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Composing the Blues for Sample-Based Hip-Hop
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Sonic Necessity and Compositional Invention in *#Blues-Hop*:

Composing the Blues for Sample-Based Hip-Hop

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Abstract

Rap, the musical element of Hip-Hop culture, has depended upon the 'recorded' past to shape its birth, present and, potentially, its future. Founded upon a sample-based methodology, the style's perceived authenticity and sonic impact are largely attributed to the use of phonographic records, and the unique conditions offered by 'composition' within a sampling context. Yet, while the dependence on pre-existing recordings challenges traditional notions of authorship, it also results in unavoidable legal and financial implications for sampling composers who, increasingly, seek alternative ways to infuse the sample-based method with authentic content. But what are the challenges inherent in attempting to compose new material - inspired by traditional forms - while adhering to Rap's unique sonic rationale, aesthetics and methodology? How does composing within a stylistic frame rooted in the past (i.e. the Blues) differ under the pursuit of contemporary sonics and methodological preferences (i.e. Hip-Hop's sample-based process)? And what are the dynamics of this inter-stylistic synthesis? The paper argues that in pursuing specific, stylistically-determined sonic objectives, sample-based production facilitates an interactive typology of unique conditions for the composition, appropriation and divergence of traditional musical forms, incubating era-defying genres that leverage the dynamics of this interaction. The musicological inquiry utilises (auto)ethnography reflecting on professional creative practice, in order to investigate compositional problematics specific to the applied *Blues-Hop* context, theorise on the nature of inter-stylistic composition, and consider the effects of electronic mediation on genre transformation and stylistic morphing.

Keywords: Rap, Blues, Composition, Sampling, Sonics, Style, Authenticity

Introduction

It's no doubt that there's a connection [between the blues and hip-hop]. Hip-hop is definitely a child of the blues. And I think you gotta know the roots to really grow. It's [like] knowing your parents, it's like knowing your culture, so you could be proud of that culture and take it to the world.

—Common (cited by Levin 2003, p.187)

From Memphis Minnie's 1930 talking-blues hit *Frankie Jean*, to rapper Nas's collaboration with his father —jazz-blues musician Olu Dara— on *Bridging the Gap* (2004), to Abdominal and The Obliques' *Sitting Music* (2012) and, most recently, Amerigo Gazaway's *B.B. & The Underground Kingz* (2015), recorded music history provides ample evidence of a close relationship between the Blues and Hip-Hop. Rappers proclaim their affiliation with the Blues in their statements, lyrics and music, and historians and musicologists draw parallels between the sociopolitical backgrounds and narrative approaches of the two genres (Rose 1994; Guralnick et al 2003; Chang 2007). In *Can't Stop Won't Stop: A History of the Hip-Hop Generation*, Jeff Chang (2007, p.13) observes that "if blues culture had developed under the conditions of oppressive, forced labor, hip-hop culture would arise from the conditions of no work". Describing his retrospective discovery of the Blues via Muddy Waters's *Electric Mud* album, rapper Chuck D (2003, p.281) of Public Enemy explains:

I was sparked about the blues as a beat digger coming across an album of immense layers and well-played sounds. [...] Myself and my co-producer Gary G-Whiz fell in love with the record, a psychedelic trip replaying and singing Muddy's classics of the past.

In this statement, Chuck D not only identifies with blues music, but elaborates on the construction, arrangement and production of a later blues recording, which resonates with Public Enemy's heavily layered production style and allows him a rap musician's sonic window onto the past. Chuck D (2003, p.280) goes on to say that "being a so-called veteran of the genre labeled hip-hop and rap music, you can't help being a musicologist, or at least a student of music, by default."

Yet despite many of the thematic and cultural similarities celebrated between rap music and the Blues, the reality of their musical relationship and crossover reveals a number of tensions. One could argue that Hip-Hop music is by default inter-stylistic, and since its very inception it has depended on phonographic segments from other musical styles in order to function and exist. DJ Kool Herc carried over the sound-system tradition of performing extended instrumentals using turntables from Jamaica to New York, where he replaced the Reggae dubs with Funk breaks¹ and provided a rhythmical foundation for MCs² to rap over (George 1998; Toop 2000; Chang 2007; Serrano 2015; Kulkarni 2015). The practice elevated the funk drum-break to 'building block of choice' for future hip-hop productions, and Funk—in its various guises—remained a referential mainstay throughout all eras of hip-hop composition. James Brown's *Funky Drummer* (1970) became the most sampled song in popular music history³, powering the majority

¹ 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.

² MC stands for Master of Ceremony, and later Microphone Controller, both referring to rapper in this context.

³ The second most sampled drum break is the intro from Led Zeppelin's *When the Levee Breaks* (1971); ironically a Memphis Minnie cover, bringing us full circle back to the Blues.

of East Coast's Boom-bap productions⁴, while P-funk inspired West Coast's synthesiser-driven divergence via interpolations and live performance⁵. As a result, the lion's share of rap releases became literally powered by late 1960's and 1970's Funk and Soul, either by way of phonographic sampling or through compositional referencing, and although Blues samples do feature in Hip-Hop, it will be important to question their lesser presence when compared to Funk and Soul sampling, despite Rap's otherwise celebrated affiliation to the Blues. In other words, why did the Blues not become the first sampling choice or main compositional reference in hip-hop production? If there are extensive thematic, cultural and even philosophical affiliations between the two genres, are there sonic and musical factors deterring a more integrated cross-genre actualisation? What can we learn from the successful case studies of congruent merging between the two genres, and how can this educate further inter-stylistic experiments? Finally, can these function as a lifeline for a practice that may be running low on renewable raw materials (i.e. phonographic samples)? In the words of hip-hop producer Domino cited in Schloss (2014, p.164):

I just think that, now, you're getting to the point where ... you're running out of things to find. And so a lot of the best loops have been used already. I mean, there's some stuff out there, I'm sure. There always will be stuff. But now it's like, in order to stop recycling things, you gotta just take pieces and make 'em into a whole new thing.

