Reimagining the 'phonographic' in sample-based hip-hop production: making records within records

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REIMAGINING THE 'PHONOGRAPHIC' IN SAMPLE-BASED HIP-HOP PRODUCTION:

MAKING RECORDS WITHIN RECORDS

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Table of contents

List of figures

has been shifted to the right in terms of lateral imaging, while the arrow pointing down from the new snare and toward the sampled drums' snare represents side-chain compression applied upon the drum layer

List of tables

Abstract

'Reimagining the 'phonographic' in sample-based hip-hop production: Making records within records', deals with the poetics of hip-hop record production making use of originally constructed sample material, rather than previously released phonographic content.[1] The idea behind the research project was borne out of a practical conundrum during the author's record-label tenure with EMI Music (Greece) as an artist/producer. The national/major-label profile highlighted issues in sample-based music-making in an acute way, illuminating a tangible gap between underground beat-making and mainstream hip-hop practice: the majority of creators who find themselves between the two extremes appear starved of access to raw phonographic sources, with some seeking innovative ways to practice the artform whilst avoiding licensing implications related to copyrighted sample use.[2] Inspired by the author's parallel academic career, the examination of the phenomenon has taken the form of a practice-based doctoral research project, grounded in the musicology of record production, and accompanied by an independent instrumental album-creation process, which supplies the applied investigative context. The largely autoethnographic approach relates the *personal* in creative practice to the larger cultural (aesthetic) phenomenon, and the research is further supported by interviews with expert practitioners, as well as phonographic (aural) and literary analysis. The theoretical and practical findings drawn out of the

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[1] For consistency, Hip Hop will appear capitalised when used as a noun and referring to the musical genre, and hyphenated in lowercase, when used as an adjective to describe ensuing nouns (for instance, process, artist, or production). Many of the cited authors in this thesis opt for Hip-Hop with a hyphen (in lowercase or capitalised), and their chosen conventions will be respected within quotations.

[2] The term 'beat-making' will be used interchangeably with 'sample-based hip-hop production'—'beat', in hip-hop parlance, refers to a complete instrumental music production or backing, not just the organisation of percussive/drum elements, which highlights the genre's rhythmic priorities. Williams (2010, p. 19) extends Schloss's (2004/2014, p. 2) definition of 'beat' as a sample-based instrumental collage "composed of brief segments of recorded sound" to also include non-sample-based elements in the instrumental production.

research illuminate an unexamined practice with profound impact upon popular music culture.

The research narrative is therefore capable of reshaping our understanding of creative beat-making in the flux of a shifting legal and pragmatic landscape. Furthermore, the non-linear, juxtaposed, and arguably metamodern dimensions of the practice readdress current/historical debates about Hip Hop, putting sonic materiality at the forefront of the discussion, and challenging the methodological strategies deployed thus far for the study of contemporary, electronic, and Afrological music forms. As such, there is an identifiable need for a thorough exploration of, and theorising upon, this form of record production practice. From Dr. Dre, through to De La Soul, J.U.S.T.I.C.E. League, Boards of Canada, Statik Selektah, Marco Polo, Griselda Records, and Frank Dukes, sample-based hip-hop producers have creatively renegotiated the landscape surrounding sample use through alternative production approaches. These techniques deploy the creation of interim sampling content for subsequent use in what can be described as a form of 'meta' phonographic process: an innovative phenomenon with important creative implications powering some of today's biggest hits and—arguably—an evolutionary strategy facilitating the future development of the genre (and sample-based music as a whole). In the aesthetic pursuit of what makes a newly created source 'phonographic' in the context of sample-based Hip Hop, the project addresses the way in which we consider how the sonic past interacts with the music present, and extrapolates upon the way in which such a musical practice may mirror a metamodern zeitgeist in other arts, and culture as a whole.

Acknowledgements

adventure. Specifically, I want to thank my mother, Lili, for taking me—as a disillusioned adolescent—to that outreach interview in Athens, Greece, which brought me to UK academia (the 'Dr' in this whole effort goes to you).

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Introduction

Since its inception, hip-hop music has been defined by the use, appropriation, and re-contextualisation of found sound. From Kool Herc's turntablism over funk records that helped invent the genre (circa 1973), through to the Beastie Boys' almost entirely sample-based *Paul's Boutique* (1989), and all the way to sample-heavy resurgences in contemporary hip-hop production, phonographic samples have provided the foundation, inspiration, and characteristic sonic footprint for large parts of the style's output. On the other hand, changes in sampling legislation and increasing sample-clearing costs have had a profound effect on hip-hop production practices, often resulting in the replacement, reduction, or complete omission of phonographic samples for notable periods of its trajectory.[3] These alternative production methods, however, have led to what has been described as a "softer" (Shocklee, 2004) or less authentic phonographic footprint (Marshall, 2006; Thompson and Greenman, 2013, p. 101)*,* which highlights the *sonic* implications that a sample-free process impacts on the end artefacts. This realisation holds the potential to shift the practitioner's focus from Hip Hop's historical association with 'musical borrowing', to the significance of *'mechanical borrowing'.*[4]

