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Synthetic Aesthetics from 'Old-Skool' to Trap
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Synth Sonics as Stylistic Signifiers in Sample-Based Hip-Hop:

Synthetic Aesthetics from 'Old-School' to Trap

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Intro-thesis

The literature on synthesisers ranges from textbooks on usage and historiography¹ to scholarly analysis of their technological development under musicological and sociotechnical perspectives². Most of these approaches, in one form or another, acknowledge the impact of synthesisers on musical culture, either by celebrating their role in powering avant-garde eras of sonic experimentation and composition, or by mapping the relationship between manufacturing trends and stylistic divergences in popular music. The availability of affordable, portable and approachable synthesiser designs has been highlighted as a catalyst for their crossover from academic to popular spheres, while a number of authors have dealt with the transition from analogue to digital technologies and their effect on the stylisation of performance and production approaches³.

¹ Respective examples include: Joel Chadabe, *Electric Sound: The Past and Promise of Electronic Music* (Upper Saddle River, N.J.: Prentice Hall, 1997). Martin Russ, *Sound Synthesis and Sampling* (Oxford: Focal Press, 2009). Mark Vail, *The Synthesiser: A Comprehensive Guide to Understanding, Programming, Playing, and Recording the Ultimate Electronic Music Instrument* (New York: Oxford University Press, 2014).

² Respectively: Paul Théberge, *Any Sound You Can Imagine: Making Music/Consuming Technology* (Middletown: Wesleyan University Press, 1997). Hans T. Zeiner-Henriksen, "Old Instruments, New Agendas: The Chemical Brothers and the ARP 2600," *Dancecult: Journal of Electronic Music Culture* 6, no. 1 (2014): 26-40, doi: 10.12801/1947-5403.2014.06.01.02.

³ Respectively: Tellef Kvifte, "Digital sampling and analogue aesthetics," *Aesthetics at Work* (2007): 105-28, https://www.researchgate.net/publication/234037742_Digital_sampling_and_analogue_aesthetics. Barry Sandywell and David Beer, "Stylistic Morphing: Notes on the Digitisation of Contemporary Music Culture," *Convergence: The International Journal of Research into New Media Technologies* 11, no. 4 (2005): 106-121, doi: 10.1177//1354856505061057.

Furthermore, popular music styles, such as Disco, New wave and the many forms of electronic dance music (EDM) have been linked to the use (and abuse) of particular types of synthesiser, and authors have noted the effect of subculture philosophy on—or against—industry trends and technological development⁴.

Trade journals and music technology magazines celebrate popular synthesiser designs as pivotal to the artistic practices or sonic aesthetics of particular artists and genres alike⁵, while it has also been demonstrated that—at given periods in time—a reverse dynamic can characterise the notions of press and manufacturers on one side, and users-and-consumers on the other⁶. Particular aspects of synthesiser technology, such as drum machines and vocoders, receive special attention in the literature due to their unique relationship to specific musical styles (e.g. the Roland TR-808 and Hip-Hop) or their notable sonic footprint on the work of particular artists (such as Beastie Boys, Daft Punk, Herbie Hancock or Dr. Dre and the vocoder)⁷. At the same time, a schism can be noted between the coverage—and practice—of drum machines with synthesising capability and those that promote primarily a sampling methodology. This area becomes the subject of focused examination later in this paper, as it is pertinent to the sampled-

⁴ Sarah Thornton, *Club Cultures: Music, Media and Subcultural Capital* (Cambridge: Polity Press, 1995).

⁵ for a summary of notable examples see: John Twells, “The 14 most important synths in electronic music history – and the musicians who use them,” *FACT*, accessed October 17, 2016, <http://www.factmag.com/2016/09/15/14-most-important-synths/>.

⁶ Samantha Bennett, “Revisiting the ‘Double Production Industry’: Equipment Manufacturing, Consumption, and the Music Technology Press in the Late 2000s” (paper presented at the Music, Law and Business-Biennial Conference of IASPM-Norden, Helsinki, Finland, November 24–26, 2010).

⁷ David N. Howard, *Sonic Alchemy: Visionary Music Producers and their Maverick Recordings* (Milwaukee, W.I.: Hal Leonard Corporation, 2004), 265-284. Dave Tompkins, *How to Wreck a Nice Beach: The Vocoder from World War II to Hip-Hop - The Machine Speaks* (New York: Melville House Publishing, 2011).

synthetic polarities that formed within Hip-Hop, and the spectrum of meanings and production approaches these convey.

Rap review

It is also important to look at the literature on Hip-Hop, in order to identify the function, meaning and relevance of synthesisers to the development of the genre, its sonics, but also the factors that render or promote synthesiser use as meaningful or authentic to particular rap sub-genres. The larger percentage of scholarly analysis deals with Hip-Hop historiographically⁸, ethnographically⁹ or musicologically¹⁰, but often with a bias towards the poetics of the rap voice¹¹. The literature on Hip-Hop production or the instrumental aspects of Hip-Hop on the other hand, focuses primarily on sampling practices¹², sampling as composition¹³, and the ethics, creativity and legality of sample-

⁸ Jeff Chang, *Can't Stop Won't Stop: A History of the Hip-Hop Generation* (London: Ebury Press, 2007). Neil Kulkarni, *The Periodic Table of Hip Hop* (London: Ebury Press, 2015). David Toop, *Rap Attack 3: African Rap to Global Hip Hop*, 3rd edn. (London: Serpent's Tail, 2000). Shea Serrano, *The Rap Year Book: The Most Important Rap Song From Every Year Since 1979, Discussed, Debated, and Deconstructed* (New York: Abrams Image, 2015).

⁹ Joseph G. Schloss, *Making Beats: The Art of Sampled-Based Hip-Hop*, 2nd edn. (Middletown: Wesleyan University Press, 2014).

¹⁰ Justin A. Williams, ed., *The Cambridge Companion to Hip-Hop* (Cambridge: Cambridge University Press, 2015).

¹¹ Adam Krims, *Rap Music and the Poetics of Identity* (Cambridge: Cambridge University Press, 2000).

¹² Justin Morey and Phillip McIntyre, "The Creative Studio Practice of Contemporary Dance Music Sampling Composers," *Dancecult: Journal of Electronic Dance Music Culture* 6, no. 1 (2014): 41-60, doi: 10.12801/1947-5403.2014.06.01.03. Tara Rodgers, "On the process and aesthetics of sampling in electronic music production," *Organised Sound* 8, no. 3 (2003): 313-320, doi: 10.1017/S1355771803000293. Schloss, *Making Beats*. MA Swiboda, "When Beats Meet Critique: Documenting Hip-Hop Sampling as Critical Practice," *Critical Studies in Improvisation* 10, no. 1 (2014): 1-11, <http://www.criticalimprov.com/article/view/3027/3584>.

¹³ Vanessa Chang, "Records that Play: The Present Past in Sampling Practice," *Popular Music* 28, no. 2 (2009): 143-159, doi: 10.1017/S0261143009001755. Joanna Demers, "Sampling the 1970s in hip-hop." *Popular Music* 22, no. 1 (2003): 41-56, doi: 10.1017/S0261143003003039. Paul Harkins, "Appropriation, Additive Approaches and Accidents: The Sampler as Compositional Tool and Recording Dislocation," *Journal of the International Association for the Study of Popular Music* 1, no. 2 (2011): 1-19, doi: 10.5429/2079-3871.

based production¹⁴. A number of publications deal with the spectrum between sampling and live-instrumentation¹⁵, but—again—synthesisers are seldom approached as live instruments in this context. Finally, the instrumental aesthetics of Hip-Hop are examined by authors dealing with experimental, alternative or left-field niches¹⁶, but their focus remains anchored on sampling rather than synthesis, as far as key contributors to the sub-genres' unique sonic attributes are concerned.

While it is difficult to trace the multiple genre divergencies and variations for any musical style—and particularly so for fast-mutating electronic genres—it is worth noting that there is also no systematic typology of rap sub-genres either in the historiography or musicological analysis of Hip-Hop with regards to sonics or the use of synthesisers. Rose, Toop, Krims, Schloss, Chang, Kulkarni and Serrano¹⁷ provide a useful timeline of stylistic development by approaching the events and practices in Hip-Hop's trajectory historically, while many of the authors dealing with Rap's musicological analysis and sampling practices cover individual practices within specific sub-genres in great detail. Lyrically or ethnically identified polarities in style, such as 'gangsta' and 'message' rap,

¹⁴ Steve Collins, "Waveform Pirates: Sampling, Piracy and Musical Creativity." *Journal on the Art of Record Production* 3, no. 1 (2008). <http://hdl.handle.net/1959.14/86444>. Eduardo Navas, *Remix Theory: The Aesthetics of Sampling* (Germany: Springer Wien New York Press, 2012). Tricia Rose, *Black Noise: Rap Music and Black Culture in Contemporary America* (Middletown: Wesleyan University Press, 1994).

¹⁵ For an excellent discussion on this topic, see: Wayne Marshall, "Giving Up Hip-Hop's First-born: A Quest for the Real after the Death of Sampling," *Callaloo* 29, no. 3 (2006): 868-892. doi: 10.1353/cal.2006.0149.

¹⁶ Mike D'Errico, "Off the Grid: Instrumental Hip-Hop and Experimentation after the Golden Age," in *The Cambridge Companion to Hip-Hop*, ed. Justin A. Williams (Cambridge: Cambridge University Press, 2015), 280-291. Jay Hodgson, "Lateral Dynamics Processing In Experimental Hip Hop: Flying Lotus, Madlib, Oh No, J-Dilla And Prefuse 73," *Journal on the Art of Record Production* 5, no. 1 (2011), <http://arpjournal.com/lateral-dynamics-processing-in-experimental-hip-hop-flying-lotus-madlib-oh-no-j-dilla-and-prefuse-73>.

