, cymbal crashes, or James Brown shouts enhance the meaning of a particular track and contextualize the rapped lyrics within a political and chronological framework. Poet and filmmaker Saul Williams offered an example in “Welcome to the Terrordome”:

There’s this part, my favorite part of the song, where Chuck [D] goes, “The shooting of Huey Newton / from the hand of a nigga pulled the trigger.” The thing is, hearing that guitar, you *know* that that guitar is a sample. You know it’s not coming from someone in the studio with them now doing that. And you get the feeling that that guitar is related to the era when Huey Newton was shot.²⁸

The guitar sample to which Williams refers is a momentary surface sample from James Brown’s “Get Up, Get into It, Get Involved” from 1970.²⁹ Williams’s instinct about the chronology is correct: Black Panther Party leader Huey Newton was shot in 1967, convicted of manslaughter in 1968, and released from prison in 1970, after

²³ Chuck D, quoted in McLeod and DiCola, *Creative License*, 99.

²⁴ Diana Ross and the Supremes, “Love Child,” from *Love Child*, Motown MS 670, 1968, LP; the 45 Kings, “The 900 Number,” Tuff City TUF 128028-R, 1990, 45 RPM.

²⁵ Chuck D, *Lyrics of a Rap Revolutionary*, 128.

²⁶ William Rose, “Crimes of Color: Risk, Profiling, and the Contemporary Racialization of Social Control,” *International Journal of Politics, Culture, and Society* 16/2 (2002): 181. Note that Rose’s study focuses primarily on the racial profiling of blacks rather than any other group.

²⁷ The numbers mentioned are from a 1999 Gallup poll, cited in Jeffrey Grogger and Greg Ridgeway, “Testing for Racial Profiling in Traffic Stops from Behind a Veil of Darkness,” *Journal of the American Statistical Association* 101/475 (2006): 878. Statisticians Grogger and Ridgeway found little evidence of racial profiling in their study conducted in Oakland, CA.

²⁸ Saul Williams, quoted in McLeod and DiCola, *Creative License*, 100. Italics in original.

²⁹ James Brown, “Get Up, Get Into It, Get Involved,” King Records 45-6347, 1970, 7” single.

the case was overturned. Public Enemy's use of momentary surface samples for collages and for brief flashes of historical or rhetorical context, particularly those related to crucial figures and moments in black American history and identity, explains why this category of samples is more important to Public Enemy's music than to the music of the Beastie Boys.

Lyric sample types

Following their approach to structural samples, the Beastie Boys and the Dust Brothers interchange rapped lyrics and lyric samples, and Public Enemy and the Bomb Squad add lyric samples to the track's existing sonic texture. The Beastie Boys alternate lyric samples with their rapped texts in the form of substitutions, in which a sampled word or phrase replaces a rapped lyric and complements the existing meaning and rhyme scheme. Public Enemy typically treats lyric samples as an additional layer, scratching them in over the track's sample-based groove, placing them against the rapped lyrics in an adjunct function, or rapping or speaking along with the sampled words as opposed to using them as a lyric substitution.

Each group's treatment of lyric samples creates audible differences in the albums. Nearly half of the lyric samples on *Paul's Boutique* are lyric substitutions, and for *Fear of a Black Planet*, the figures are less than 10%. For example, in the first verse of the Beastie Boys' "Shake Your Rump" (0:16–0:25), the italicized lyric is a sample from Foxy's "Get Off Your Aahh and Dance":

Got arrested at the Mardi Gras for jumping on a float
 My man MCA's got a beard like a billy goat.
Hoo-hoo is the disco call
 MCA, hu-huh, I'm getting rope, y'all.

In this example, as in most lyric substitutions, the rapper could easily have delivered the sampled lyric's text himself, but the sample essentially italicizes the text; it is grammatically and semantically part of the rapped lyric, but is distinguished by its timbre and voice type.