Writing about Jay-Z's *The Blueprint* (2001) on the 20th anniversary of the album's release in a recent Instagram post, producer 9th Wonder (2021) captures the

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[3] Steve Collins (2008) reports that the "aftermath" of cases such as the 1991 lawsuit involving Biz Markie's 'Alone Again' from *I Need A Haircut* (1991) "sounded a death knell for unlicensed sampling", causing "substantial changes in appropriative music", and resulting in "a stringent … licensing system to govern the practice". He adds that: "The sampling musician is subject to the arbitrary licensing fees demanded by the copyright owner" because "there is no compulsory licence for sound recordings and therefore no statutory controlled royalty rates"; and offers Kanye West's 'All Falls Down' from *The College Dropout* (2004), as an example of a hip-hop production opting for a re-recording (featuring Syleena Johnson), instead of paying $150,000 for a license of the intended original (by Lauryn Hill) (Collins, 2008).

[4] By 'mechanical borrowing' I am referring to the use of *recorded sound* from a previously released music recording, which is subject to mechanical copyright (PRS for Music, 2021).

interplay between poetics, the licensing landscape, and resulting aesthetics in Hip

Hop's trajectory acutely:

> SAMPLING IS DEAD…..
>
> Or at least that's what I was told during that time. Outside of @hitek [Hitek], [J] DILLA, Madlib, @realpeterock [Pete Rock], @djpremier [DJ Premier], and so many others still digging and chopping up records, the mainstream at large somewhat chose to abandon the notion.[5] Producers were becoming more in tune with their publishing rights, and, staying away from artists who took away a majority of their share. I chose to however, keep digging despite what the naysayers said.[6] On a mainstream level, it takes ONE album to turn things around, there may be precursors, but the one album that put soul back in mainstream hip-hop, was this one [*The Blueprint* (Jay-Z, 2001)]. @justblaze [Just Blaze], @kanyewest [Kanye West], and @binkthehumblemonsta [Bink] was the right cast of producers who gave Jay-Z the *perfect chunky sound beds* to bare his soul. (my emphasis)

Project hypothesis

The proposed hypothesis in this project, thus, is that the appeal of the sample-based

production aesthetic in Hip Hop is the result of a 'mechanical borrowing' that captures

a multi-layered sonic imprint of historical recording, mixing, mastering, and even

physical manufacturing processes. This, in turn, has implications not only for the end

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[5] 'Chopping' and 'chopped' are commonly used terms in hip-hop production terminology indicating processes creatively utilising and re-arranging edited or truncated audio segments, often digitally sampled from phonographic masters. Kajikawa (2015, p. 164) defines 'chopping' as "the process of dividing a digital sample into any number of smaller parts and rearranging them to create a new pattern".

[6] Schloss (2014, p. 79) defines "digging in the crates" as the process of "searching for rare records", which provide "the raw material for sample-based hip-hop" alongside associated functions, such as: "manifesting ties to hip-hop deejaying tradition, "paying dues," educating producers about various forms of music, and serving as a form of socialization between producers".

outputs, but also for the creative and technical poetics that it inspires.[7] Many hip-hop producers who favour sampling have expressed explicit links between the genre's perceived authenticity and the use of samples, particularly ones capturing past or analogue eras (Krims, 2000; Collins, 2008; Harkins, 2008; Schloss, 2014).[8] Existing literature attributes this to the technology deployed, the spaces captured, historical musicianship trends, and the creative workflow determined by the sampling process itself (Rose, 1994; Krims, 2000; Harkins, 2008; Sewell, 2013; Schloss, 2014).

Conversely, practitioners' opinions appear polarised on the use of live instrumentation in Hip Hop as an authentic production alternative (Marshall, 2006). The distinction that will be drawn out by this research is that the majority of samples deployed in hip-hop practice *do* feature live instrumentation inherently (albeit previously recorded, produced, and released), but it is the nature of the production that contains them which further shapes the authenticity argument, and determines the sonics of the end artefacts. This delineation echoes Allan Moore's (2002, pp. 211–8) notions of "first" and "third person authenticity", acknowledging that sample-based aesthetics may rely, respectively, on the recognition of specific (artist) utterances or generic (category) signifiers.[9] But it problematises how the latter *perception* is constructed, by examining the mechanics that shape an adequate phonographic

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[7] This research commences with a hypothesis rather than a set of research questions as it is founded on the observation of patterns experienced in a professional context (Wisker, 2008). Although the use of a hypothesis is typically more common in scientific contexts, it can apply to arts-based inquiry when it pursues "a suggested explanation for a phenomenon or a reasoned proposal suggesting a possible correlation between multiple phenomena" (Wisker, 2008, pp. 49–50). This echoes the phenomenological philosophy underpinning the methodological design (discussed in more detail below), which bridges a (positivist, on the surface) testing or probing approach as part of the praxis, within the otherwise constructivist epistemological paradigm characterising the research at large.