⁴ 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 breakbeat would be supported by synthetic kick and snare drum layers, frequently courtesy of a Roland TR-808 drum machine.

⁵ providing an alternative to sampling practices partly as a reaction to newly applied legal restrictions. The Bomb Squad - known for their production work with Public Enemy - and Dr. Dre are notable examples of producers who consciously altered their process and style in response to the 1991 lawsuit involving Biz Markie's "Alone Again" (McLeod 2004; Collins 2008; Sewel 2013).

Methodology

To answer these questions and consequently inform relevant creative practice there are a number of areas that require closer examination. Firstly, if sampling is the predominant methodology in Hip-Hop creation, then the musical and sonic qualities of blues recordings need to be analysed from the perspective of their sample 'appropriateness'. This requires aural analysis of representative blues works that feature within rap songs as sampled sources. In her article 'Records that Play: The Present Past in Sampling Practice', Vanesa Chang (2009, p.147) explains:

The successful pursuit of new samples has, as its limit, the producer's capacity to hear musical possibility in a song, to listen for connections that may not currently exist in the song, to perceive aural spaces where they might not be obvious. This requires conceiving of sound as plastic material, and not as a finished product.

Furthermore, and in response to the growing practices of interpolation⁶, original composition and live performance within hip-hop production, it will be important to consider issues of stylistic authenticity and sonic impact arising from these alternative methodologies. A large part of the existing literature focuses on the relationship between phonographic samples and hip-hop 'realness', or authenticity (Rose 1994; McLeod 2004; Marshall 2006; Collins 2008; Schloss 2014). Using intertextual analysis, the paper will aim to identify the musical and 'sonic signatures' (Zak 2001; Zagorski-Thomas 2014) that render audio material preferential to samplers. It will then explore production approaches that may prove effective in infusing original material with these qualities, whilst support-

⁶ Interpolation refers to the studio re-creation of performances and sonics of an existing recording, which avoids breaching mechanical (phonographic) copyright, whilst still in use of the original composition (publishing rights).

ing musical innovation and originality. Marshall (2006, p.880) discusses this dynamic in the work of live hip-hop band The Roots:

...the degree to which the Roots' music indexes hip-hop's sample-based aesthetic serves as a crucial determinant of the group's "realness" to many listeners. At the same time, the Roots' instrumental facility affords them a certain flexibility and freedom and allows them to advance a unique, if markedly experimental, voice within the creative constraints of "traditional" hip-hop's somewhat conservative conventions.

On the other hand, in the cases where sampling methodologies do have the potential to interact with original composition and performance in a synchronous or near-synchronous context, it may be fruitful to consider them as active determinants in the shaping of this material, as opposed to mere agents that enable the manipulation of a 'passive' recorded past. Consequently, and following an examination of the literature on sampling practices and production as 'composition' (Demers 2003; Warner 2003; Moorefield 2005; Navas 2012; Morey and McIntyre 2014), the methodology will involve an applied stage of creative practice, where original blues composition, improvisation and performance interact with an integrated sample-based production process.

The effect of studio practices on the evolution of musical aesthetics has precedents that date back to the very beginning of phonography and, in the case of the Blues, Robert Johnson analyst Eric W. Rothenbuhler (2007, p.78) has supported that Johnson's "music reflected a then nascent recording culture (...which) was influenced by recorded music and showed signs of being composed and performed with attention to a kind of for-the-record aesthetic". But when a studio process enables the creation of blues content that is designed to feed sample-based composition, this may be described as a case of pursuing a kind of '*meta*'-record aesthetics, where the meta-genre (Hip-

Hop) not only digests, but *shapes* the source-genre. The degree, dynamic and potential outputs of this interaction become the subject of reflexive analysis, extrapolating further on the effect of sampling technologies on inter-stylistic synthesis, morphing and the creation of cross-genres. As Albin Zak (2001, p.73) states in *The Poetics of Rock*, “(i)n the development of a music so stylistically dependent upon machinery, the history of technology and the history of musical style are linked”.

Samplin’ and Tumblin’

Commencing with the analysis of representative works, three different cases have been selected here: Nas’s *Bridging the Gap* (2004), referencing Muddy Waters’s *Mannish Boy* (1955); Amerigo Gazaway’s mashup *The Trill is Gone* (2015), sampling B.B. King’s *The Thrill Is Gone* (1969); and Abdominal and the Obliques’ track *Broken*, from their album *Sitting Music* (2012).

[Case 1:] Bridging the Gap is a collaboration between rapper Nas and his father Olu Dara, a jazz-blues musician who performs lead guitar, trumpet and harmonica on the track. Producer Salaam Remi performs bass, guitar and drums, and session musician Vincent Henry is credited with the remainder of the live performances, namely baritone sax, harmonica and strings. Although *Mannish Boy* receives no sampling or interpolation credit — and only father, son and producer are credited with writing and composition — the central guitar and harmonica motif can rather clearly be identified as a faster (and melodically sparser) homage to Muddy Waters’s and Junior Wells’s interaction on *Mannish Boy*, which is further accentuated by the melodic similarities in Olu Dara’s chorus. Olu Dara’s (2004) lyrics, however, are different to Muddy’s version and this, perhaps, legitimises Dara’s reclaiming of the motif:

See I come from Mississippi
I was young and runnin' wild
Ended up in New York City, where I had my first child
I named the boy Nasir, all the boys call him Nas
I told him as a youngster, he'll be the greatest man alive

This is consistent with an early blues tradition of shared motifs and a more inclusive notion of composition, which Rothenbuhler (2007, p.71) describes as follows:

In the early blues tradition, as in most oral cultures, there was little emphasis on composition as we define it and value it today. Both lyrics and music were combinations of standard figures and phrases, a given performer's own adaptations or inventions, and new phrases invented or chosen from the stock to fit the situation of performance.