In several instances, the Beastie Boys' lyric samples contain both the voice and the instruments from the source. These elements signal the genre and context of the sample. "Hello Brooklyn" is the fifth section of "B-Boy Bouillabaisse," and its final lines (7:53–8:02) contain a prominent lyric sample from Johnny Cash's "Folsom Prison Blues"³⁰:

I ride around town 'cause my car is fly,
 I shot a man in Brooklyn *just to watch him die*

The five sampled words in Cash's voice, plus the rockabilly guitar, walking bass, and shuffle-rhythm percussion, signal and preserve the sample's original context rather than disguise it or extract only the lyrics. In the Cash sample, not only do the sampled lyrics replace the rapped lyrics, but the instrumentation of the sampled

³⁰ Johnny Cash, "Folsom Prison Blues," CBS 3549, 1968, 7" single.

lyric also stands in for the groove. In this way, the Beastie Boys and the Dust Brothers maintain the same number of sonic layers in the track. The lyric sample in this case is substitutive rather than additive, and is typical of the Beastie Boys' approach to sampling.

Although Public Enemy and the Bomb Squad do not avoid lyric substitutions, the vast majority of their lyric samples are recurring (heard in the choruses), framing (scratched in during introductions or interludes), or adjunct (placed against rapped lyrics). These kinds of lyric samples contribute a layer of sound to the existing groove or lyrics and thus, in contrast to the Beastie Boys' approach, are additive rather than substitutive. The groups' approaches to lyric samples echoes their broader approach to sampling in general: the Beastie Boys substitutive approach reveals an interest in lean textures, whereas Public Enemy uses lyric samples as much for their timbral, musical qualities as for their semantic content, combining them with instrumental samples to create a thick, complex texture.

Public Enemy and the Beastie Boys approach each of the three types of samples—structural, surface, and lyric—in distinct ways. First, in structural types, both groups prefer aggregate structures, yet the way they arrange the component samples results in contrasting sounds. Public Enemy's music contains multiple layers of looped aggregate component samples; the Beastie Boys' music uses aggregate component samples in alternation with each other. Second, Public Enemy uses surface samples more frequently and with a greater sense of historical awareness compared to the Beastie Boys. Third, in lyric sample types, the Beastie Boys overwhelmingly prefer lyric substitutions, whereas Public Enemy typically takes an additive approach. The typology thus allows us to articulate how and why these two groups sound so different from each other, but more importantly, it helps us define and describe their sample-based musical styles, which are inextricably linked to the meaning and message of their music.

Genre, Race, and the Sample Canon

We can further describe and define the musical styles of the two groups by linking the typology to the musical genres they sample. As Figure 8 reveals, Public Enemy and the Beastie Boys, in collaboration with their production teams, show striking similarities and differences in the genres of music they choose to sample.

Both groups rely heavily on funk and soul recordings for their sample sources in all categories of the typology; both groups sample funk and soul recordings more than any other genre. Both groups also sample roughly the same percentage of hip hop recordings (just under 20% for the Beastie Boys and just over 20% for Public Enemy).

In the context of this particular analysis, “funk and soul” refers to artists such as James Brown, Chic, Sly and the Family Stone, Trouble Funk, and Marvin Gaye. “Rock” includes Led Zeppelin, Uriah Heep, and the Beatles. Jazz artists include Idris Muhammad, Grover Washington, and T. S. Monk (son of Thelonious). “Hip hop” means Afrika Bambaataa, Spoonie Gee, Schoolly D, and Run-DMC. “Reggae” means Bob Marley and Musical Youth. “Comedy and spoken word” includes Eddie Murphy, Richard Pryor, and Robin Harris. Although some readers may resist