¹⁷ Chang, *Can't Stop Won't Stop*. Krims, *Rap Music and the Poetics of Identity*. Kulkarni, *The Periodic Table of Hip Hop*. Rose, *Black Noise*. Schloss, *Making Beats*. Serrano, *The Rap Year Book*. Toop, *Rap Attack 3*.

and 'black' and 'white' rap, are covered in the chapters on genres in *Droppin' Science: Critical Essays on Rap Music and Hip Hop Culture*¹⁸, but there is a lesser emphasis on sonic aspects overall, and synthesisers more specifically. Sewell and Ratcliffe provide systematic typologies on sampling (in Hip-Hop and EDM respectively)¹⁹, but due to the authors' understandable sampling or stylistic foci, neither the use of synthesisers nor the more 'synthetic' rap sub-genres are dealt with extensively.

In identifying these gaps, the paper aims to systematise the scattered findings on *style*, in order to provide an initial categorisation of sonically defined Hip-Hop sub-genres, which can then function as a map for tracing synergies with synthesiser usage. Furthermore, the intertextual analysis will be supported by aural analysis of key works, in order to relate the literary findings to sonic outputs. The discography analysed to this end aims to cover a representative timeline from Sugarhill Gang's *Rapper's Delight*²⁰ (the first recorded rap hit) to the birth of Trap (arguably the most synth-heavy take on the genre to date), identifying key producers and works that represent a 'sound', 'aesthetic' or divergence in Hip-Hop music.

¹⁸ Robin D. G. Kelley, "Kickin' Reality, Kickin' Ballistics: Gangsta Rap and Postindustrial Los Angeles," in *Droppin' Science: Critical Essays on Rap Music and Hip Hop Culture*, ed. Williams E. Perkins (Philadelphia: Temple University Press, 1996), 117-158. Ernest Allen, Jr., "Making the Strong Survive: The Contours and Contradictions of Message Rap," in *Droppin' Science: Critical Essays on Rap Music and Hip Hop Culture*, ed. Williams E. Perkins (Philadelphia: Temple University Press, 1996), 159-191. Armond White, "Who Wants to See Ten Niggers Play Basketball?" in *Droppin' Science: Critical Essays on Rap Music and Hip Hop Culture*, ed. Williams E. Perkins (Philadelphia: Temple University Press, 1996), 192-208.

¹⁹ Robert Ratcliffe, "A Proposed Typology of Sampled Material within Electronic Dance Music," *Dancecult: Journal of Electronic Dance Music Culture* 6, no.1 (2014): 97-122, doi: 10.12801/1947-5403.2014.06.01.06. Amanda Sewell, "A Typology of Sampling in Hip-Hop" (PhD diss., Indiana University, 2013).

²⁰ Sugarhill Gang, *Rapper's Delight*, Sugar Hill Records SH 542, 1979, vinyl.

Towards a sonic-stylistic timeline

Most histories of recorded Rap, or Hip-Hop music, begin with *Rapper's Delight* by the Sugarhill Gang released in 1979. Although it was not the first Rap release ever, it is “the first commercially successful rap song, [...] universally recognised as the moment modern hip-hop became an official genre”²¹. Preceding the release by a few months *King Tim III (Personality Jock)*, by the Fatback Band²², features similar live and predominantly electric, Disco-funk instrumentation, with a rapped vocal delivery on top, claiming the *actual* title of first rap release ever²³. However, what’s interesting from the perspective of synthesis, is that before either of these songs were released, Arthur Baker produced *Rap-O Clap-O* for Joe Bataan²⁴, juxtaposing similar rap vocal delivery but against a much more synthetic backdrop. Although the production was eventually released later than either *King Tim III* or *Rapper's Delight*, it did however set a prototype for Baker’s synthesised electro-funk style of production that would later become a mainstay in Old School Rap. Featuring a prominent “synthetic drum track”²⁵ and a catchy synthesiser melody over the disco-styled guitar part, it predates Baker’s futuristic collaborations with Afrika Bambaataa that would eventually take the form of *Jazzy Sensation*²⁶ in 1981 and *Planet Rock*²⁷ in 1982. Cementing the combination of Roland TR-808 drum timbres, Fairlight synth lines, sequencer programming and resonant filtering these two produc-

²¹ Serrano, *The Rap Year Book*, 11.

²² Fatback Band, *King Tim III (Personality Jock)*, Spring Records SP-D-402, 1979, vinyl.

²³ Discussed in: Howard, *Sonic Alchemy*, 268.

²⁴ Joe Bataan, *Rap-O Clap-O*, Salsoul Records SG 315, 1979, vinyl.

²⁵ Howard, *Sonic Alchemy*, 268.

²⁶ Afrika Bambaataa & the Jazzy 5 / Kryptic Krew featuring Tina B, *Jazzy Sensation*, Tommy Boy TB 812, 1981, vinyl.

²⁷ Afrika Bambaataa & the Soul Sonic Force, *Planet Rock*, Tommy Boy TB 823, 1982, vinyl.

tions would mark a departure from disco-fuelled “proto-rap”²⁸ towards a tighter, programmed and more synthetic production signature, whose *echoes* can be traced down the following decades across releases by Run-D.M.C., Beastie Boys, Dr. Dre, and the sub-genres of G-funk, Southern Rap and its offshoots Miami Bass, Crunk and Trap.

Despite the obvious sonic differences between these early releases, and the emerging binaries between *organic* and synthetic timbres that would continue to characterise future trends in Hip-Hop, the productions shared a familiarity formula that remained clear of sampling methodologies. *Rapper’s Delight* featured live re-workings of Chic’s *Good Times*²⁹, *Jazzy Sensation* borrowed heavily from *Funky Sensation*³⁰ by Gwen McCrae, and *Planet Rock* included re-played or re-programmed synth hooks copying Kraftwerk’s *Trans-Europe Express*³¹. As a result, these first rap releases paid tribute to the performative turntablism that gave birth to the genre via their referentiality, but unlike it, they did not make use of any phonographic materials directly. This is an important methodological distinction in early Hip-Hop that also characterises the genre’s future use of synthesisers, rationalised either as copyright alternatives, or alluding to various notions of referentiality, nostalgia and even futurism.

Between these live or synthesised production polarities lies a release representing yet another important methodological paradigm. Grandmaster Flash’s *The Adventures of Grandmaster Flash on the Wheels of Steel*³² is the first rap release to represent performed turntablism *on record* featuring excerpts from other recordings. The most

²⁸ Howard, *Sonic Alchemy*, 268.

²⁹ Chic, *Good Times*, Atlantic DK 4801, 1979, vinyl.

³⁰ Gwen McCrae, *Funky Sensation*, Atlantic DMD-286, 1981, vinyl.

³¹ Kraftwerk, *Trans-Europa Express*, Kling Klang 1C 064-82 306, 1977, vinyl.

³² Grandmaster Flash, *The Adventures of Grandmaster Flash On The Wheels Of Steel*, Sugar Hill Records SH 557, 1981, vinyl.

prominent here is perhaps Michael Viner's Incredible Bongo Band's *Apache*³³, but other 'samples' that can be heard are Blondie's *Rapture*³⁴, Chic's (actual phonographic) *Good Times*, Queen's *Another One Bites the Dust*³⁵, and excerpts from various other Sugar Hill Records acts. The importance of this release is that it pays tribute to the DJ practices of Kool Herc, Afrika Bambaataa and Grandmaster Flash himself, which gave birth to Hip-Hop but had not yet been committed to record up to this point. As such, the Old School era hip-hop releases had actually depended either on live instrumentation, or drum machines and synthesis (rather than previously recorded phonographic materials), and Grandmaster's recorded turntablism would not only self-preserve this historical practice, it would also pave the way for the sampling practices that would follow.

Another interesting aspect of the three distinct methodologies characterising Hip-Hop production—live instrumentation, synthesis and sampling—is the way in which they correlate to early notions of Rap authenticity. The early releases that utilised live performance inevitably borrowed from disco and funk aesthetics, as the bands and session musicians that performed on them came from these performative traditions. Consequently, they were perceived as feel-good, dance-inducing *party* records, with some rapping on top, but which had little to do with the use of funk breaks³⁶ and the aural or *authentic* tradition of Rap. To this day, Hip-Hop that relies predominantly on live performance can carry this stigma of reduced authenticity, and bands that attempt to bridge

³³ Michael Viner's Incredible Bongo Band, *Bongo Rock*, Pride PRD-0028, 1973, vinyl.

³⁴ Blondie, *Rapture*, Chrysalis CHS 2485, 1981, vinyl.

³⁵ Queen, *Another One Bites the Dust*, EMI EMI 5102, 1980, vinyl.

³⁶ A *break* or *break-beat* refers to the rhythmical breakdown of a record occupied solely by drums. DJs would extend the break-beat's duration by using two copies of the record on two turntables and switching continuously between the two breakdown segments.

the gap dedicate a significant amount of their efforts learning to sound like sample-based Hip-Hop, both in their musical motifs but also their sonics³⁷.