Ironically, this compositional position has a lot in common with Hip-Hop's sampling philosophy and production ethics. Yet the adapted introductory motif here retains its blues-derived triplet feel (12/8), which cannot quite *bridge the gap* with Hip-Hop's funk-derived reliance on common time (4/4). Salaam Remi does not attempt to resolve the tension, instead structuring the production around a clearly defined 'duality' of 12/8 choruses (featuring sung parts by Olu Dara) and 4/4 verses (featuring Nas's raps). The 12/8 blues hook that introduces the song is suddenly sped up and re-appropriated in common time at 0:33, punctuated by Nas's "let's go" shout initiating the verse figure, and resembling a sample-based gesture which —although highly swung in its relationship to the syncopated drum part— nevertheless remains in 4/4. The verses are constructed around a two-bar repetition of the live drums and the guitar and harmonica riff, with occasional solo harmonica flourishes, sixteenth snare drum fills, and strings that build-up at the end of four or eight-bar sequences. Despite the construction of the verses out of live perfor-

mances, the main verse 'loop' here conveys a sample-based approach, whether the drum pattern and riff repetition are in fact constructed with the use of a sampler or looped around within a DAW⁷. The up-front placement of the drum mix, its consistent two-bar repetition, the rhythmical cuts and stops of the beat, and the tight placement of what feels like a 'chopped'⁸ version of the blues motif against it, convey a clear sample-based sensibility. Furthermore, the recording and mix sonics imprinted upon the blues performances are reminiscent of vintage production qualities (such as lower fidelity and higher tube saturation, similar to mid-to-late 1950's Chess recordings), which distances them from the more modern sonic signatures imprinted upon the drums and raps. The fact that multiple studios have been deployed for the completion of this track⁹, may suggest that the producer purposefully pursued particular era-invoking timbres from alternate technical setups when dealing with the different instrumental groups. The drum figure is reminiscent —both in its accents and sonics— of 1970's funk break-beats, such as Clyde Stubblefield's drum break from *Funky Drummer* by James Brown (1970). The sonic differentiation is further exemplified by the different timbral qualities and spatial treatments on both Nas's and Olu Dara's voices, the former appearing more contemporary and congruent with a post-2000 rap aesthetic, the latter sign-posting towards a more distant —if somewhat generic— past. As such, *Bridging the Gap* highlights musical and timbral tensions between the Blues and Hip-Hop, presenting the producer with rhythmical and sonic ultimata. Although the Blues are hereby 're-constructed' rather than phonographically sampled, Salaam Remi chooses to amplify the stylistic differences by

⁷ Digital Audio Workstation software

⁸ 'Chopped' is a commonly used term for *edited* or *truncated* and then re-arranged in Hip-Hop production terminology.

⁹ Four studios have been used for recording (DARP Studios in Atlanta; Electric Lady Studios and Sony Music Studios in New York) and mixing the track (Circle House Studios in Miami).

dialling in structural and timbral polarities, resolving to a historically intermediate style — Funk— for his drum break, acting as a catalyst in *bridging the gap*.

[Case 2:] Amerigo Gazaway is a Nashville-based producer who is well known as a “chemist” of the mashup (Caldwell 2015) creating “collaborations that never were” (Reiff 2015). Having previously mixed Marvin Gaye’s soul vocals with Mos Def’s raps, and The Pharcyde’s —*West Coast*— rhymes against Tribe Called Quest’s —*East Coast*— instrumentals (Roberts 2012), his work is identifiably sample-based. But he elevates the ‘mashup’ beyond its historical definition as a mere juxtaposition of two or more synchronised records. Through extensive sampling of smaller segments from multiple sources, sample manipulation, live recording and computer programming, he is able to synthesise the numerous elements into a coherent whole of notable musicality. This is enriched by his considerable skills in live musicianship, which allow him to integrate organ, electric bass, electric piano, synthesisers and turntables into the mix, effectively ‘jamming’ with the sampled musicians who “never were” in his studio. His methodology positions him into the virtual seat of a producer who works with artistic ‘ghosts’ from the past, creating a metaphor of a more physical production paradigm. For *B.B. & The Underground Kingz*, Soul Mates Records (2015) state:

Aptly titled “BB & The Underground Kingz: The Trill is Gone,” the producer seamlessly bridges the gap between hip-hop and its predecessor, the blues.

Crafting the album's bedrock from deconstructed samples of King's electric blues hits, Gazaway re-imagined what might have happened had King and UGK actually recorded in the same time and space. [...] Strategically looping and lacing Lucille's guitar licks and B.B.'s road tales with Bun B & Pimp

C's southern fried storytelling, Gazaway finds a sweet spot in the overlapping themes of his subjects' respective catalogs.