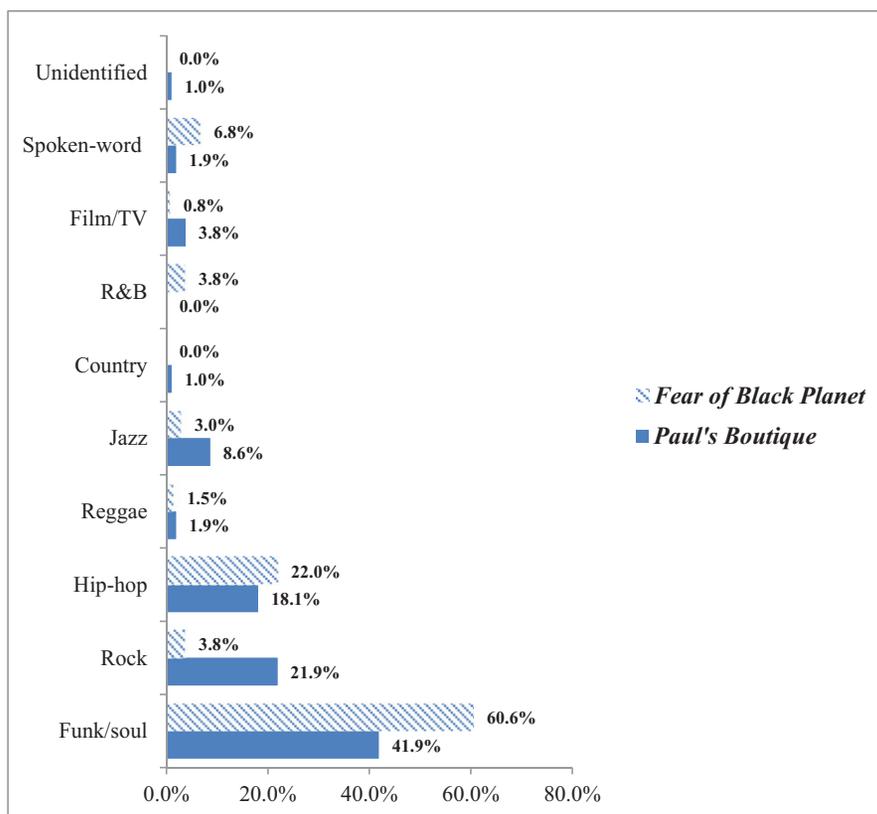


Figure 8. Sources of all samples in the Beastie Boys' *Paul's Boutique* and Public Enemy's *Fear of a Black Planet*, according to genre

collapsing funk and soul into the same category, nearly every producer I interviewed referred to the two genres both collectively and interchangeably. To many hip hop producers, the Temptations, Parliament-Funkadelic (in any of its incarnations), the Soul Searchers, Rose Royce, Kool and the Gang, the Winsons, and Dyke and the Blazers all belong to the same broad genre. Separating “funk” and “soul” creates a distinction that many hip hop producers do not make themselves.

Both the Beastie Boys and Public Enemy prefer to sample soul, funk, and hip hop, but that is their only similarity in their choices of source materials. They obtain the rest of their samples from very different sources. After funk and soul, the Beastie Boys sample rock most frequently, whereas Public Enemy's rock samples are scant. Combined, funk, soul, and hip hop samples account for nearly 83% of the total samples on *Fear of a Black Planet*, while funk, soul, hip hop, and rock account for about 82% of the total samples on *Paul's Boutique*. In other words, the Beastie Boys sample funk, soul, hip hop, and rock in approximately the same concentration as Public Enemy samples only funk, soul, and hip hop.

Samples of music by white artists make up just over 25% of the samples on *Paul's Boutique*, but samples of white artists on *Fear of a Black Planet* comprise only 6.8% of the album's samples. This is not surprising, given the prevalence of rock samples

on *Paul's Boutique* and the tendency of rock artists to be white.³¹ By and large, to sample rock is to sample white artists, and the rock samples on these albums are no exception.