Of key importance to this paper is the fact that hip-hop production that relied predominantly on drum machines and synthesisers found itself navigating a less polarised route in terms of authenticity claims. This is widely exemplified by the revered early electro releases, the celebrated practices of Dr. Dre and his reliance on synthesisers in the G-funk period, but also the many offshoots of Southern Rap (such as Crunk and Trap) and their heavily synthetic arrangements now dominating contemporary Hip-Hop (and, to some extent, popular music). A moment of historical significance in the divide between the *party* and *serious* rap aesthetic came with the release of Run-D.M.C.'s *Sucker M.C.'s*³⁸ in 1983, which utilised nothing more than an Oberheim DMX drum machine (with its sample-derived percussive presets) and minimal turntable effects. Serrano notes that "Run-DMC stripped away all of the instrumentation and replaced it with drum machines (and then later they pushed it even further and melded it together with hard rock guitars and histrionics), which made it feel more real, more visceral"³⁹. Kulkarni adds that "(t)he lush disco, pop and electro textures [...] were body-slammed into pulverising drum-machine beats, brutally effective heavy bass and powerful rhyming that showed no interest in crossing over anywhere."⁴⁰ The author here differentiates the approach not only from the live disco arrangements of earlier productions, but also from the electronic timbres of Baker's and Bambaataa's electro-rap. Although *Sucker M.C.'s* ended up being categorised as electro—albeit New-School—by most record stores,

³⁷ as discussed in Marshall, "Giving up Hip-Hop's Firstborn".

³⁸ Run-D.M.C., *It's Like That / Sucker M.C.'s (Krush Groove 1)*, Profile Records PRO-7019, 1983, vinyl.

³⁹ Serrano, *The Rap Year Book*, 36.

⁴⁰ Kulkarni, *The Periodic Table of Hip Hop*, 37.

what may be influencing Kulkarni's distinction here is the fact that the drum timbres making up the majority of this production are actually derived from live samples. The Oberheim DMX drum machine used by Larry Smith and Russell Simmons for the production of *Sucker M.C.'s* proudly derives its drum hit samples from recordings of real drums. Daniel Sofer, author of the DMX manual, differentiates its sonic footprint from previous synthesising alternatives (i.e. Roland's 1980 TR-808) when he claims:

The DMX has been designed by the Oberheim staff with the idea of giving you better sound, and more intimate control of it, than has been previously available in a percussion synthesizer.

The DMX generates the sounds of real drums. Recordings of real drums are digitized, stored in computer memory, and are made available at the touch of a button.⁴¹

The minimalist beat aesthetic and its perception as a harder, more authentic backdrop for truth-narrating MCs⁴² has been exemplified many more times since *Sucker M.C.'s*. Another prime example is Ice-T's *6 in the Mornin'*⁴³ which follows the minimalist instrumental paradigm and is regarded by many a rap historiographer as the first Gangsta-rap record. Equally, *Sucker M.C.'s* receives the credit for the first Battle-rap record due to its thematic content, which highlights an important distinction that needs to be made between categorisations founded upon lyrical content, and the focus of this paper, which is on the sonic characteristics of Rap's instrumental production. Although there is often a reciprocal relationship between lyrical themes and the aesthetics of the production—and

⁴¹ Daniel Sofer, "DMX Owner's Manual," *Internet Archive*, accessed October 21, 2016, https://archive.org/stream/synthmanual-oberheim-dmx-owners-manual/oberheimdmxownersmanual_djvu.txt.

⁴² MC stands for Master of Ceremony and, later, Microphone Controller, both referring to rapper in this context.

⁴³ Ice-T, *Rhyme Pays*, Sire 9 25602-2, 1987, compact disc.

this will be noted where relevant—it is important to focus separately on the sonics of Hip-Hop for a fruitful examination of the role of synthesisers in its production and aesthetics. In order to aid the remainder of this analysis, Table 1 provides a categorisation of rap genres, highlighting key works with reference to instrumentation, sampling and the use of synthesisers:

Categories (sonic) [secondary] <i>geographical</i>	Key Works	Instrumentation	Sampling	Synthesisers
OLD SCHOOL	1979 ----->			
Party / Live	Sugarhill Gang - <i>Rapper's Delight</i> (1979)	Live disco-funk (acoustic, electric)	X	X
Turntablism	Grandmaster Flash - <i>The Adventures of Grandmaster Flash on the Wheels of Steel</i> (1981)	Turntables	√	X
Electro	Afrika Bambaataa & the Soul Sonic Force - <i>Planet Rock</i> (1982)	Programmed synths (bass, leads, strings), SFX, drum machine beat	X	√ (<i>Fairlight, Roland TR-808*</i>)
Electro-funk	Grandmaster Flash & the Furious Five - <i>The Message</i> (1982)	Drum machine beat, live disco-funk and synths	X	√ (<i>Live Prophet</i>)
NEW SCHOOL	1983 ----->			
Beat-only Electro [Battle-rap]	Run-D.M.C. - <i>Sucker M.C.'s</i> (1983)	Drum machine beat, turntable FX	√/X (by definition, yes, as the Oberheim DMX uses recorded drum samples, but no phonographic sampling)	X
Beat-only Electro [Gangsta-rap] <i>West Coast</i>	Ice-T - <i>6 in the Mornin'</i> (1986)	Drum machine beat, turntable FX	X	X
Rap-Rock [Pop-rap]	Beastie Boys - <i>(You Gotta) Fight for your Right (to Party)</i> (1986)	Live punk-rock (electric, acoustic)	X	X
Boom-bap [Conscious/political-rap] <i>East Coast</i>	Public Enemy - <i>Rebel without a Pause</i> (1987)	Sampling, programming, turntable FX and scratching (and samples triggered live)	√ (<i>Ensoniq Mirage, and S900 samplers used</i>)	X

Categories (sonic) [secondary] <i>geographical</i>	Key Works	Instrumentation	Sampling	Synthesisers
'Mobb' Scene precursor to G-funk, Hyphy	Too \$hort - Born to Mack (1987)	Programming and synthesisers	X	√ (Prophet, Roland TR-808)
GOLDEN AGE	1988 ----->			
Boom-bap [Gangsta-rap / proto-G-funk] <i>West Coast</i>	N.W.A. - <i>Straight Outta Compton</i> (1988)	Sampling and programming, turntable FX	√	√ (Roland TR-808)
Bohemian [Jazz-rap]	A Tribe Called Quest - <i>People's Instinctive Travels And The Paths Of Rhythm</i> (1990)	Sampling (prominence of jazz sources; extended solo sections)	√	<i>minimal</i>
G-funk [Gangsta-rap]	Dr. Dre - <i>Nuthin' But A 'G' Thang</i> (1992)	Sampling, programming, live performance and synthesisers	√	√ (Minimoog)
Miami Bass	Tag Team - <i>Whoomp! (There It Is)</i> (1993)	Sampling (Kano's <i>I'm Ready</i> Italo-disco bassline), Roland TR-808 (fast) beat, electro-styled synth strings	√	√ (Roland TR-808)
Boom-bap [East Coast]	Wu-Tang Clan - <i>Enter The Wu-Tang (36 Chambers)</i> (1993)	Sampling (breakbeats, lo-fi strings and piano, martial arts film dialogue snippets), loose programming	√	<i>minimal</i>
Jazz/Live Rap	The Roots - <i>Organix</i> (1993)	Live performance	X	X
G-funk [Gangsta-rap] bridge to late 1990's Hip-Hop-fuelled R&B replacing rappers with singers, but retaining G-funk's synthetic tendencies	Warren G - <i>Regulate... G-Funk Era</i> (1995)	Sampling, programming, live drummer, 8x additional vocalists, backing vocal group, 2x bassists, 3x guitarists, 2x keyboardists: synths, rhodes and clav)	√	√
DIASPORA**	1998 ----->			
Southern Rap	OutKast - <i>Aquemini</i> (1998)	e.g. track <i>Synthesiser</i> : mix of electronics and 808 Bass-music reliance, with OutKast's flavour of Southern soul (at 0'42" an 808 pitched down snare roll predates the sequenced manipulation of 808 timbres in Crunk and then Trap)	√	√

Categories (sonic) [secondary] geographical	Key Works	Instrumentation	Sampling	Synthesisers
Bounce	Juvenile - <i>Back that Azz Up</i> (1999)	Bounce-influenced fast 808 beat, introducing 32nd hi-hat programming; prominent off-beat feel to instrumental, supported by 8ths on electronic percussion, vocal chops and keyboard strings motif	√	√
Crunk	Lil' Jon & The East Side Boyz - <i>Kings of Crunk</i> (2002)	electro-inspired, Miami-stylised 808 figures (extended kick decays, pitched snare rolls, 32nd hi-hat programming); Bounce-inspired crowd chants; buzzy/distorted synth leads; arpeggiated/sequenced plucks (fast ADSR envelopes); some monophonic legato leads (more digital than G-funk in timbre); sampled or preset string motifs	√	√
Trap	T.I. - <i>Trap Muzik</i> (2003)	electronic textures, elaborate 808 percussive programming and increased synthetic brass/string patches playing epic, dark motifs (e.g. single 24's: dark harmonic progression, slow tempo, gothic bells, 16th subdivisions, double-time hi-hat and snare-roll programming	√	√

Table 1

* The Roland TR-808 is included here under Synthesisers because it uses analog oscillators to derive some of its percussive timbres, which can then be modified further.

** Kulkarni uses the term "Diaspora" as a descriptor for the multitude of Hip-Hop divergencies that follow after 1998.⁴⁴

⁴⁴ Kulkarni, *The Periodic Table of Hip Hop*, 120-121.