Amerigo (Gazaway 2016) adds: "I'm trying to get away from using that word (mashup), and trying to call it something like a conceptual collaboration". Gazaway's methodology may appear as a polar opposite to Salaam Remi's interpolation approach on the surface, because of the precedence of sampling over 'original' composition; yet he is able to achieve a more integrated co-existence between the two genres, moving away from distinct structural dualities or triplet-based time signatures forced into common time. This is partly due to his micro-sampling¹⁰ processes, but also because of characteristics inherent in the *type* and era of blues that he chooses to sample. On a track such as *The Trill is Gone*, he chooses B.B. King's 1969 version of *The Thrill is Gone*, a 4/4 rendition of the 6/8 minor jazz-blues original, released by Roy Hawkins¹¹ in 1951. The B.B. King version is characteristic of a late 1960's or early 1970's blues treatment as, by this point, the influence of Soul and Funk can be felt clearly on the Blues. The time signatures begin to favour common time and many of the arrangements expand considerably to include larger sections (often brass and strings), contributing to more polished productions with larger ambient footprints and less mix saturation (particularly when compared to the mid-1950's Chicago blues referenced for *Bridging the Gap*). Similar characteristics can be heard on records by the other two 'King' contemporaries, Freddie King and Albert King (the latter exemplifying the soul-blues formula of Stax Records), with comparable sonic signatures on records such as *Help Me Through*

¹⁰ In an interview with the author, Amerigo (Gazaway 2016) details how he accesses the needed samples for his "conceptual collaborations" from multiple sources: available multi-tracks, isolating the left and right sides of a stereo master, locating extended live performance versions and sampling solos and exposed instruments from these; furthermore, he purposely samples B.B. King's "Lucille" guitar and treats it as a separate character in his arrangements.

¹¹ and written by Roy Hawkins and Rick Darnell

the Day (1973) and *I'll Play the Blues for You, Pt. 1* (1972) respectively. The tendency for R&B-inspired, minor 4/4 blues in this era, with spacious arrangements and extended electric guitar solos (at tempos that range between 80 and 95bpm), is particularly helpful in the hands of rap samplists such as Gazaway. The link with Funk has already been created on the source material, there are no time signature tensions to be resolved, and the extended instrumental sections provide multiple opportunities for sampling particular parts. Furthermore, the fuller arrangements enrich the sampled palette with wide frequency spectra, and the minor harmony is congruent with the dark mood of much modern Hip-Hop. Characteristically, on *The Trill is Gone*, Gazaway diverts from the (funk-derived) hip-hop habit of staying on the I chord for the duration of a song (which *Bridging the Gap* pays tribute to), and instead follows the harmonic movement of B.B. King's version. He reduces the tempo from approximately 90 to 78bpm (and consequently the tonality of the song from Bm to Am), but respects the i-iv-i-bVI-v(7) sequence of the 1969 version. He also re-arranges various instrumental guitar segments under the rapped verses, creating a classic 'call-and-response' blues signature between the guitar and vocals. Further additions include live organ lines for the later parts of the choruses, and backing vocals and ad-libs.

The resulting rich and pluralistic musical arrangement is characteristic of Southern Rap's divergence from East and West Coast Hip-Hop in the mid-1990's¹², justifying the inter-stylistic intentions here also from the perspective of Hip-Hop's evolution. Amerigo (Gazaway 2016) consciously pays homage to both DJ Screw's slowed-down "chopped and screwed" sampling style and Pimp C's gospel-inspired use of live instru-

¹² The album that's credited with putting Southern Rap on the map is OutKast's 1994 *Southernplayalisticadillacmuzik* (Grem 2006), complete with live performances of slowed-down southern soul meeting synthetic drum machine programming.

mentation¹³, regarding the latter as a pioneer in “making Southern Rap music that was melodic and had harmony” and “blending the old with the new”. In other words, Gazaway finds commonalities between later (funk/soul-contaminated) Blues and more recent hip-hop divergencies, in order to allow for richer harmonic progressions that support this complimentary meeting of genres. Through these choices he demonstrates a positive case of trans-morphing¹⁴ (Sandywell and Beer 2005), where he not only successfully mixes the two genres but arguably creates a new, hybrid one; one that sits comfortably within the evolutionary narrative of Southern Rap. The choice to pitch and slow down the instrumental by two semitones and approximately 12bpm¹⁵ supports idiosyncrasies characteristic of Southern Rap subgenres, and this may be one of the most crucial decisions Gazaway makes initially. As a consequence, he accepts the reduced frequency ‘presence’ of the original recording’s spectrum, which in turn allows him to place many of the blues samples ‘behind’ the programmed beat as far as the ‘depth’ perspective of the mix is concerned. He also abuses the two sides of the blues multi-track by widening it to an audible extent in order to allow for a distinct ‘centre-stage’ placement for his newly programmed electronic kick and snare drums (characteristic of the subgenre’s reliance on Roland TR-808 drum machine timbres). The original electric piano parts are exposed on the right side of the stereo image and he chops and edits them at the end of the eight-bar sections to enhance their rhythmical effect. His synthetic high-hats sit comfortably on top of otherwise mildly equalised instrumental elements (another result of the pitching down and his further equalisation of the samples), interplaying between eighths,

¹³ Amerigo regards DJ Screw and Pimp C as pioneers of the Southern Rap sensibility, a notion that is shared by the hip-hop community at large.

¹⁴ Sandywell and Beer (2005, p.115) define trans-morphing 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”.

¹⁵ the track further abuses the pitch-tempo analogy at 5:12, down to Fm and 65bpm

sixteenths and thirty-seconds in the high-hat programming. Finally, the expansive ambience of the original blues mix enhances the combined, illusory ‘depth’ effect, giving the blues signature a distinctly haunting ‘space’ within the architectural landscape of the mashup; it feels like past and present are occupying separate sonic spaces.

In another production decision of key importance, Amerigo (Gazaway 2016) uses the Melodyne software to transform the original live electric bass into a MIDI part, which he then uses to trigger a “dirty south sub synth bass” at “the exact same shuffle, the exact same groove as the actual bass player that played on the record”, serving the southern synth-bass sensibility but keeping “that human groove”. Thus, the totality of the sonic characteristics described above appear intrinsically linked to musical decisions conceived as part of cross-genre mixing, informing the creative processes that follow in the applied leg of the methodology. In a move that mirrors his elegant sonic trans-morphing, Gazaway (2016) sums up the cross-genre journey in the title of his mashup, changing *thrill* to *trill*, a term simultaneously referring to Texas slang and a Southern Rap sub-genre¹⁶. Finally, he identifies his contemporaries’ fear of dealing with triplet subdivisions as the main reason behind the less frequent integration of Blues and Rap, a creative challenge that he wholeheartedly accepts by “working with it a little bit more, massaging it (further) and pushing it ... more”.