Although all rock groups sampled on these albums are white, not all white artists sampled on these albums are rock groups. Each group sampled music by white artists working in genres other than rock, including jazz, country, film music, and hip hop. In the structural sample types, both Public Enemy and the Beastie Boys typically include samples of white artists' music as either an aggregate component sample—one layer of a groove that contains many different looped samples—or as a percussion-only structural sample—the only sampled part of a groove. As noted, both groups prefer aggregate sample-based grooves and percussion-only sample-based grooves over the other two types. By including samples of white artists' music in these types, the producers reveal that the music of white artists is as valued and respected as the music of black artists for creating a track's sample-based groove.

When sampling the music of white artists for lyric sample types, however, the contrast between the two groups is striking. *Fear of a Black Planet* contains only a single lyric sample of a white artist or group: Double Dee and Steinski's "Lesson 2 (James Brown Mix)" is sampled in Public Enemy's "Revolutionary Generation."³² Although the hip hop DJs Double Dee and Steinski are both white, "Lesson 2" is itself a DJ track that contains samples from several different James Brown recordings. "Revolutionary Generation" includes a sample of the word "Brown" panned back and forth between audio channels. Although it is technically a sample of the Double Dee and Steinski track because their audio manipulations are left intact, the sampled material is just as easily heard as a sample of James Brown rather than of Double Dee and Steinski. In other words, the only lyric sample of a white artist's music on *Fear of a Black Planet* is a sample of two white DJs who were themselves sampling a black artist's voice. There are no voices of white musicians, sampled or otherwise, on *Fear of a Black Planet*. As Mark Katz has observed of "Fight the Power," the final track on *Fear of a Black Planet*, "Even when not readily identifiable, the samples clearly draw from African American culture."³³

On the other hand, lyric samples of white artists' voices on *Paul's Boutique* are plentiful and prominent, including Johnny Cash, Kenny Loggins and Jim Messina, Sweet, the Ramones, and the Beastie Boys themselves. These lyric samples are often heard alongside lyric samples of black artists; in "Hey Ladies," for example, the white group Sweet appears in the company of black musicians including Afrika Bambaataa, Kurtis Blow, James Brown, Fab Five Freddy, and Kool and the Gang.

With the exception of their self-sampling and the sample of Johnny Cash already mentioned, the structural, surface, and lyric sample types of white artists

³¹ Although I refer to rock as a white-dominated music genre, I acknowledge rock's black roots and the appropriation of rock music by white artists in the 1960s. Maureen Mahon notes that by 1985, whites had appropriated rock to the extent that the thought of blacks playing rock music was counterintuitive to many. See *Right to Rock: The Black Rock Coalition and the Cultural Politics of Race* (Durham, NC: Duke University Press, 2004).

³² Double Dee and Steinski, "Lesson 2: The James Brown Mix," from *Lesson 1, 2, & 3*, Tommy Boy TB 867, 1985, 12" single.

³³ Katz, *Capturing Sound*, 154.

included on *Paul's Boutique* are drawn either from music of British or American rock groups—including Pink Floyd, Led Zeppelin, and Alice Cooper—or from film music, among them recognizable portions of film soundtracks by John Williams and Bernard Hermann. The white artists sampled on *Fear of a Black Planet*, however, perform in traditionally African American musical genres, such as jazz, funk, and hip hop: Average White Band (sampled in “Pollywanacraka”) is a Scottish funk band, Double Dee and Steinski are white DJs who frequently sample the voices of black artists such as James Brown and Syl Johnson, and Bob James (sampled in “Anti-Nigger Machine”) is a white jazz keyboardist.