Relationship to samples (and live instrumentation)

In the New School era that was kick-started with Run-D.M.C.'s *Sucker M.C.'s*, a number of conscious production approaches can be observed, which distance Hip-Hop from both the disco-funk and electro-synthetic philosophies of the past. On the one hand, the early releases from Def Jam Recordings overseen by producers Rick Rubin and Russell Simmons borrow from Rock and Punk in an attempt to signify an *alternative* aesthetic, diametrically opposed to the mainstream sounds of Sugar Hill Records. The harder, minimalist beat aesthetic, alongside the tougher lyrical themes and louder (often shouted) rhyming—be it battle, gangsta, humorous or political—provide the frequency space and matching sonic attitude for distorted guitars and punk-rock performances to join the “party”. The term is used ironically here, as the crossover appeal of records such as *Walk this Way*⁴⁵ by Run-D.M.C. and Aerosmith, and *(You Gotta) Fight for your Right (to Party)* by Beastie Boys⁴⁶, brings them back full circle into the mainstream. What also characterises this trend is a return to live performances, which although not directly related to Disco or Funk anymore, nevertheless brings live bands back to the production equation (two members of Aerosmith for the former, and Beastie Boys themselves for the latter track). As a result, these records often get categorised as Rap Rock or Pop-rap, but crucially remain synthesiser-free.

On the other hand, the synthetic aversion noted in this period seems to dominate yet another production preference. Ever since the Oberheim DMX and Marley Marl's celebrated practice of sampling acoustic drum hits from records, New School Hip-Hop demonstrated a new-found preference for *organic* (i.e. digitally sampled *acoustic*) drums.

⁴⁵ Run-D.M.C., *Walk this Way*, Profile Records PRO-7112, 1986, vinyl.

⁴⁶ Beastie Boys, *(You Gotta) Fight For Your Right (To Party)*, Def Jam Recordings, Columbia 38-06595, 1986, vinyl.

What changed between the use of drum machines such as the DMX and Marl's methodology, is that the sampling of the live drum segments could now be done by the producers themselves rather than pre-packaged by manufacturers. With new samplers and sampling drum-machines entering the market, the methodologies soon reflected the use of longer loops, which opened up the entirety of the recorded past to samplers as potential content. In his book on *It Takes a Nation of Millions to Hold Us Back* by Public Enemy, Weingarten writes:

They were sick of the stock snares of the DMX drum machine, which Hank Shocklee said were in everything from Midnight Starr to the Thompson Twins. To get the snare sound they wanted for "Rebel without a Pause", they just went to the record they loved the most.⁴⁷

And what they loved most was *Funky Drummer* by James Brown⁴⁸ and specifically drummer Clyde Stubblefield's exposed break that had already been used religiously by turntablists in live DJ sets ever since the inception of Hip-Hop. Although there are disputes even between Public Enemy members Chuck D and—The Bomb Squad producer—Hank Shocklee about the origin of the drum loop in *Rebel*, most authors agree that an Ensoniq Mirage and an Akai S900 sampler were used to provide the dense and cacophonous layers on the record⁴⁹. *Funky Drummer* went on to become the most sampled song in recorded history, followed by (John Bonham's drum introduction to) *When*

⁴⁷ Christopher R. Weingarten, *It Takes A Nation of Millions to Hold Us Back* (New York: Bloomsbury Academic, 2010), 23-24.

⁴⁸ James Brown, *Funky Drummer*, King Records 45-6290, 1970, vinyl.

⁴⁹ Loren Kajikawa, *Sounding Race in Rap Songs* (California: University of California Press, 2015), 77. Weingarten, *It Takes A Nation of Millions to Hold Us Back*, 27-32.

the Levee Breaks by Led Zeppelin⁵⁰, and (the drum break from) *Amen Brother* by The Winstons⁵¹ (often referred to in the UK Drum n' Bass scene as the 'Amen break').

The influence of Public Enemy and The Bomb Squad's production cannot be overstated, as they took the freedom the new sampling technology provided and built collages of groove often compared to a rap *music concrète*. Their sound influenced producers outside of Hip-Hop's birthplace—New York—and completed the recorded part of the style's journey back to its origins: the funk drum break. Out of the 1364⁵² songs that have sampled *Funky Drummer*, many belong to this era of Rap, which birthed the reliance on drum (and other live) samples and, with it, the sub-genre of Boom-bap⁵³. Boom-bap is particularly important to this examination exactly because of this reliance on sampling practices and consequently on sampled rather than synthetic content, occupying a period roughly from 1986 and—as an underlying aesthetic—much after the gradual re-introduction of synthesisers in Hip-Hop with Dr. Dre and G-funk in 1992. Dre is a key character to this synthetic 'contamination' of rap production, which can be understood via his influences but also his reaction to the legal landscape surrounding sampling in the early 1990s. The 1991 lawsuit involving Biz Markie's *Alone Again* res-

⁵⁰ Led Zeppelin, *Led Zeppelin IV*, Atlantic 8122796433, 1971, vinyl.

⁵¹ The Winstons, *Color Him Father / Amen Brother*, Metromedia Records MMS-117, 1969, vinyl.

⁵² "Funky Drummer: by James Brown", *WhoSampled*, accessed February 17, 2017, <http://www.whosampled.com/James-Brown/Funky-Drummer/>.

⁵³ Boom Bap is a subgenre of Hip-Hop, referring onomatopoeically to the sound and rhythm of a heavy bass drum and snare (generally over sparse instrumentation). Typically, a sampled break-beat would be supported by synthetic kick and snare drum layers, frequently courtesy of a Roland TR-808 drum machine.

onated loudly with the Hip-Hop community, and producers consciously altered their practices and style in response⁵⁴.

Yet, Dre's increased reliance on synthesisers by this point cannot be attributed solely to a cynical negotiation of the legal landscape. This would be a disservice to his stylistic achievement of re-introducing synth signatures in a fashion congruent to Hip-Hop's evolution, whilst avoiding the early electro comparisons that had come to be perceived as kitsch. Whilst Dre was one of the many producers inspired by Public Enemy and The Bomb Squad's sound, his background as a DJ and member of electro-funk outfit World Class Wreckin' Cru allowed his funk and hip-hop influences to merge into a unique production signature. His production of N.W.A.'s single *Straight Outta Compton*⁵⁵ does sound like it owes much to The Bomb Squad production style⁵⁶, but further tracks on the *Straight Outta Compton* album take on a different personality, and one can hear the seeds of Dre's eventual G-funk, which reaches maturity by 1992's *Nuthin' But A 'G' Thang*⁵⁷. Tracks such as *Parental Discretion iz Advised* and *Gangsta Gangsta*⁵⁸ shyly introduce his trademark keys riffs and whiny lead synth motifs, over a slower⁵⁹ mix of

⁵⁴ For more on this, see: Collins, "Waveform Pirates". Sewell, "A Typology of Sampling in Hip-Hop". Kembrew McLeod, "How Copyright Law Changed Hip Hop: An Interview with Public Enemy's Chuck D and Hank Shocklee," *Alternet*, accessed April 15, 2015, http://www.alternet.org/story/18830/how_copyright_law_changed_hip_hop.

⁵⁵ N.W.A., *Straight Outta Compton*, Ruthless Records, Priority Records SL 57102, 1988, vinyl.

⁵⁶ and more compelling evidence can be found in: Kajikawa, *Sounding Race in Rap Songs*, 93: Like other heavily sampled breaks from this era, the one-measure loop features a syncopated interlocking of snare and bass hits that is reminiscent of James Brown's "Funky Drummer (featuring Clyde Stubblefield's famous beat). As if he were following the Bomb Squad's exact formula, Dr. Dre layered a drum machine (Roland TR-808) over this break. The 808 was programmed to add its characteristic bass boom to the first two drum kicks of the "Amen" loop, and to tick off a 16-count hi-hat pulse with a closing hi-hat clasp on the downbeat of every other measure.

⁵⁷ Dr. Dre, *The Chronic*, Interscope Records 7567-92233-2, 1992, compact disc.

⁵⁸ *Ibid*.

⁵⁹ slower by comparison to The Bomb Squad's outputs.

funk bass and guitar riffs, horn stabs and 808 drum programming. A notable departure takes place at 4:06 of *Gangsta Gangsta* when a lead analogue synth makes a signature legato appearance, which—in retrospect—can be viewed as an incubator of much to come in Dre’s future sonic armoury⁶⁰. As Brian Hiatt notes in a *Rolling Stone* article, “for a few thrilling bars on “Gangsta Gangsta,” Dre stumbles upon the sine-wave synth whine that would define his mature G-funk sound, and much of 1990s hip-hop.”⁶¹ Dre’s slower funk is bluesier, sparser and perhaps more appropriate to both the LA climate and the gangsta lyricism of the record (as opposed to the fast-paced didactic rhymes of Public Enemy’s Chuck D), but Dre’s critical catalyst is perhaps his acquired funk taste and DJ ability for crowd-pleasing and taste-making, which avoids pastiche, and instead creates an eclectic mix of past and future elements. In describing Dre’s 1992 album *The Chronic*⁶², Howard notes:

Literally indulging in George Clinton’s cartoon-colorful Parliament/Funkadelic “P-Funk” sound, Dre ingeniously sidestepped the early 1990’s barrier of paying exorbitant publishing clearances (which would have made Public Enemy and N.W.A.’s sample-heavy late-eighties songs too expensive to release) by “interpolation”, a method that involved real musicians and singers re-recording song snippets to be used as samples.⁶³

⁶⁰ Dr. Dre here samples from: Ohio Players, *Funky Worm / Paint Me*, Westbound Records W 214, 1973, vinyl. Various reports attribute the synth solo either to an ARP Pro-Soloist or a Mini-moog synthesiser.

⁶¹ Brian Hiatt, “N.W.A: American Gangstas: Inside the messy, prophetic rise of the most dangerous hip-hop group in the world,” *Rolling Stone*, accessed February 17, 2017, <http://www.rollingstone.com/music/features/n-w-a-american-gangsters-20150827>.

⁶² Dr. Dre, *The Chronic*.

⁶³ Howard, *Sonic Alchemy*, 281.