[8] The reference to *analogue* eras pertains to the use of predominantly analogue technologies and media, which are understood to infuse particular and recognisable sonic characteristics to recorded music, signifying specific periods in record production history (see, for example: Bennett, 2012).

[9] For example, identifying within a sample a distinct performance by a particular drummer (such as Clive Stubblefield, Gregory Coleman, or John Bonham); as opposed to perceiving a sample as taken from 1960s funk/soul or 1970s rock discography.

context (or in Moore's (2002, p. 216) words: "the fabrication of … a conceptual (if not historical) point of origin"). The project is therefore a study in examining and creating phonographic—rather than cultural—history, whilst acknowledging the cultural factors that shape the *context* that provides meaning to the *content* (the material elements) of the sonic domain. The practical problem posed is whether there can be effective production alternatives toward achieving the desired aesthetic objectives, whilst avoiding the use of copyrighted samples. This practice-based research explores the hypothesis through a design that incorporates a large-scale (instrumental) album production process, referencing a range of classic musical epochs and styles at source level. The aim of the investigation is to produce original hip-hop output from self-made record segments that communicate convincing phonographic qualities. Associated objectives are to:

- explore vintage production techniques that can be deployed in pursuit of phonographic constructs effectively, facilitating sample-based composition;

- review literature on the history, musicology, and interaction of record production, sampling, and hip-hop aesthetics;

- assess peers' opinions on sample-based aesthetics and processes in contemporary beat-making; and

- investigate the interaction between beat-making and the production of original source content.

Background

Previous literature on Hip Hop has overwhelmingly favoured notions of "musical borrowing", which—even when inclusive of broad themes such as the intertextuality and reception of genre, the rapper's voice, and sampled sound (see, for example:

Williams, 2010)—promote elements of the musical and/or lyrical domains (musical style, motifs, words, and rhythm) as primary foci. On the occasions when sonic texture, material content, and the overall phonographic timbre resulting from sample-based processes are considered, the majority of studies stop at surface observations. For example, Tricia Rose's otherwise foundational mapping of Hip Hop's sonic priorities to "black intent" in *Black noise* (1994), mostly "focuses on the conventions of orality in hip-hop rather than on the underlying sonic product that supports and sustains it" (Goldberg, 2004, p. 130). Schloss's exhaustive ethnographic study of Golden Age practices in *Making beats* (2014)—which accurately identifies the sonic characteristics that define the period's sample-based aesthetic—only extends as far as *filtering* techniques with regards to the sonic domain (deployed in the service of sound-object isolation).[10] Analysis of essential processes such as (swing) quantisation and sample chopping revert back to rhythmic and structural (motivic) ramifications. Adam Krims's (2000, pp. 41–54) Kantian-inspired "hip-hop sublime" extends as far as recognising "timbre … as a crucial means of organization" and a catalyst in the listener's sense-making sonic experience; but it does not explore how the "combination of incommensurable musical layers … are selectively and dramatically brought into conflict with each other". Krims's timbral sublime does echo William Moylan's (2020, p. 239) "gestalt percept" as a "singular impression that coalesces from its many parts"; but Moylan goes further by considering the acoustic component parts that make up this *timbral* percept (as will this study, largely aligning with Moylan's principles and analytic framework applied to the aural analysis of the recording—hereby referred to

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[10] 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".

as the *sonic*—domain).[11] Finally, Amanda Sewell's (2013, pp. 26–67) useful typology of hip-hop samples across a range of seminal phonographic case studies identifies their structural organisation and aesthetic implications, but not the inner workings of a sample-based record's mixing architecture and timbral make-up (essential knowledge if these mechanics are to be deployed in the service of source sample *creation* and, then, *use*).

In other words, whilst Williams (2010, p. 1) and other scholars choose to transcend "narrow discourses of 'sampling'", this examination (re)considers the importance of close readings of content (and process) within the sonic domain, in order to evaluate the character and context of unique (read 'samplable') phonographic ephemera. The aim of the approach, however, is not to champion a return back to an intrinsic flavour of musicology but, rather, to proceed with a phenomenological questioning of aural experiences in sample-based Hip Hop, in order to decipher their underlying causality and poetics (more on this, in the methodological section below). This quest, of course, assumes elevated importance for a practice-based study, as it transcends description, with the potential to inform—and interact with—*application*. As Albin Zak III (2001, p. 26) has highlighted:

> Recording Practice in-and-of-itself remains stubbornly absent from the lion's share of published research. In my opinion, it will remain absent until a unified "disciplinary" approach to analyzing record making (and not just records) finally emerges, an approach that conceives, and explains, musical practice of recording technology ... as musical communication per se.

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[11] This delineation is a subtle but important one for this thesis, highlighting that the sonic characteristics of phonographic content are the result not only of recording processes, but of the music production chain as a whole, which also includes mixing, mastering, and physical manufacturing practices.