It would be too simple to say, however, that Public Enemy samples black artists' recordings because they are black and the Beastie Boys sample white artists' recordings because they are white. Public Enemy, the Beastie Boys, and their production teams sample tremendous numbers of funk and soul recordings, which are predominantly and traditionally black genres of music. By sampling funk and soul recordings, these groups engage with the established tradition of sample-based hip hop. According to Schloss, most of the earliest producers—most of whom were African American—found their sample sources in their parents' record collections. As Schloss notes, this practice

led to a certain core of well-known records, generally those that were popular with urban African American listeners in the 1970s This is one material way in which African American culture has influenced the hip hop aesthetic. The first and second generation of deejays were afforded access to and familiarity with the recordings of such artists as Bob James, Grover Washington, New Birth, and others whose original listenership was largely confined to urban African American communities.³⁴

After the first generation of sampling artists, all aspiring hip hop producers not already familiar with the classic funk and soul recordings had to steep themselves in the music. Most of the producers I interviewed had this experience, either because they were too young or because their parents did not listen to those genres of music. As Apple Juice Kid (Stephen Levitin) explains, “I did not grow up on seventies funk, which is ninety percent of hip hop. If you wanted to be a hip hop producer, you needed to . . . find the coolest loops off seventies funk records.”³⁵ Other producers told me that they likewise had to “catch up” when they were starting out; 9th Wonder's (Patrick Douthit) parents listened exclusively to gospel music and did not allow secular music in their household, and Vinroc (Vincent Punsalan) does not recall his parents listening to music during his childhood.³⁶ To this day, it is extremely unusual for a hip hop producer, regardless of race, not to know this body of recordings, one that is now regarded as the canon of source materials for sample-based hip hop.

³⁴ Schloss, *Making Beats*, 82.

³⁵ Apple Juice Kid, telephone interview with the author, 25 August 2012. On “digging in the crates,” see Schloss, *Making Beats*, especially chapter 4, “Materials and Inspirations: Digging in the Crates.”

³⁶ 9th Wonder, telephone interview with the author, 8 August 2012; Vinroc, telephone interview with the author, 10 August 2012.

Sampling artists also draw on music learned from their own performance experiences. In the case of Public Enemy and the Bomb Squad, the members with instrumental music experience had played music from the same genres that were in the sample canon, namely, funk, jazz, and soul. Flavor Flav is a drummer, and in Public Enemy's live shows, he occasionally still plays. Producer Bill Stephney played guitar. Producer Eric "Vietnam" Sadler played keyboards in funk and jazz bands.³⁷ Their experiences, not just as listeners, but also as musicians, further confirms the likelihood that they would draw on funk, soul, and jazz recordings—predominantly black genres—for their samples. In contrast, the Beastie Boys were a hardcore punk rock band in the early 1980s. The lineup in 1981 and 1982 included Mike D on drums and MCA on bass, along with John Berry and Kate Schellenbach. This version of the group released the EP *Polly Wog Stew* in 1982, and the Beastie Boys continued to play the album's single "Egg Raid on the Mojo" in their live shows until MCA's untimely death in 2012. Although the group transitioned to hip hop after Berry and Schellenbach left the group and were replaced by guitarist Ad-Rock, clearly the Beastie Boys knew rock recordings from their early careers as performers.

Public Enemy's and the Beastie Boys' choices of source materials were influenced both the recordings in hip hop's sample canon and by their own performance and listening experiences. Both Public Enemy and the Beastie Boys sample funk and soul recordings because those recordings are a standard requirement for any sampling hip hop artist. They generously incorporate samples of these music genres into every sample type. However, there is a clear difference when looking at the role samples of white artists' music plays in the sample choices of these two artists. Public Enemy draws its samples almost exclusively from black music genres, and the few white artists they sample recorded in traditionally black genres. They treat samples of white artists working in black genres the same as black artists, using their samples primarily as aggregate structural sample types and percussion-only structural sample-types. Public Enemy views white artists' music as appropriate for these structural sample types, but they completely avoid white artists' music when looking for lyric sample types. In fact, the only lyric sample on *Fear of a Black Planet* is actually another artist's sample of a black voice. The Beastie Boys sample both the canonic genres of funk and soul as well as rock and other predominantly white genres, and they treat black and white artists' music relatively equally when choosing genres for each sample type. Each group's source materials reflect its listening and performance experiences as well as its familiarity with hip hop's sample canon.