Rolling Stone magazine's Jonathan Gold adds a colourful description of Dre's production process on Snoop Doggy Dogg's *Doggystyle*⁶⁴:

A bass player wanders in, unpacks his instrument and pops a funky two-note bass line over the beat, then leaves to watch CNN, though his two notes keep looping into infinity. A smiling guy in a striped jersey plays a nasty one-fingered melody on an old Minimoog synthesizer that's been obsolete since 1982, and Dre scratches in a sort of surfadelic munching noise, and then from his well-stocked Akai MPC60 samples comes a shriek, a spare piano chord, an ejaculation from the first Beastie's record — "Let me clear my throat" — and the many-layered groove is happening, bumping, breathing, almost loud enough to see.⁶⁵

Howard confirms Dre's influences and the formula that resulted in numerous crossover hits from *Doggystyle* to 2Pac's 1996 single *California Love*⁶⁶ when he writes: "(Dre) teamed up with old-school funk pioneer Roger Troutman (of Zapp) for Tupak Shakur's breakthrough hit "California Love" [...] an unabashed throwback to Dre's electro-funk roots"⁶⁷. Indeed, Dre's use not only of synthesisers, but also vocoders and talkboxes (here performed by Troutman), owes much to his early experiments in *The World Class Wreckin' Cru*, particularly audible in tracks such as 1985's *Juice*⁶⁸.

⁶⁴ Snoop Doggy Dogg, *Doggystyle*, Death Row Records 92279-2, 1993, compact disc.

⁶⁵ Jonathan Gold, "Day of the Dre," *Rolling Stone*, accessed October 21, 2016, https://web.archive.org/web/20080506072416/http://www.rollingstone.com/artists/drdre/articles/story/5937496/cover_story_day_of_the_dre.

⁶⁶ 2Pac, *California Love*, Death Row Records DRWCDT 3, 1995, compact disc.

⁶⁷ Howard, *Sonic Alchemy*, 282.

⁶⁸ The World Class Wrecking Cru, *World Class*, Kru-Cut Records KCC 004, 1985, cassette.

From G-funk to the Golden Age

Although Dre was not the first hip-hop producer to utilise analogue synthesisers in this way, the success of *Chronic* and *Doggystyle* distinctly differentiated the sounds coming out of LA as opposed to those coming out of New York in the mainstream, and by 1992 the West Coast had become synonymous with the G-funk sound and Gangsta-rap. The referential use of P-funk-inspired synth textures became the essential stylistic catalyst and while it may have been driven by a case of (legal) necessity being the mother of (sonic) invention, these analogue synthesisers from a previous era became the agents of stylistic divergence in the hands of the right hip-hop visionaries⁶⁹. Kulkarni explains:

All hip-hop production of the early nineties had to find ways around the sample-clearance strictures the Biz Markie case had thrown up. [...] For the West Coast, land of plastic surgery and porn, it was about synthetics, multi-layered synthesisers, slow grooves that suited the sun-struck streets and jeeps, fleshing things out with backing vocals and conventionally melodic choruses, pillaging P-funk for loops, slapping on a high-pitched portmanteau saw-wave synth lead.⁷⁰

Yet the roots of G-funk arguably lie in the Bay Area 'Mobb' music scene which predates it, with less mainstream regional releases that were consequently even more synth-dependent (and less sample-heavy) than the major hits from LA. From Too \$hort's

⁶⁹ This is also noted in Twells, "The 14 most important synths in electronic music history – and the musicians who use them" with regards to the Prophet-5:

The fact that it (Prophet-5) became such a studio staple no doubt led to the Prophet's use on early West Coast rap records – Dr. Dre was a fan, and Too \$hort used the Prophet (along with a Roland TR-808 drum machine) to put together his stark, influential debut album *Born To Mack*.

⁷⁰ Kulkarni, *The Periodic Table of Hip Hop*, 98.

1987 Gold album *Born to Mack*⁷¹ to Luniz' 1995 hit *I Got 5 on It*⁷², Bay Area producers interacted with "G-funk's emphasis on "funky worm" keyboard melodies and Zapp-like trunk-rattling bass, yet the bass seemed deeper and the funk arrangements were less dependent on P-funk samples and interpolations"⁷³. *Born to Mack* has many similarities to Old School electro, but also to the drum-machine beat sparseness of New School acts such as Run-D.M.C. Unlike them though, Too \$hort favoured synthetic 808 textures instead of DMX samples, and the wide, buzzy synth drones, glissando synth leads and slow tempi on tracks such as *Dope Fiend Beat*⁷⁴ hinted at his future aspirations, the incubation of G-funk and—arguably—a much later incarnation of Bay Area synthetic minimalism: the style of 'Hyphy', viewed by many as a reaction to Southern 'Crunk' in the 2000s, but with a colloquial Bay Area flavour.

Warren G's 1995 album *Regulate... G-Funk Era*⁷⁵ on the other hand, aptly pulls the curtain on the sub-genre's trajectory, with a mellow sound and a title that all but sums up the style's life-cycle. Featuring a large group of session players, perhaps ironically, the record brings Gangsta-rap sensibilities back to a hybrid of live-performed and programmed pop. *Regulate* can be seen as a bridge to the Hip-Hop-fuelled R&B that follows during the rest of the 1990s, crafting a flavour of mainstream pop that replaced rappers with singers, but retained many of the instrumental and synthetic tendencies of G-funk.

⁷¹ Too \$hort, *Born to Mack*, Jive 1004556, 1987, compact disc.

⁷² Luniz, *I Got 5 on It*, Noo Trybe Records 7243 8 93365 6 6, 1996, vinyl.

⁷³ Napster, "Bay Area Mobb Music," *Cheat Sheet* (blog), accessed October 22, 2016, http://us.napster.com/blog/post/bay_area_mobb_music.

⁷⁴ Too \$hort, *Born to Mack*.

⁷⁵ Warren G, *Regulate... G Funk Era*, Violator Records, Rush Associated Labels 314-523-335-2, 1994, compact disc.

As with the thematic and geographical sub-categorisations of Hip-Hop, so it is with the overarching eras of Old School, New School and the Golden Age, that there are resulting overlaps in Rap's timeline, many of which are made more intricate by further stylisation occurring due to the sonic divergencies examined here. Stylistic morphing is never neat, sometimes cyclical and always developmental, and it is impossible to draw discreet inflection points on a continuum which represents the energies of a community of practitioners collectively creating and interacting. Historiographers struggle with precise definitions and dates in this regard, resorting instead to key works that exemplify a divergence highlighting the beginning or end of an époque. Sandywell and Beer comment on stylistic morphing accurately when they write:

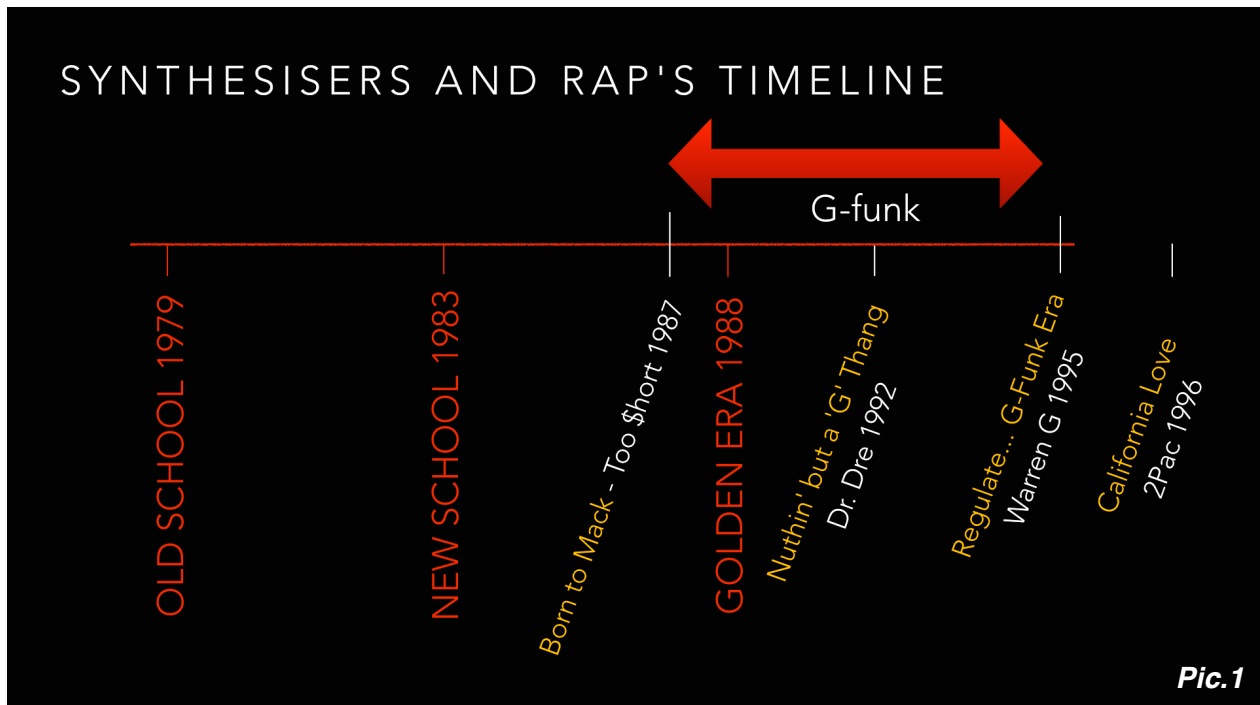
It seems that there is no such thing as genre. Rather there are generic resources, parameters, incitements. Under further scrutiny canons prove to be complex configured collections of stylistic signifiers traversing cultural fields and interwoven with cultural objects. Against this paradoxical conclusion we suggest that genre is more than a technical or theoretical term. It is also a practitioner's term invoked in the recognition, consumption and production of musical performances.⁷⁶

As a result, artists and producers may find themselves on both sides of an inflection point, while another typological variable may place them into one époque or another due to thematic, sonic or even visual or fashion-related rationales. By looking at Kulkarni's definition of the Golden Age as "an era in which sampling hit a dizzying new depth of layered complexity and innovation" and "a sublime 10-year period from 1988 to 1998 in which hip hop was artistically more free than it had ever been before"⁷⁷, it is clear to see that Public Enemy's 1987 *Rebel without a Pause* analysed above and their 1988 album

⁷⁶ Sandywell and Beer, "Stylistic Morphing", 119.