[Case 3:] At the other extreme of the Blues-Rap spectrum are situated attempts at a fully live performed Hip-Hop, borrowing from traditional blues composition and performance practices. Perhaps the most representative live hip-hop band are The Roots, while *Blakroc* —the collaborative album between hip-hop producer Damon Dash and rock group the Black Keys— also provides a relevant case. The Roots, however, owe more to Jazz, Funk and Soul than to Blues directly, and although the Black Keys are of-

¹⁶ for more on *trill*, see Bun B’s interview with Danielle Harling (2013) on hiphopdx.com

ten referred to as a blues-rock act, *Blakroc* mixes alternative and garage rock influences in equal measure. Abdominal and The Obliques on the other hand, are one of the very few acts that receive the quintessential #Blues-Hop tag online, exemplifying the cross-genre as a hybrid of live instrumental performance and rapping. The group formed as a side project of Toronto rapper Andy Bernstein —known by his stage name as Abdominal, sometimes Abs— and released their album *Sitting Music* in 2012, providing a useful case-study of hybridisation with its own compositional and sonic problematics. Thomas Quinlan (2012) provides the following review of the record on *exclaim.ca*:

A mix of folk, blues and country (that) replaces the sampling and boom bap beats. Revitalized by a backing band —guitarist Andrew Frost and percussionist Colin Kingsmore— Abs is still rapping but with a smoother flow that sometimes becomes singing, while his band provide backing harmonies and hooks. [...] *Sitting Music* might not be your typical hip-hop album — Abs describes it as blues-hop and "middle-aged hip-hop"— but it's great to see an artist striving to stretch his boundaries.

The very inception of the project is a consequence of Andy Bernstein's (2016) reaction to growing older and wanting to experiment with more introspective lyrical themes, which according to him required a different sound and "some time apart" from what he describes as "traditional Hip-Hop". In an interview with the author, Bernstein (2016) explains:

My whole career has been more (about) doing the straight-ahead rap stuff, like typical rap-beat-samples, that kind of thing. The idea behind (forming) the band was just really because I was getting older and I was finding (that) I wanted to tackle some new themes [...] slightly more introspective themes, look at some vulnerable kind of topics. So, it just didn't feel right to

me to have the same —the usual— typical sample-based Boom-Bap rap beats for those types of songs. That was really the main reason for me to put the band together, just to kind of get like a mellower, quieter sound that would better fit the themes of these new types of songs.

Abdominal (Bernstein 2016), furthermore, disagrees with the notion of a direct link existing between rap authenticity and the sample-based method, because Hip-Hop “does not equal one particular sound, it’s more (of) an approach, an aesthetic [...] using what’s around you and crafting it to form something new, whether it’s using samples, whether it’s, oh you know, I know this guitarist...” On single *Broken*, Bernstein, Frost and Kingsmore use percussion, and acoustic, electric and slide guitars, all recorded in a domestic basement with household objects used as separation baffles, and vocals overdubbed at the rapper’s home studio. Abdominal’s (Bernstein 2016) vision for the album was to capture the sonic of “just three dudes sitting on a porch playing”, something they achieve by focusing on simultaneous performances as much as possible, allowing recording ‘spill’¹⁷ to take place, and not overly polishing the post-production process.

The harmonic progression of I-bIII-I-IV-V in the choruses and I-bIII-ii-V in the verses, with frequent usage of passing chords and extensions, and the laid-back performing style over a slow tempo, conjure a ‘swamp blues’ feel; but there is a definitive hip-hop influence on the hybridisation of the composition and arrangement. The percussive beat is simplified to quarter and eighth accents resembling a drum-machine pattern, with shakers added progressively to emulate programmed high-hat sixteenths. At 01:43 Frost and Kingsmore perform a quarter-note ‘stutter’ echoing a sample-based repeat which lasts one additional bar, while on many occasions (i.e. at 1:30, 2:50 and 3:23)

¹⁷ ‘Spill’ in studio recording refers to the leakage of sonic content reaching a microphone positioned closest to the intended source from surrounding instruments.

there are complete instrumental stops resembling DJ 'cuts'¹⁸. The main acoustic guitar sequence repeats throughout the verses assuming a 'looped' function, often ending the four-bar sections with rather exposed and mechanised quarter strums, 'marking time' so to speak. Although the intention here may not be about pursuing a sampled or programmed production texture, it is clear that the musicians' experience of Hip-Hop, and their catering for the rapped verses, drive their compositional, arranging and structural decisions towards an effective hybridisation. One that is thematically supported by the lyrics and the group's open-minded approach to experimentation in negotiating the two genres. Notably, they remain less experimental during the rapped verses, with a simpler harmonic progression and a strict four-bar repetition, while for the sung choruses they support the melody by leaving the tonic for the flat third chord, then returning to the tonic before the closing IV-V-I turnaround. The resulting five-bar chorus cycle feels supportive of the sung melody, giving the hook a distinctive if peculiar feel, while parallels can be drawn to early recorded country or folk blues where performers would extend their own accompaniments to cater for the uniqueness of their melodic or lyrical lines¹⁹. It is not a surprise that out of the three case studies, it is the live blues-hop production that presents the most compositional freedom, but what is important here is the influence of the *meta*-genre on the traditional form, even without its form-shaping technologies directly on hand (i.e. the use of samplers and DAWs). In effect, the sampling practices that

¹⁸ DJs momentarily mute records for rhythmical effect using a crossfade control on their mixer during live performances, and in the practice of turntablism this is referred to as a 'cut'; it is often emulated on studio recordings by automation or using the mute button on a mixing console, or via various editing practices in software.