In order to address the sonic domain, this study engages a range of theoretical perspectives drawn from musicological literature focusing on record production. Simon Zagorski-Thomas's (2014, pp. 37–46) typological categories of "sonic cartoons" (relating to the sonic "signatures" of records), "using technology" (relevant in this context to the interaction of recorded sound with sampling), and "aesthetics and consumer influence" (considering the cultural dimensions of the sound of recorded music and its perception) are helpful starting points to frame the investigation.[12] Furthermore, his notion of "staging" is employed as a catalyst for identifying timbral, spatial, or mechanical statements in recorded sound (Zagorski-Thomas, 2014, pp. 70–91).[13] In the context of sample-based Hip Hop, this research will argue, staging phenomena assume exponential dimensions, and the practice of constructing and then juxtaposing phonographic 'stages' becomes a distinguishing textural characteristic of the project's proposed beat-making poetics. Zak's (2001, pp. 49–96) broad categorisation of recorded sound phenomena into "musical performance", "timbre", "echo", "ambience" (reverberation), and "texture" in *The poetics of rock* draws out a foundational spectrum of practical variables responsible for the construction of unique phonographic qualities. His rich analysis of the effects of recording spaces and vintage equipment is particularly valuable to this investigation, given that the musical content he analyses often forms much of the sampling material in hip-hop production (Zak III, 2001, pp. 97–127).

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[12] Zagorski-Thomas (2014, p. 68) defines 'sonic signatures' as characteristic sounds that "can relate to particular types of performance or programming characteristics … to spatial characteristics, to particular types of distortion, to the characteristics of particular types of sound sources or instruments or to the type of processing".

[13] A number of authors (for example: Lacasse, 2000; Zagorski-Thomas, 2009, 2010; Liu-Rosenbaum, 2012; Holland, 2013; Moylan, 2014/1992) have theorised on the placement of musical elements within the space of a popular music mix, and the concept of 'staging' has emerged as a useful theoretical notion: in essence, it suggests conceptualising a music mix as a 'stage' where the placement—but also the dynamic movement and manipulation—of musical elements (mediation) has thematic and narrative implications (meaning) for both listeners and producers.

Additionally, a number of scholars provide illuminating information on the creative use (and abuse) of production technology through discourse on tradition versus innovation (Bennett, 2012; McIntyre, 2015); creative and technical exploration of particular studios and eras (Seay, 2012; Jarrett, 2014); the narrative implications of mixing/staging practice (Liu-Rosenbaum, 2012); and staging as it relates to functional considerations and reproduction media (Zagorski-Thomas, 2009, 2010). This literature, when combined with historical texts on the evolution of recording technologies (Milner, 2009; Horning, 2013), and textbooks on classic or unique recording and production techniques (Cunningham, 1998; Owsinksi, 1999, 2000, 2013; Massey, 2000; Granata, 2003; Stavrou, 2003; Huber and Runstein, 2013; Katz, 2013; Mixerman, 2014b, 2014a; Corbett, 2015; Senior, 2015) offers a rich pool of data on the technical processes deployed, and the factors contributing to signature sounds.

Methodology/ies and Research design[14]

The aims, purposes, and format of this investigation—and, arguably, of any research endeavour interjecting creative practice within its trajectory—call for a considered and bespoke research design. This section will provide a critical reading of relevant methodological approaches, before fusing them under a *bricolage* framework. The challenge lies in a number of areas. Firstly, the function of the applied (practice-based) component has to be carefully determined. Does an arts-based actualisation test or demonstrate theorising deducted from literary analysis (sonically, in this case, *articulating* knowledge from the synthesis of secondary sources); or does

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[14] An earlier exposition of this section has been published as part of an article on "Research design for contemporary forms of creative audio practice" (see: Exarchos, 2019b). The methodological considerations of autoethnography's alignment with (sonic) arts-based contexts that follow have been presented as part of *The Autoethnography of Composition and the Composition of Autoethnography 2020* online conference, and can be accessed at: https://surrey.cloud.panopto.eu/Panopto/Pages/Viewer.aspx?id=889b4087-aab7-45d4-80a2-abe600ab6a79 (at 50:19").

it assume a more inductive role, drawing emergent knowledge out of critical incidents from within the (primary) praxis? It follows, that this decision has implications for the sequencing of phases in the research design; and it may also be possible to consider iterative, cyclical, or alternating motions that maximise both deductive and inductive opportunities rather than side with either of the binaries (a *both/and* rather than an *either/or* approach).

A second consideration lies in identifying the best-suited methodological paradigm(s) for the nature of what is being examined and mapping respective strategies to the types of questions being asked (at the most conductive research stages). Does the design have to comply with a single epistemological position, or is there a benefit to studying (creative) phenomena or experiences from multiple perspectives, leveraging triangulation to arrive at critical understandings of their ontology? The latter approach implies that embracing multiplicity in the design may be favourable especially to contemporary artistic intentionalities that are a reflection of post-structural cultural and historical contexts. Much of the literature on contemporary or practice-based creative research (Collins, 2010; Rogers, 2012; Barrett and Bolt, 2014; Leavy, 2015; Alvesson and Sköldberg, 2018) has been moving away from monological positions, acknowledging the benefits of promoting multi-method integration within the same investigation. Alvesson and Sköldberg (2018), for example, argue that methodological paradigms such as grounded theory, hermeneutics, post-structuralism, and (various types of) ethnography may be apt for particular phases of a research examination, rather than pose strict investigative frames within which a whole study should remain contained.