⁷⁷ Kulkarni, *The Periodic Table of Hip Hop*, 78.

*It Takes a Nation of Millions to Hold Us Back*⁷⁸ would have respectively fallen into the Old School *and* Golden Age eras. But clearly their sonic methodology portrays a continuum of sampling practices aiming at a unified sonic and politically driven aesthetic. Equally, the role of synthesisers in G-funk follows a developmental route, from early manifestations in Too \$hort and N.W.A (1987-8), to their hay day in *Nuthin' but a 'G' Thang* (1992), again demonstrating a continuum of methodologies favoured by a particular territory (West Coast), community or producer (Dr. Dre). For a visual representation of G-funk's trajectory highlighting an example of such overlaps, see pic.1 below:



Golden sampling (and synth aversion)

Our synth-focused attention on G-funk and Dr. Dre may make it appear as if the West Coast stole the limelight not only from the East, but also from sampling in general in the first half of the Golden Era. Yet, sampling methodologies remained active regardless of coast. Whereas G-funk producers continued to *regulate* and interpolate—they

⁷⁸ Public Enemy, *It Takes a Nation of Millions to Hold Us Back*, Def Jam Recordings 527 358-2, 1988, compact disc.

didn't stop sampling altogether, just reduced it until they had major hits which allowed them to license 'big' samples again—East Coast producers got more intricate with their sampling. They 'chopped'⁷⁹ more, searched for more obscure sources and manipulated their samples further in order to conceal their sources. This approach gave us some of the most advanced mavericks in the genre, such as Pete Rock, the RZA, DJ Premier and J Dilla, who perfected sampling practices on their new instrument of choice, the Akai MPC music production controller. Other responses focused on live instrumentation and a jazzier, more bohemian approach, giving us collectives such as De La Soul, A Tribe Called Quest and the first decidedly live Hip-Hop band, The Roots. All along, Hip-Hop continued to re-negotiate its own authenticity, regularly challenged by merit of its own crossover appeal and success. Every time a production style crossed over into the mainstream, a sonic reaction emerged from another territory, collective or producer, re-focusing the sound back to the underground.

To many listeners in 1993, Wu-Tang Clan's *Enter the Wu-Tang (36 Chambers)*⁸⁰ was exactly that: New York's lo-fi, organic and relentless reaction to LA's—now mainstream—G-funk sound. It was the punk to the mainstream rock, the DIY to the polished. Powered by producer The RZA, it mixed breakbeats with lo-fi string and piano samples, film dialogue snippets from martial-arts movies, nine roughly recorded and often distorted MCs, and loose programming on an MPC that hardly featured any quantisation. It would be fair to say that the East balanced its reign on Hip-Hop during the second half of the Golden Age (1993-1998), with hugely successful, historic albums released in

⁷⁹ 'Chopped' is a commonly used term for *edited* or *truncated* and then re-arranged in Hip-Hop production terminology.

⁸⁰ Wu-Tang Clan, *Enter the Wu-Tang (36 Chambers)*, RCA 07863 66336-2, 1993, compact disc.

1994, such as The Notorious B.I.G.'s *Ready to Die*⁸¹, Nas's *Illmatic*⁸² and (DJ Premier-produced) Gang Starr's *Hard to Earn*⁸³. Before that, De La Soul and A Tribe Called Quest fired up their own aesthetic reactions with the jazzy, hippy and bohemian *3 Feet High and Rising*⁸⁴ and *People's Instinctive Travels And The Paths Of Rhythm*⁸⁵ (in 1989 and 1990 respectively), while The Roots offered their aptly titled live debut *Organix*⁸⁶ in 1993. Although synths made cameo appearances now and again throughout this era⁸⁷, the East appeared obsessed with the sample-based aesthetic, contained predominantly within the Boom-bap style. It wasn't until the South sought its own identity through live performance, synthetic timbres, a reliance on past styles such as Miami Bass, and a cross-genre mutation with dance music, that synthesisers would reign again in Hip-Hop.

Dirty (synth) South

A year of pivotal importance for Hip-Hop, 1994 also saw Southern Rap make its mark on the map, with the release of *Southernplayalisticadillacmuzik* by Atlanta's rap duo OutKast⁸⁸. Produced by the Organised Noize production team and largely composed by OutKast, it mixed the earlier East Coast formula of synthetic 808s supporting

⁸¹ The Notorious B.I.G., *Ready to Die*, Puff Daddy Records 786127300024, 1994, compact disc.

⁸² Nas, *Illmatic*, Columbia CK 57684, 1994, compact disc.

⁸³ Gang Starr, *Hard to Earn*, Chrysalis 7243 8 28435 2 8, 1994, compact disc.

⁸⁴ De La Soul, *3 Feet High and Rising*, Tommy Boy TBCD 1019, 1989, compact disc.

⁸⁵ A Tribe Called Quest, *People's Instinctive Travels And The Paths Of Rhythm*, Jive 1331-2-J, 1990, compact disc.

⁸⁶ The Roots, *Organix*, Remedy Recordings, Cargo Records CRGD 81100, 1993, compact disc.

⁸⁷ for example, a buzzy bass/lead synth makes a very rare appearance on *36 Chambers* on the album's 12th track: *Wu Tang: 7th Chamber, Pt. 2 / Conclusion* supporting a rather 'Funky Drummer' inspired beat.

⁸⁸ OutKast, *Southernplayalisticadillacmuzik*, LaFace Records 73008 26019 2, 1994, compact disc.

sampled drum breaks, with West Coast sensibilities of live instrumentation and a slower tempo. The first single, *Player's Ball*⁸⁹, was probably the most G-funk sounding of all, but OutKast and Organised Noize's instrumental choices on the single and throughout the album were more experimental, at times funkadelic (as on the 6'30"-long *Funky Ride*) and always rooted within a flavour of a more organic, live-performed Southern soul.

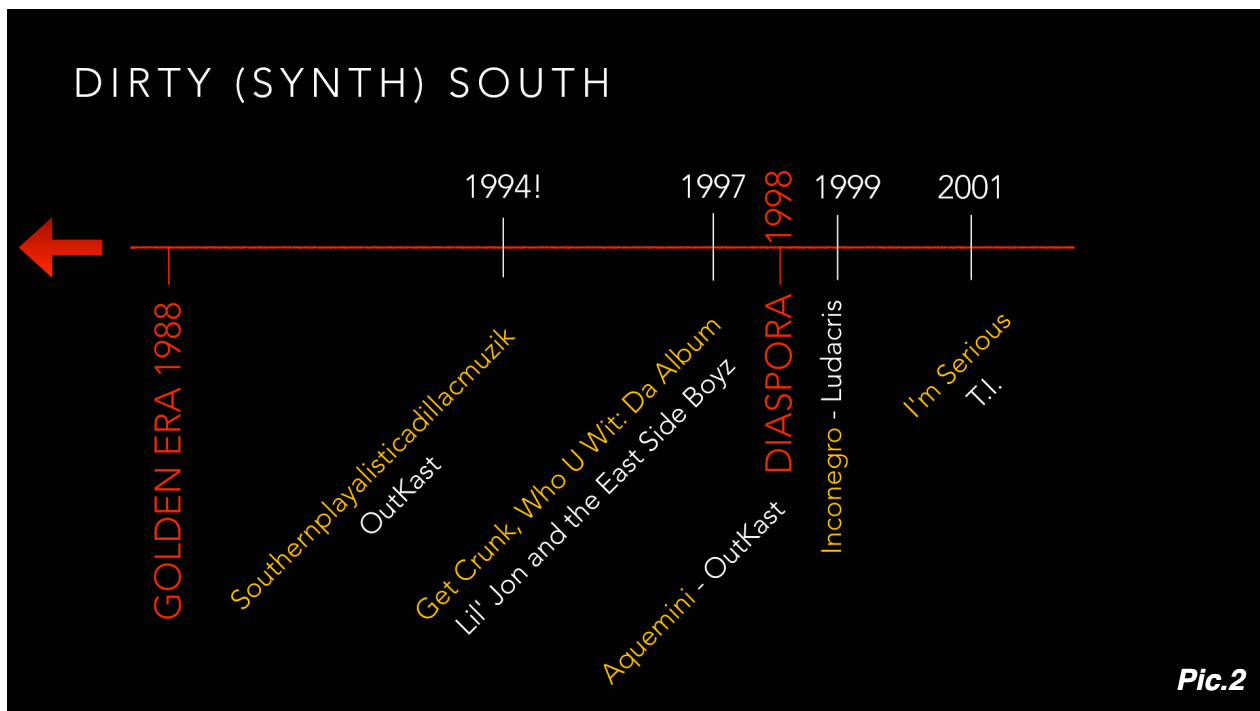
Player's Ball—ironically for a scene that eventually became so synonymous with synthesisers—featured none of G-funk's leads, and the entirety of *Southernplayalisticadillacmuzik* remained minimal in its use of synth textures, limiting them to supporting synth bass (which had become a frequent Boom-bap habit as noted above). *Git Up, Git Out*, the record's third single, sounded like it owed more to New York than LA due to its darker, Bob Marley-derived sampled hook and delayed horn stab, but the more mechanistic, up-front drum programming made it distinct in comparison to either of the other coasts' sonic sensibilities. By selectively referencing from the two contemporary tendencies in California and New York, OutKast and Organised Noize were able to carve their own distinctive niche, featuring up to seventeen live musicians on the album's credits, and avoiding clichés or overly colloquial sonic attributes. Their more straight, mechanical and up-front beat programming, mixing samples and 808 textures, owed much to a Southern Bass music sensibility which, up until this album, was one of the few notable rap-related stylistic contributions from the South⁹⁰. Two of the later tracks on the album, *Hootie Hoo* and *D.E.E.P.*, mix a Boom Bap beat sensibility with futuristic programmed bass arriving

⁸⁹ OutKast, *Southernplayalisticadillacmuzik*.