¹⁹ David Evans (2000, p.90) discusses various manifestations of this very characteristic when comparing Blind Lemon Jefferson with his contemporaries; highlighting Jefferson's innovations he details:

Jefferson's practice of prolonging the singing of certain notes and thereby stretching the standard twelve-bar form is illustrated in virtually all of his blues using an AAB stanza pattern. In these he also contributes to the stretching by playing extended guitar figures in response to his vocal lines.

have shaped the 'meta-genre' are not hereby utilised directly, but their stylistic aftermath is exercised by the musicians in absentia, shaping the very rhythm, arrangement and structure of their blues-inspired performances.

Meta-jamming: setting up the inter-stylistic experiment

As part of a wider research project examining the application of vintage production techniques on contemporary Hip-Hop, eight hours of original blues content have been composed in preparation for the sampling phase, referencing blues styles from the 1950s to the 1970s. For the purposes of this examination, late-1960's to early-1970's minor blues examples have been referenced, such as the southern Blues that came out of Shelter Records in Texas and Stax Records in Memphis. The aim has been to create a relevant applied context, which will welcome practical exploration of the findings from the three case studies above: musical and sonic characteristics that reflect the first two case studies, but also compositional freedom reflected in the third. For this particular experiment, a fifteen-minute improvisation has been conceptualised and then recorded by overdubbing acoustic drums, electric bass, upright piano, electric Rhodes piano, electric guitar and shaker. Loosely inspired by the aforementioned references, the improvisation has taken place over an eight-bar iv-i-V(7)-i harmonic progression (for the verses) and a bVI(7)-i-V(7)-i variation (for the bridges or choruses), at a harmonic speed of two bars per chord, a tempo of 85bpm and a time signature of 4/4.

TABLE 1: HARMONIC PROGRESSION OF BLUES RECORDING

Bars	1	2	3	4	5	6	7	8
Verse	iv	iv	i	i	V(7)	V(7)	i	i
Bridge / Chorus	bVI(7)	bVI(7)	i	i	V(7)	V(7)	i	i

The drums were recorded to a metronome click and the rest of the instrumentation in synchronisation to the drums, with the aim of aiding the editing processes of the forthcoming sampling phase.²⁰ The duration of the recording extended to fifteen minutes—or 642 bars—supporting the development of instrumental synergies and furnishing the sampling phase with a rich palette of options. The cyclic blues form consisted of pattern and dynamic variations centred around a main electric bass guitar motif often coupled with the electric guitar (a figure frequently employed at Stax by Albert King and bassist Duck Dunn of Booker T. and the M.G.'s), while the electric Rhodes piano supported the harmony and rhythm with chordal work in the middle register. The upright piano provided rhythmical and harmonic support initially, then delved into solo improvisation as the track progressed. The drums gradually developed from simple eighth bass-drum and snare-drum patterns using the cross-stick on the snare, to more syncopated and swung sixteenth accents progressively employing the full snare. These were consciously performed to mirror a range of references²¹, again with the aim of enriching the potential sampling pool of the later phases. After minor macro-editing of the performances—which aimed at preserving the micro-level interaction between instrumental performances and their resulting 'groove', but nevertheless removing any content of no use—125 segments of half, single and dual bars were deemed as worthy samples, each segment representing no more than a single chord in the harmonic progression. These were then exported as synchronised multi-track components and (given the track-

²⁰ Although recording to a click-track is atypical of blues sessions of the referenced era, the rationale behind this decision has been to aid sampling on a much larger scale than typically practiced. For most sample-based rap productions, a smaller number of samples are chosen from the same record and the variations in timing on the original performances can be negotiated through time-based manipulation. But for the 125 samples chosen from the original here, some degree of synchronisation had to be maintained for the sampling phase to remain feasible.

²¹ from the predominantly straight-eighth patterns audible on the Freddie King and B.B. King examples above, to the more swung-sixteenth patterns performed by Al Jackson Jr. for Albert King at Stax.

count of fifteen channels for most parts of the structure) resulted in 1,854 audio files²². The synchronised stereo segments were brought into another DAW for mixing, utilising software emulation of representative hardware technologies for the era. Particular attention was directed towards microphone pre-amps, mixing desk summing and recording format (tape, vinyl) colouration, characteristic of vintage sonic signatures imprinted on material that would frequently be favoured for sampling. Master tape and vinyl record emulations of the stereo files were prepared for each segment of the multi-track, and the mixed results were exported as 24-bit wave files, compatible with Akai's MPC Renaissance music production controller, which was to be used extensively in the following sampling phase²³. Finally, each segment or 'chop' was assigned to a drum pad on the MPC, taking up most of its eight banks of sixteen pad locations (a maximum of 128 per programme²⁴) to fuel the following phase.

²² The recording process was designed to honour tracking practices and appropriate instrumental sources representative of the era. The resulting channel list is as follows:

1. Bass drum
2. Snare drum
3. Middle tom
4. Mono overhead (option)
5. Stereo overhead (left)
6. Stereo overhead (right)
7. Drum room microphone
8. Shaker
9. Fretless bass
10. Rhodes
11. Upright piano (left)
12. Upright piano (right)
13. Clean electric guitar (rhythm)
14. Fuzz electric guitar (rhythm)
15. Clean and fuzz electric guitar (lead)

²³ The MPC Renaissance is a descendant of 1988's MPC60 and a mainstay in the current arsenal of Hip-Hop production tools. Over the past two decades, the growing literature on Hip-Hop musicology has paid ample tribute to Akai's range of MPCs, acknowledging their pivotal influence on the methodologies of Rap production. The technology combines sampling, drum-programming and MIDI-sequencing functionality, which has been embraced by practitioners ever since the release of the standalone MPC60 in 1988 and until its more recent computer-dependent incarnations manifested in a multitude of current controllers and DAWs.