But crucially, the study of one's own creative practice brings to the forefront issues of rigour, value, validity, and quality often fuelled by residual (positivist) critical

stances toward any form of auto-methodology (Gorichanaz, 2017). The rationale behind discrediting auto-methodologies can be attributed to the inherently small sample size (the self), and the reduced distance from the subject/area/praxis studied, which—it is inferred—would otherwise help 'objectify' findings (Gorichanaz, 2017). As a result, the onus falls upon the researcher-practitioner to devise effective strategies for the observation, collection, and analysis of self-'data' that are transparent, meaningful, and actionable for ensuing interpretation. Alvesson and Sköldberg (2018) indeed propose that a flexible interpretive approach, meaningfully mapping methods to issues stipulated by the research question(s), is a way to ensure true *reflexivity*. This is a notion that resonates with Le Roux's (2017, p. 198) examination of rigour, specifically in autoethnographic research, where "the researcher and the researched are often the same person"—therefore "[a]utoethnography as a methodology demands multi-layered levels of researcher reflexivity".

A self-study of creative practice, in turn, creates two further, related requirements. The first, is the need to select an effective mechanism for the observation and capture of praxis—one that deploys one or more relevant media, formats, or technologies, such that it will enable sufficient recall, reflection, interpretation, and—eventually—reflexivity. The objective here is to capture nuanced processual detail promptly and systematically, allowing this 'data' to become foundational material for ensuing interpretation. Although this consideration is one of pragmatism, the selection of potent observational technique(s) becomes crucial in facilitating a range of interpretive options in following steps, and consequently a palette of (auto)methodological alternatives. In other words, there is an interrelationship between the type of data captured (for example, textual journaling, photography, audiovisual archiving), the potential for evolving interpretation, and the kind of

analytical methods enabled. As conductor/autoethnographer Bartleet (2009, p. 715) explains:

> Due to the musical nature of my project, my reflections were not always in text-based formats. I filmed my rehearsals and concerts and undertook interviews with colleagues and used sound recordings and photographic images to reflect on significant moments throughout my musical development.

The second requirement is for the selected method(s) of analysis to provide potential for generalisation and transferability that expands beyond the singular experience of the creative practice researcher. Generalisation here is not referred to in the empirical, statistical sense—the objective is to problematise, contextualise, and decipher phenomena relevant to a creative community (and culture) that the artist-researcher is a member of. We can turn to Le Roux and Gorichanaz once more for a proposition of strategies that promote rigour and ensure quality in auto-methodological contexts. Le Roux (2017, p. 203) asserts "that rigour [may] not lie in the chosen method per se, but in the judicious application of the method and explaining how the process was implemented". Gorichanaz (2017) also points to transparency of method and primary data;[15] as well as the depth of detail, and authenticity in the presented narrative amongst other factors—conversely offering warnings against overly evocative/storytelling approaches in favour of more analytical standpoints.[16]

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[15] This is part of the rationale for providing textual snippets from the journal complimenting this thesis, alongside selected segments of the audiovisual footage capturing praxis.

[16] This is a delineation that is in line with Gorichanaz's support for *auto-hermeneutics* as opposed to autoethnography in the context, specifically, of library and information science research. However, even within autoethnographic discourse, one can find passionate arguments for or against evocative or analytic approaches (see, for example: Ellis and Bochner, 2006), as the following section will highlight.

This latter point resonates with a vibrant discourse addressing the—textual—tone that self-study and related auto-methodologies should assume in pursuit of validity, which is pertinent to arts-based contexts as well. Proponents of evocative, narrative approaches (particularly in autoethnographic enquiry) favour storied writing that embraces subjectivity, vulnerability, and an artistic, performative style of presentation.[17] These are qualities that promote honesty, authenticity, and nuanced detail, offering increased disclosure of the authors' biases and backgrounds within the text. Borne out of the crisis of representation, such autoethnographic accounts engage the reader in a bilateral dynamic, amplifying the emotive effect of lived experiences through performative storytelling, and drawing the reader into a co-experiencing of the expressed epiphanies through empathy.[18]

The counter-argument coming from 'analytic' voices (for example: Anderson, 2006), is whether this mode of effective *showing* needs to be met by coherent *telling* (Pitard, 2019, p. 1834), where the exposition of experiences and events is followed through with structured analysis serving particular research contexts. Scholars, therefore, synthesising auto-methodological approaches in various fields, deploy elements of autoethnography (to evoke experiential resonances in a striking fashion), but proceed onto analytical frameworks that help contextualise and generalise these as part of a *theorising*—another nod toward the adoption of multi-methodologies. For example, Gorichanaz (2017, pp. 3–4) admits that a "boundary" between a proposed phenomenological 'auto-hermeneutics' and autoethnography "is admittedly a diffuse one", but indeed fuses elements of the two approaches under a

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[17] Adams, Holman Jones, and Ellis (2015, pp. 1–2) define autoethnographic narratives as: "stories of/about the self told through the lens of culture. Autoethnographic stories are artistic and analytic demonstrations of how we come to know, name, and interpret personal and cultural experience".
[18] The crisis of representation refers to a "crisis which arises from the (noncontroversial) claim that no interpretive account can ever directly nor completely capture lived *experience*" (Schwandt, 2014, p. 45, original emphasis).