⁹⁰ Grem summarises a list of notable examples in: Darren E. Grem, "The South Got Something to Say": Atlanta's Dirty South and the Southernization of Hip-Hop America," *Southern Cultures* 12, no. 4 (2006): 57, doi: 10.1353/scu.2006.0045:

In Miami, 2 Live Crew earned fame and drew censure for their sexually charged "booty shake" bass music; in New Orleans, Master P's No Limit record label became a multi-platinum seller of West Coast-styled gangsta rap; in Houston, the Geto Boys rose to fame as one of the region's fiercest and most controversial rap groups; in Memphis, Eightball & MJG and Three 6 Mafia sold tens of thousands of their hard-core albums and achieved legendary status across the South.

at the record's most defined electronic footprint, which would later become synonymous with the South. Lil' Jon and the East Side Boyz' *Get Crunk, Who U Wit: Da Album*⁹¹, OutKast's third album *Aquemini*⁹², Ludacris's *Incognegro*⁹³ and T.I.'s *I'm Serious*⁹⁴ would continue to embrace synthesisers into the mix, prouder of their Southern heritage and bolder with stylisations stemming from Southern Bass music. For a visual representation of the timeline of these Southern Rap releases, see pic.2 below:



But Southern *Bass* music had its roots in earlier sub-genres, much before OutKast's notable debut. Miami Bass had been around since the mid-1980's, a close relative of early electro-funk, with a heavy reliance on electronic textures and the Roland TR-808. Faster tempos, often a more sustained 808 kick decay and sexually explicit lyrics differentiated it from New York's more staccato, conscious or futuristic electro,

⁹¹ Lil' Jon & The East Side Boyz, *Get Crunk, Who U Wit: Da Album*, Mirror Image Entertainment MRR 4556-2, 1997, compact disc.

⁹² OutKast, *Aquemini*, LaFace Records 73008-26053-2, 1998, compact disc.

⁹³ Ludacris, *Incognegro*, Disturbing Tha Peace 911-2, 2000, compact disc.

⁹⁴ T.I., *I'm Serious*, Arista 07822-14681-2, 2001, compact disc.

while it focused religiously on the dance-floor, both with its sound and choice of lyrical themes. The 2 Live Crew's 1986 single *Throw The D*⁹⁵ provides an early blueprint of the style with its frantic, dance-oriented 808 take on beat-only, synthetic electro, but their later 1989 hit *Me So Horny*⁹⁶ exemplifies the dance-crossover sensibility with more maturity, a DMX-style beat and the inclusion of samples⁹⁷. The best known mainstream example of the style is 1993's *Whoomp! (There It Is)* by the Tag Team⁹⁸, sampling a Moroder-inspired, arpeggiated (or sequenced) Italo-disco bassline from Kano's *I'm Ready*⁹⁹, reverting back to the 808 for the heart-beat of the fast-paced groove, and throwing electro-styled synth strings in for good measure. Importantly, and despite its authenticity stature questioned by most Hip-Hop purists, *Whoomp! (There It Is)* provides a clear example of 'trans-morphing', which Sandywell and Beer define as "the creation of trans-genres by morphing across genres [...]. This process generates a hybrid genre as the performer is simultaneously positioned in two or more genres"¹⁰⁰. This hybridity is why record stores have often struggled with the categorisation of styles such as Miami Bass in their album crates, recordings of which can be found in either the Hip-Hop or House/EDM sections. The trans-morphing and danceable qualities of Miami Bass allowed it further cross-genre mixing with styles such as Chicago House and Detroit Techno, birthing the subgenres of Ghetto-House and/or Ghetto-Tech—one of the many examples of rap and dance music colliding in the years to come.

⁹⁵ The 2 Live Crew, *2 Live Is What We Are*, Luke Skywalker Records XR-100, 1986, vinyl.

⁹⁶ The 2 Live Crew, *Me So Horny*, Luke Skywalker Records GR-127, 1989, vinyl.

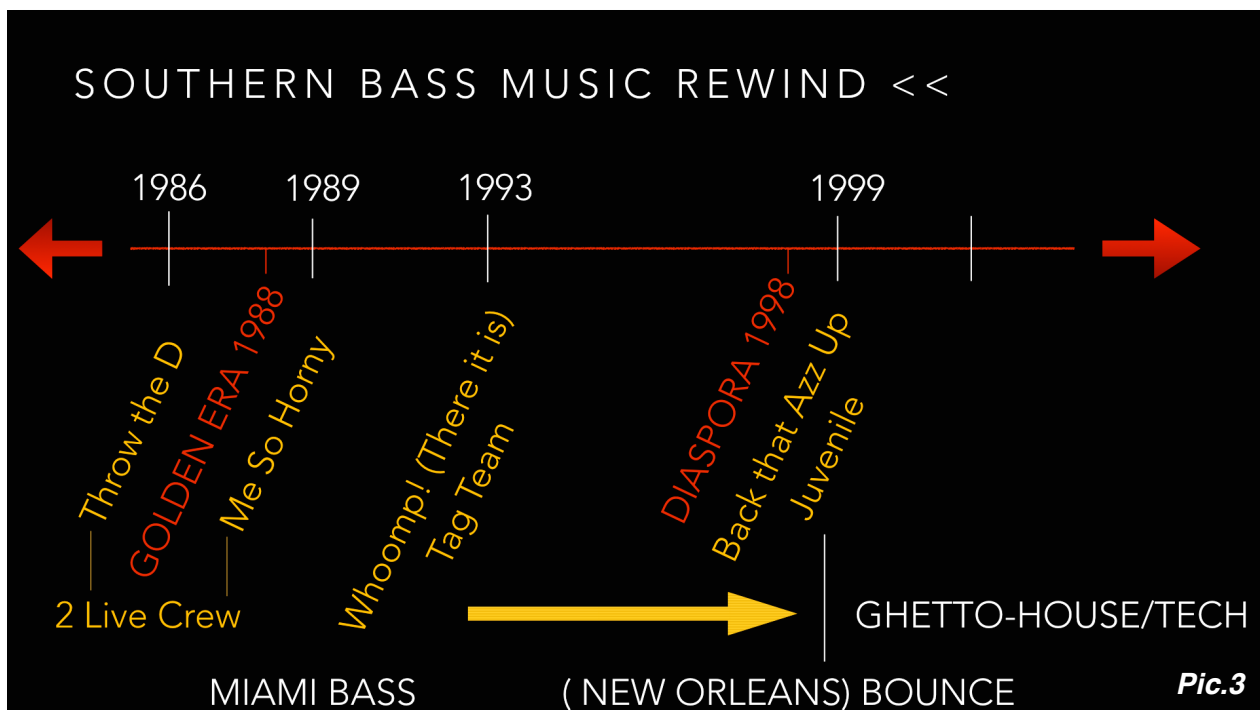
⁹⁷ It is also a shockingly accurate sonic predecessor of the late 1990's UK Big-Beat style in terms of beat accents, hip-hop/dance crossover sensibilities and song structure. Early releases by FatBoy Slim and Chemical Brothers exemplify this comparison.

⁹⁸ Tag Team, *Whoomp! (There It Is)*, Club Tools CLU 6004-5, 1993, compact disc.

⁹⁹ Kano, *I'm Ready*, Emergency Records EMDS 6504, 1980, vinyl.

¹⁰⁰ Sandywell and Beer, "Stylistic Morphing", 115.

Another case of Southern Bass’s relationship with dance styles is exemplified in New Orleans’s Bounce music, which Kulkarni defines as “a type of New Orleans club dance music popular among Nola’s large LGBT and drag communities. It was heavy on slogans and back and forth Mardi-Gras-style chanting and up-tempo beats.”¹⁰¹ According to the author, it was Juvenile who “brought (the style) to mainstream attention via tracks like ‘Back That Azz Up’”¹⁰² in 1999, another example of the South embracing its Hip-Hop/dance hybridity following OutKast and Lil’ Jon. The producer behind Juvenile’s hit single is New Orleanian Mannie Fresh and one of the prominent Bounce influences he brings to the table—or mixing desk—is the fast 808 beat, introducing 32nd hi-hat programming (a later mainstay in Trap) and a prominent off-beat feel to the whole instrumental, supported by 8ths on the electronic percussion, vocal chops and keyboard strings motif. For a visual representation of the progression from Miami Bass to Bounce and the related EDM off-shoots, see pic.3 below:



¹⁰¹ Kulkarni, *The Periodic Table of Hip Hop*, 120.

¹⁰² Ibid., 120. Juvenile, *Back that Azz Up*, Cash Money Records, Universal Records U8P-1545, 1999, vinyl.