²⁴ The MPC operating script uses programmes as groupings of multiple samples, sharing a number of user-definable parameters, such as polyphony, effects and output assignments.

Chopping the Blues: sample-based composition

A lot has been written about ‘sample-based’ composition, some of it polemic (Goodwin 1988) and some supportive (Rodgers 2003; Harkins 2008; Harkins 2010; Williams 2010; Schloss 2014; Swiboda 2014), while much of the literature is focused on the ethical and legal dimensions of what is regarded as new or original work (Collins 2008; McLeod 2004). Although, as we have seen above, the Blues themselves challenge Eurocentric notions of composition, in this particular case, the publishing and mechanical constraints that would limit sample-based composition are removed by virtue of the author being both *sampled* and *sampler*. This context allows for a focused reflexive analysis of the interaction between sampling practice and the construction of pre-recorded material, without diluting the question with peripheral concerns. Furthermore, it will be useful to extrapolate on potential synergies resulting from this closer relationship between the two functions: composer as content creator, as well as content ‘manipulator’.

The Akai MPC range facilitates a particular sampling workflow due to its interface design, operating system, but also a number of inherent sonic characteristics. The drum pads situated on top of its interface —for all of its hardware or software incarnations— invite a percussive style of triggering of musical material, while the Roger Linn-derived rhythmic quantisation (with its characteristic swing and inherent timing imperfections) is the subject of much reverence from scholars and practitioners alike (Rose 1994; Schloss 2014). Similarly, the ‘sound of the MPC’ gets particular attention in press and literature, a characteristic that is attributed to the lower sampling resolution of older models, resulting in a lower fidelity and dynamically limited headroom that is actually helpful to beat

'placement' within the mix²⁵. The MPC Renaissance has been chosen here as a later incarnation of this archetypical Hip-Hop production tool (albeit one with improved computer integration, helpful to the scope of this experiment), effectively seen as a Hip-Hop 'instrument' that inspires particular musical utterances.

Following experimentation with the sequence and timing of the chopped bars derived from the original composition, and making use of the MPC drum pads, it was possible to create new rhythmical and harmonic combinations, by triggering shorter segments and creating re-imagined sequences that were never performed on the original recording. Depending on the length of the segments used, the tempo of the original piece was still perceptible for any sample longer than an individual percussive hit, so the whole programme was detuned by two semitones, consequently reducing the tempo of the segments by approximately 12bpm²⁶. A typical Boom-bap practice is to set a programme's polyphony to mono, so that each segment triggered, mutes the previous one already playing²⁷. Although this was historically practiced partly as a means to obscure the origin of phonographic samples (by keeping them shorter and presenting them in re-imagined orders), two positive side-effects of the process were a highly rhythmical effect, and preservation of clarity in the harmonic progression of newly constructed patterns (avoiding the juxtaposition of overlapping chords). Employing this practice for both

²⁵ The company itself pays tribute to its heritage (and sampling heritage in general) by including four options for modelling vintage sampler behaviour, that of the Akai MPC3000, the MPC60 and two variations for the E-mu SP-1200.

²⁶ This echoes Gazaway's methodology described above, but it is also typical of hip-hop practice in general, as a means to further distance one's output from the recognisability of the source and arrive at tempi appropriate for the subgenre in question: here, the vision of a more harmonically rich hip-hop production lend itself to a Southern Rap sensibility, which frequents slower tempi.

²⁷ DJ Premier's work on Gang Starr's *Hard to Earn* (1994) is a prime demonstration of this function.

aesthetic and pragmatic reasons, the following sequences were composed, stemming from the original ‘chops’:

TABLE 2: HARMONIC PROGRESSION OF HIP-HOP PRODUCTION

Bars	1	2	3	4	5	6	7	8
Intro 1	iv iv i i	iv iv i i	iv iv i i	iv iv i i				
Intro 2	i i i iv	i i i V	i i i V	i i bVI(7) V				
Verse	iv [x4]	i [x4]	iv [x4]	i [x4]	iv(sus4) [x2] iv [x2]	i [x4]	iv(sus4) [x2] iv [x2]	V(7) [x4]
Bridge	bVI(7) [x4]	i [x4]	bVI(7) [x4]	i [x4]	bVI(7) [x4]	i [x4]	bVI(7) [x4]	V(7) [x4]
Chorus	i i iv iv	i i iv iiø	i i iv iv	i i iv iiø	i i iv iv	i i iv iiø	i i iv iv	i i iv iiø

* each chord represents one of four beats in a bar

The large range of samples exported provided multiple alternatives for each single-chord bar, with factors such as the richness of the frequency spectrum and the individual micro-motifs of included instruments becoming crucial in the selection process and triggering. Importantly, as can be seen in Table 2 above, the programming and re-organisation of the segments allowed the construction of different sequences to the original, at altered harmonic speeds for most sections (generally faster when compared to the original recording, with speeds of two chords per bar and at times one chord per beat). It is interesting to note from the harmonic analysis that the programming and re-organisation of the sampled segments created a number of harmonic departures, extensions or substitutions. Specifically, on the fifth and seventh bars of each verse, the segment chosen in support of the iv chord is a different one to that used in bars one and three, featuring a clear variation in the contained piano melody, and one that stresses the seventh scale degree infusing the iv chord with a potential sus4 colouration. A similar occurrence can be observed in the chorus, where every other bar can be perceived as a half-diminished ii chord (in place of the iv chord of bars one, three, five and seven). This

is due to a passing note audible on the sampled electric bass part, which moves to the second degree of the scale and it is the result of an additional one-beat segment brought in on beat four of every even bar (bars two, four, six and eight of the chorus sequences). Despite the fact that these extensions and substitutions are open to interpretation, they are however suggested as a consequence of melodic content occurring inadvertently within the high number of sampled alternatives. The rap producer then has a choice to either exploit what is implied and augment it, or suppress it, through additional layering²⁸. What's more, the sonic manipulation of sampled content within a sampler or during mix-down can further affect these harmonic choices. It is typical practice to equalise samples using a sampler's onboard filters in order to remove unwanted or clashing parts from the frequency spectrum, or to boost frequencies picking complimentary tones that work in the new context. This can accentuate or mask particular instrumental parts literally influencing the level of their contribution to the harmonic content.