Heideggerian/existential paradigm of "analysis *in situ*, emphasizing the role of interpretation" (my emphasis).[19] The delineation, respectively, is qualified by the focus on phenomena rather than culture, but with the common denominator of a person's "lived experience" often being "inseparable" from culture (Gorichanaz, 2017, p. 4). Pitard (2019, p. 1840), on the other hand, taking a Husserlian/transcendental approach, bridges the phenomenological-autoethnographic gap by deploying 'vignettes' and 'anecdotes' that capture "prereflective stage[s]" (or 'transcendental reductions' in phenomenological parlance), as part of a multi-step analytical framework. The framework progresses through consecutive "layers of awareness that might otherwise remain experienced but concealed, [taking] the reader on a collaborative journey of cultural discovery" (Pitard, 2019, p. 1829). Pitard, thus, manages to successfully merge evocative writing with phenomenological 'variational' questioning, having engineered a design that demands layered interpretation from multiple perspectives in the service of increased reflexivity.[20] As such the *"nuanced, complex* and *insider* insights"* (Adams, Holman Jones and Ellis, 2015, p. 105, original emphasis) that warrant reflection and ignite reflexivity in autoethnography, parallel the phenomenological "insistence on the importance of carefully attending to the phenomena in their full *concreteness*, [and] the importance of unprejudiced descriptions" (Zahavi, 2021, p. 272, my emphasis). Similarly, rapper-researcher Dave Hook (2020, pp. 73–4), opts for an analytic flavour of autoethnography, by building a multi-method "scaffold" around reflexive narratives to "validate and support … findings"—he states that:

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[19] The Heideggerian/existential paradigm stands in contrast to a Husserlian/reflective "analytical isolation of phenomena" (Gorichanaz, 2017).

[20] 'Variational' questioning refers to an active "probing activity" phenomenologists describe as *"variational method"* (Ihde, 2012, p. 23, original emphasis).

in the case of self-analysis of an artist's work, the autoethnographic process is travelling in the opposite direction to the more sociologically inclined creative-writing format of autoethnography championed by Bochner and Ellis (2003). Rather than being designed to find creative ways of sharing and examining work in a traditionally academic field, it is about allowing the artist to take part in analysis and research of their existing creative output.

Despite its particular flavour, however, it is easy to see why autoethnography—with its focus on a "researcher's personal experience … [illuminating] the culture under study" (Ellis and Bochner, 2000, p. 740)—presents considerable appeal to arts-based researchers investigating wider aesthetic phenomena through the lens of their own practice. But this is not without further tensions. Having evolved out of ethnography, and representing a post-structural paradigm shift in social anthropology, autoethnography pursues "ethical agenda", expresses "fieldwork evocatively" (Ellis and Bochner, 2006, p. 445), and uses "our experience to engage ourselves, others, culture(s), politics, and social research" (Adams, Holman Jones and Ellis, 2015, p. 2). These are methodological purposes and conditions highlighting that the leap from culture to aesthetics requires some precaution before autoethnography can be congruously applied to contemporary artistic fields. The concern is expressed, for example, in McRae's (2009, p. 143) music autoethnography, where he admits: "I may not implicate myself or my audience in my performance in resistant ways, but my performance does create and perpetuate a certain aesthetic".

Nevertheless, there have been notable attempts to integrate autoethnography into musicological pursuits, resolving some of these tensions, as is evident by a number of collected chapters comprising *Music autoethnographies* (Bartleet and Ellis, 2009). Here, through a variety of foci, the authors link notions such as "image, gesture and style to cultural expression and identity" (Bloustien cited in Scott-Hoy, 2009, p.

50); improvisation to "the harmonisation of one's musical personality with social environment" (George E. Lewis cited in Knight, 2009, p. 80); and instrumental performance to "the historical, social, and cultural meanings that are layered on and in" (McRae, 2009, p. 149) a particular instrument. Furthermore, and with regard to sonic phenomena, Knight (2009, p. 82) resorts to performative, onomatopoeic inventions to describe the electroacoustic manipulation of his trumpet recordings, offering accounts such as: "thump—wheeze—then process and texturise the sound and listen as it layers up over previously sampled clicks and exhalations"; while Anthony (2018) engages a largely autoethnographic approach to analyse popular music sound mixing as performance using hardware studio equipment. Specifically in relation to Hip Hop, Harrison (2014) deploys an arts-based autoethnographic lens to study underground hip-hop music-making—a study that incidentally recounts instances of sampling that take advantage of improvised live performance as source material. Finally, Findlay-Walsh (2018, pp. 122–3) expands the reach of the method to *sonic* autoethnographies, "swapping the writing and interweaving of texts for the recording and layering of first-person auditory perspectives"; and seeking "to involve and to implicate subsequent listeners in the enquiry, generating productive tensions between different listening perspectives, as well as between different recorded auditory environments".