This latter characteristic—the use of *keyboard presets*—can be heard all over late 1990’s Hip-Hop productions, and it is most likely the consequence of synthesiser workstations flooding the synth market between 1988 (the Korg M1) and 1999 (the Korg Triton), which producers such as the Neptunes and Timbaland employed extensively next to their otherwise innovative programming and sampling. In a case reminiscent of the effect the Yamaha DX7 had on 1980s pop, late 1990’s and early 2000’s rap production was overwhelmed by synthesiser workstation presets. Twells notes:

While the Neptunes did indeed use the Triton on many occasions (‘Grindin’'s influential beat is a sequence of Triton presets that actually sit next to each other in the sound bank), it’s the Korg 01/W that was responsible for their signature plucked guitar and clavinet sound. Similarly, Timbaland was more regularly spotted using the Ensoniq ASR-10, but definitely put the Triton to work on a number of occasions, mostly thanks to co-producer Danja’s fondness for the workstation.¹⁰³

Yet, it is Lil’ Jon who deserves special mention in this section because, together with his Three 6 Mafia collective, they birthed the subgenre of ‘Crunk’, the boldest embrace of EDM and heavily or exclusively synthesised arrangements in Hip-Hop yet. Lil’ Jon and the East Side Boyz’ 1997 *Get Crunk, Who U Wit: Da Album* created the blueprint for a Southern style that in the following years would take over the charts and eventually the North, crossing over into mainstream pop and surviving pretty much until its eventual morphing into Trap in 2003. Perhaps the matured example of the style is the 2002 album *Kings of Crunk*¹⁰⁴, where Lil’ John teams up with Mannie Fresh for a tour de force of Crunk sonic signatures: electro-inspired but Miami-stylised 808 figures (extended kick decays, pitched snare rolls, 32nd hi-hat programming); Bounce-inspired crowd

¹⁰³ Twells, “The 14 most important synths in electronic music history – and the musicians who use them”.

¹⁰⁴ Lil’ Jon & The East Side Boyz, *Kings of Crunk*, TVT Records TV-2370-2, 2002, compact disc.

chants (and general shouting rather than rapping of rhymes); buzzy or distorted synth leads (which sat comfortably over the 808 kick/bass); arpeggiated/sequenced plucks (with fast ADSR envelopes); sometimes monophonic legato leads (reminiscent of G-funk but more digital in timbre); and sampled or preset string motifs. Describing *Crunk Juice*¹⁰⁵, the final album by Lil' Jon and the East Side Boyz which continues in the *Kings of Crunk* production tradition, Hip-Hop Connection magazine states:

From the bass work to the years spinning Run-DMC, from the dancehall forays to the Nic & Smooth and Tribe party rocking disc jock sets, from the retro electro shocks to the go-go nods; it's the ultimate connect-the-dots music. His eclectic genetics are almost like a modern day Afrika Bambaataa, if the 'Planet Rock' man still made good records.¹⁰⁶

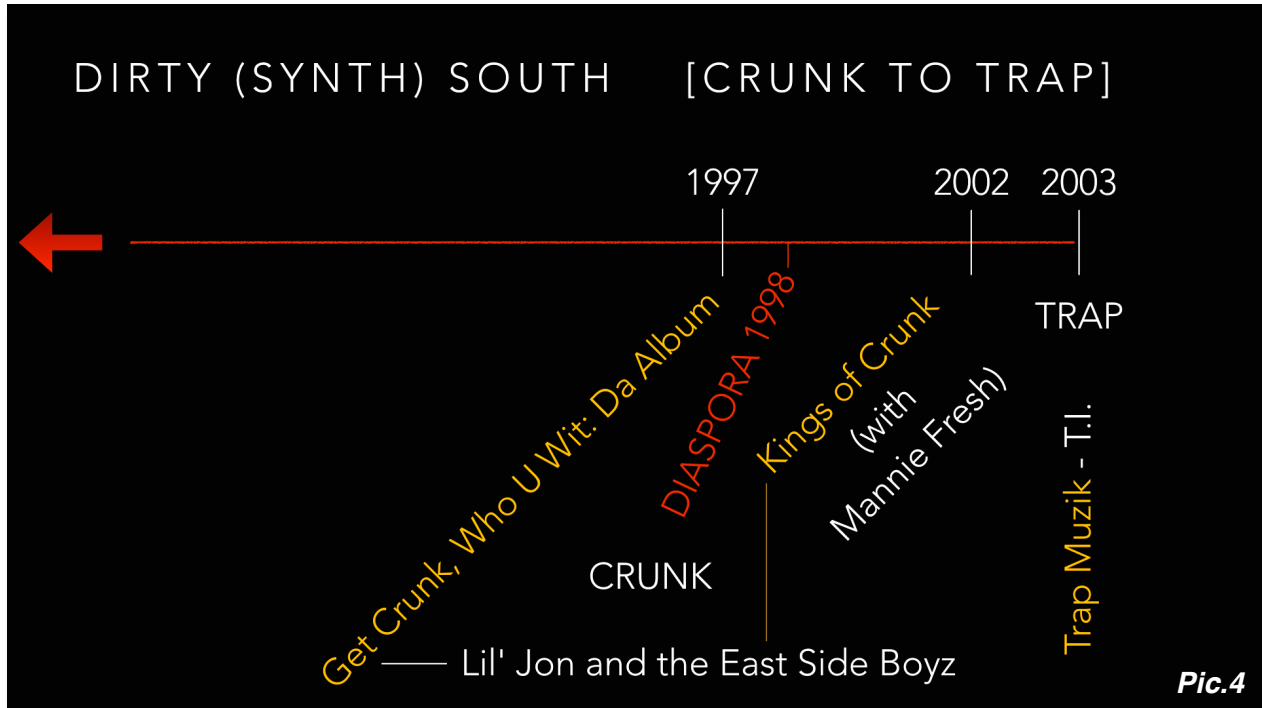
It is T.I.'s 2003 album/single *Trap Muzik*¹⁰⁷ that is often cited as the work that signifies the official divergence from Crunk into Trap, although the reference can often be thematic; trap is a southern US drug reference, which is dealt with extensively—and rather critically—by T.I. in the album's lyrics. The sonic differences between previous works described as Crunk and *Trap Muzik* do exist however, and when analysed against T.I.'s earlier album *I'm Serious*, it is the predominance of electronic textures, more intricate 808 percussive programming, and the increased use of synthetic brass/string patches playing epic (and darker) motifs that stand out. The first single, *24's*, encompasses the style's sonic blueprint, highlighting the dark harmonic progression with a slower tempo, gothic bells, 16th-note subdivisions and numerous opportunities for dou-

¹⁰⁵ Lil' Jon & The East Side Boyz, *Crunk Juice*,TVT Records, BME Recordings TV-2690-2, 2005, compact disc.

¹⁰⁶ Oldboyentertainment, "Kings of Crunk," *Hip-Hop Connection* 190 (2005): 74.

¹⁰⁷ T.I., *Trap Muzik*, Atlantic, Grand Hustle 7567-83695-2, 2003, compact disc.

ble-time hi-hat and snare-roll programming. For a visual representation of the progression from Crunk to Trap, see pic.4 below:



Pic.4

Syn-thesis

Whilst Southern rap's evolution owes much to electronic dance music's instruments, tools and synth textures, perhaps due to Hip-Hop's inclusive modus operandi since its inception, most of the trans-morphing cases detailed here demonstrate a one-way dynamic: Hip-Hop looking outside of itself in order to redefine its instrumental bed, rebuke its pop catchiness, and reinvent the sonics that inspire the MC. From the funk break, to Rock, to P-funk, to Disco, to Pop, to Electronica and EDM, Rap music keeps borrowing, digesting, evolving and trans-morphing. Fewer are the cases when Hip-Hop has had the opposite effect on EDM, although some interactivity has been drawn between Miami bass, Big Beat and Ghetto Tech. Yet with Trap, the common synthetic denominator between it and electronica, seems to have opened up an endless field of pos-

sibilities, energising a reciprocal and international dynamic. DJ Mag describes this phenomenon as follows:

Crunk and trap music travelled to hyped dancefloors in Europe within electronic music's underbelly from the very beginning, through the likes of rap-heavy DJs [...]. But over the last year, trap gained a much-hyped interest in the electronic music world and blogosphere. It's since evolved into a different beast, one that has a few opposed faces.¹⁰⁸

And so, through a reactionary creativity set against sampling legislation or the kitschiness of a previous aesthetic, and a search for sonic impact, geographical legitimacy and stylistic authenticity, synthesisers have time and again become the key to Rap's getaway vehicle and expressive expansion. Perhaps their most consistent presence has been felt over short percussive envelopes—eventually becoming longer in the South—with Roland TR-808's analogue drum timbres being allowed participation in the game, even during the strictest sample-heavy eras. Discreetly supporting the 'holy' funk break and extending its frequency spectrum to the lowest sub-*boom* and the snappiest snare-*bap*. They unlocked West Coast producers' gates to a kingdom of G-funk fun, placed samples on supportive roles, and invited P-funk veterans back to the session. Crucially, they gave the West its USP, and then they did it all over again for the South. This time, not necessarily via analogue sonics of a recent past, but by embracing an EDM sensibility that was pointing to the future. From hardware monophony, to workstation preset-culture to laptop innovation, the timbres morphed from subtractive to FM, physical, additive and granular, and left their supportive discretion of the Boom-bap era for a Southern boldness that first took over the US, then went back to infect pop and EDM, its global birth mother.

¹⁰⁸ "Trap Music: Under Lock & Key; the trap phenomenon explained," *DJ Mag*, accessed October 23, 2016, <https://djmag.com/content/trap-music-under-lock-key>.

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