With regards to rhythmical implications of the process, the monophonic triggering and muting, on the other hand, can create tightly syncopated results due to the placement of the new 'cut' (initiated by the percussive attack of the edit or a kick-drum on the first beat) against rhythmical subdivisions already present in the previously playing segment. In this example, this was further exploited by decimal alterations to the overall tempo, and the use of MPC's higher settings of swing quantisation, which made any sixteenth triggering 'late' and by consequence closer to the next event triggered. As a result, the original material here assumes new rhythmical qualities due to its placement and truncation within the programming order sequenced on the MPC. It could be argued, that the resulting sensibility is quintessentially Hip-Hop: the *meta*-syncopation in-

²⁸ in the case on hand, a Hammond organ part was added in post production to support these harmonic suggestions

teracts favourably with the sampled material's internal syncopation, which may be a further pragmatic reason explaining why Hip-Hop favours Funk and frequently cites an Afrocentric sonic past. Schloss (2014, p.159) explains:

A hip-hop beat consists of a number of real-time collective performances (original recordings), which are digitally sampled and arranged into a cyclic structure (the beat) by a single author (the producer). In order to appreciate the music, a listener must hear both the original interactions and how they have been organised into new relationships with each other. [...] And the formal structure may reflect both linear development (in the original composition) and cyclic structure (in its hip-hop utilization).

Due to legal or content-related limitations in accessing favourable sampling material however, much Rap music that is produced with cyclic priorities in mind, whilst exploiting the rhythmical tendencies described, it also tends to be harmonically more timid. This is in no way a criticism of the musical outputs of the practice —to which Schloss attributes a defining aesthetic value— but, in drawing a condition between limitation and results, we are able to explore the creative possibilities should the limitation be removed. The original compositional phase in this experiment has allowed for extended sampling opportunities, optimised synchronisation and direct access to instrumental-only material. It is in this context that inter-stylistic evolution can be pursued further, as Rap's rhythmical sensibility (a result of particular workflow and methodological practices) can be potentially combined with increased harmonic freedom. I believe that some of the answers to the long debate on sampling versus live performance in relation to Hip-Hop authenticity, may lie in the grey area between these two polarities. After all, samples contain live musicianship per se, so it is the differentiating variables between the sample-based method and the live approach that are of interest. And although limitation may be the

mother of invention, at least for particular eras of Hip-Hop's trajectory, it may be of value to challenge Hip-Hop's limitations, and then observe the tensions expressed against its overarching aesthetic. Despite live hip-hop bands' best efforts to stay within the genre, the debate continues²⁹. The Roots drummer and producer Questlove, has dedicated a large part of his professional life to achieving authentic Hip-Hop sonics on his drum kit, but what he may be —purposely— missing is the *meta*-ingredient: the effect of the sample-based process upon his Funk. An effect that birthed the Hip-Hop of the Golden Age³⁰ and defined the Boom-bap subgenre. Schloss (2014, p.151) argues that:

It is in the relationship between the samples that the process of composition begins to exert a decisive influence as producers experiment with different patterns and approaches to organization. [...] In making their studios into laboratories, producers are making themselves into research scientists...

Conclusion

Previous attempts at Hip-Hop musicological analysis have dealt extensively with rapping and the poetics of the voice (Krimms 2000; Adams 2015), while the literature on sampling discussed above has dealt with the mechanics and aesthetics of the sample-based process and its interaction with phonographic content. This paper has focused on the relationship between the sonic priorities of Hip-Hop and the composition of original content, utilising the Blues as a case-study and exploring the potential of inter-stylistic trans-morphing between its form and Hip-Hop. Although the Blues share some of the

²⁹ For a stimulating discussion of The Roots' position on this problem see Wayne Marshall's (2006) article: 'Giving up Hip-Hop's Firstborn: A Quest for the Real after the Death of Sampling'.

³⁰ Kulkarni (2015, p.78) defines 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".

cyclic structures that are mirrored in Hip-Hop, they have also been utilised less than other forms of music in its sampling practices, thus presenting some unique rhythmical and harmonic problematics in the applied aspect of this examination. As Kyle Adams (2015, p.118) highlights regarding the problems of hip-hop analysis:

The techniques developed for the analysis of Western art music, even when they can provide accurate descriptions of some of hip-hop's surface phenomena, often leave the analyst without a deeper sense of how hip-hop operates and why it seems to communicate so effectively with such a broad audience.

This examination has attempted to delve into the mechanics of the creative practice in order to serve the musicological pursuit of Hip-Hop analysis from a practice-based perspective. The exploration attempts to address a gap in the field identified by Simon Zagorski-Thomas in his book *The Musicology of Record Production* (2014, pp.45-6):

Probably the largest imbalance, which is due to the analytical focus and the desire to establish a map of the theoretical landscape, is the lack of explicit discussion of how this theory should inform the practicalities of production.

Although this research in no way offers an exhaustive typology of the creative opportunities that exist between the sample-based landscape and original composition, the examination has focused on rhythmical and harmonic interactions between the Blues and Hip-Hop with a two-fold intention: to systematically explore inter-stylistic synergies from a practice-based perspective, whilst navigating alternative creative avenues for Hip-Hop's future evolution.

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