In summary, a common denominator that persists throughout the majority of self-study approaches exposed here (phenomenological auto-hermeneutics; evocative, analytic, and/or music/sonic autoethnography) is the pursuit of reflexivity, ensured via the integration of a suitably wide interpretive repertoire (Alvesson and Sköldberg, 2018, p. 250). Given the subjective nature of artistic inquiry, it becomes clear that actioning reflexivity can function both as a validating catalyst *and* a driving

force behind multi-layered interpretations of phenomena or experiences. But two final factors—for the purposes of this methodological exposition—require addressing: how to transcend mere reflection over process and achieve critical/true reflexivity, and how to do so via the integration of (artistic) praxis within the research design.

In her award-winning article "On becoming a critically reflexive practitioner", Ann L. Cunliffe (2004/2016) presents a pedagogical framework designed for management education, which is potentially transferable to most creative praxis. Cunliffe (2016, pp. 753–4) proposes that "we [can] make sense of experience" through:

a) "reflex interaction" (action based on "instinct, habit, and/or memory");

b) "reflective analysis" (thinking about, categorising, and explaining an object, "often using theory to help us see our practice in different ways"); and

c) "critically reflexive questioning" (drawing "on social constructionist assumptions to highlight subjective, multiple, constructed realities" and "exposing contradictions, doubts, dilemmas, and possibilities").

Cunliffe's triangle of experiential sense-making mirrors Pitard's multi-stage analytical model, and can offer a malleable structural purview over reflexive multi-methodological designs such as those promoted by Alvesson and Sköldberg (2018). Figure I.1 below provides a schematic representation of the envisioned phases in this research design, mapped against relevant methodological paradigms, and Cunliffe's triangle of sense-making stages. The following sections discuss the mapping in detail.
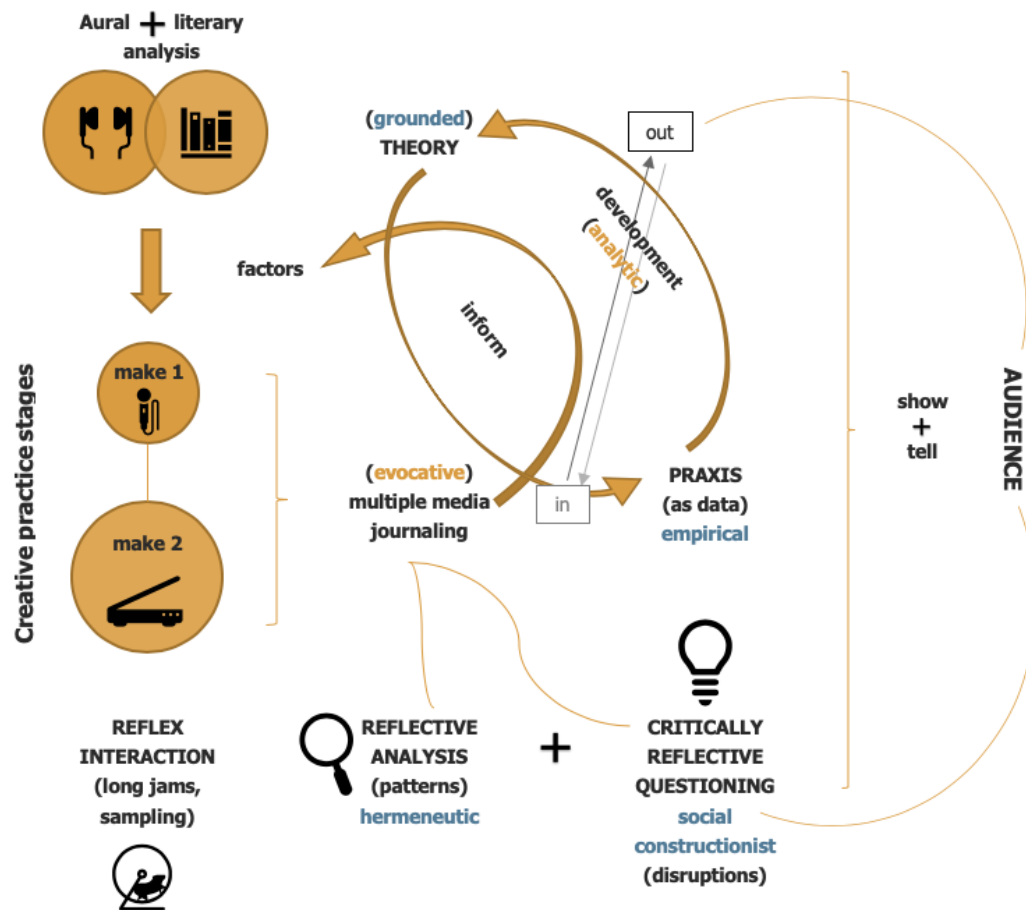
Figure I.1 A schematic representation of proposed phases in the research design, mapped against fitting methodological paradigms, and (Cunliffe's triangle of) sense‑making stages.