Conclusions

We can draw two main lessons from the deploying a sampling typology in comparing *Paul's Boutique* and *Fear of a Black Planet*. First, the two albums reveal the rich generative possibilities of the canon of funk and soul recordings as source materials for sample-based hip hop. As most of the producers I interviewed were eager to explain, it is possible to create tracks that are completely new, unexpected, and radically different from one another even if they derive from a common source.

³⁷ Myrie, *Don't Rhyme for the Sake of Riddin'*, 60–61.

They emphasized that certain sounds will stand out to one producer that another missed entirely; even successive hearings by the same producer will sound different from one another. 9th Wonder explains:

Myself and Kanye West and Just Blaze can have the same sample, the same record, and you might hear it three different ways. It all depends on the ear of the sampler, which part of the song we want to take. And I may hear a part that Kanye and Just are like, man, I missed that part. Kanye may hear a part that I'm like, "Man, I missed that!" It's weird. You hear different things on different days. I have a record that I'm listening to, and I'm like, "There's nothing on this record," and I'll go back and listen to it again like, "How the hell did I miss this?"³⁸

Thus, even if a producer is sampling the same genre, artist, or track as another producer, he or she should look for a unique passage within that canonic material, and use it in a distinctive manner. This shared body of source materials yields inexhaustible musical possibilities, and the manner in which producers use samples plays a crucial role in defining their musical style. The typology I have developed helps us understand differences in musical style by characterizing the distinctive ways in which a producer deploys a collection of samples.

Second, this study makes clear that close listening is a fundamental activity of hip hop production. The dozens of surface samples in the music of Public Enemy or the Beastie Boys were not strewn haphazardly across the sonic landscape; they were carefully selected and extracted, and their particular placement in the new track is always significant. The painstaking process of selecting samples demands a deep familiarity with a repertoire and repeated close listening. Apple Juice Kid, for example, told me that the reason he chose to sample Van Halen in his early years as a producer was because he knew their music so well: "I could totally do that because I've listened to 'Jump' like a thousand times."³⁹ Producers scour recordings for what they consider the best parts; as DJ Jazzy Joyce says, "Why wouldn't I know how to cut out the fluff and get to the best of the best to present to you?"⁴⁰ For a producer to find the "best of the best," he or she must know a record in an extraordinary level of detail.

Paul's Boutique and *Fear of a Black Planet* both sample funk, soul, and hip hop, but the albums are unique, different from one another and distinct from the sample-based music of other hip hop artists. The typology offers a way to describe how the construction of these two albums differs. Public Enemy's music was built with multiple component samples in aggregate structural grooves, copious surface samples, and up to twenty different samples in a single track. The Beastie Boys, by contrast, used a spare, sample-based texture, alternating structural sample types and using lyric samples in a substitutive manner; moreover, they sampled liberally from outside the funk and soul canon. These two albums opened the door for myriad

³⁸ 9th Wonder, telephone interview with the author, 8 August 2012. DJ Jazzy Joyce described nearly an identical process to me: "Sometimes it could be something as simple as you and I sitting here watching Netflix, and there's a line in the movie that struck my mind differently than yours. We were watching the same movie, but later, I might go back to that movie and make a hit record out of a phrase. You're watching the same movie, but you didn't hear it. But I heard it." DJ Jazzy Joyce, telephone interview with the author, 20 August 2012.

³⁹ Apple Juice Kid, telephone interview with the author, 25 August 2012.

⁴⁰ DJ Jazzy Joyce, telephone interview with the author, 20 August 2012.

production approaches, and demonstrated innovative approaches to the treatment of sampled materials while also embracing hip hop's history. By combining my own typological analyses with perspectives from producers I offer new ways to hear these albums—and sample-based hip hop in general—as well as a precise vocabulary for discussing it. The typology represents a form of close listening that occurs in the same spirit as the intense aural focus hip hop producers bring to their work.

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