Reflex interaction, (grounded theory) and creative praxis

In this project, the praxis of both creating source audio that facilitates a sample‑based creative process, and the sample‑based process itself, offer rich opportunities for *reflex interaction*: using tacit knowledge as a musician, studio engineer, and record producer to create original audio content over these two different stages. Habit, memory, and previous experience as a professional practitioner inform the progression from initial musical ideas (inception) to developing sonic outputs (production). At the source level, this engagement takes the form of responding to abstract musical ideas; sonifying them through instrumental performance; capturing these sonifications with recording technologies; layering further musical ideas (which

follow the same progression from abstraction to sonic materiality); organising structure and form; and shaping and processing the resulting sound through studio haptics and technologies (or their emulation thereof via computer operating scripts). At the sample-based level, the engagement takes the form of selecting audio segments (*digging*), further sonic manipulation, and a percussive style of improvisation, performance, and programming/composition resulting in re-imagined musical phrases (*chopping*/beat-making).

As such, the creative practice experiment facilitates the generation of data, echoing an empirical, grounded theory (inductive) approach. However, as the investigation poses pertinent questions about:

- what is 'phonographic' at the source level of sample-based Hip Hop,

- the aesthetic implications of the past in its sonic manifestation, and

- the material poetics of inter-stylistic synthesis and phonographic juxtaposition,

it also makes sense to inform practice with theoretical preunderstandings. These can take the form of findings drawn from literature, textbooks, and discography that respectively guide the production process through a constructivist accumulation of historical, musicological, and technical detail on sampling processes; past phonographic workflows and technologies; as well as phonographic referencing (through aural analysis for the latter). Figures I.2 and I.3 provide a schematic representation of the discussed phases.

Phase 1

The first phase of the research design involves the analysis of discography, historiographical and musicological literature on the notion of phonographic signatures, as well as literature on sampling practices. The aim is to identify the sonic factors that draw the sample-based producer into the selection of particular audio sources/segments. These factors are pursued and recreated in the following, applied creative-practice phase, and further informed by reflective analysis facilitated by multi-media journaling (as will be discussed in the following section).
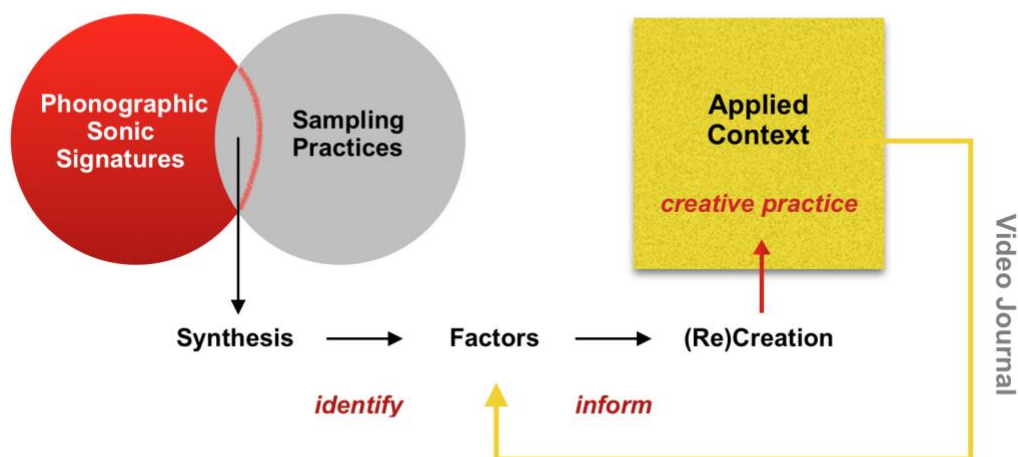
Figure I.2 First phase of the research design depicting the deployment of literature on phonographic signatures and sampling practices to identify key sonic factors influencing sample selection. These factors inform the creation of original source audio in the following, applied creative-practice phase.

Phase 2

The primary stage of the second—applied—phase incorporates the recording, mixing, and mastering of original content, referencing classic phonographic styles and eras. This musical content is performed, composed/improvised, and engineered with the aim of providing a rich pool of raw sonic material for the subsequent, sample-based

stage. The production of the content is informed by historical and technical detail derived from the studied range of historiographical and musicological sources, audio engineering and production textbooks, and aural analysis of discography. The second stage consists of the selection of numerous (typically short) samples from the recordings/masters made in the previous stage, assigned as audio segments to the drum pads of characteristic sampling drum-machines used in the genre: the process promotes a percussive style of improvisation, performance, and composition resulting in re-imagined musical phrases exemplifying the sample-based hip-hop aesthetic (beat-making). The artefacts of this stage are, in turn, mixed as finalised productions (making up the end practice-based outputs of the research project).
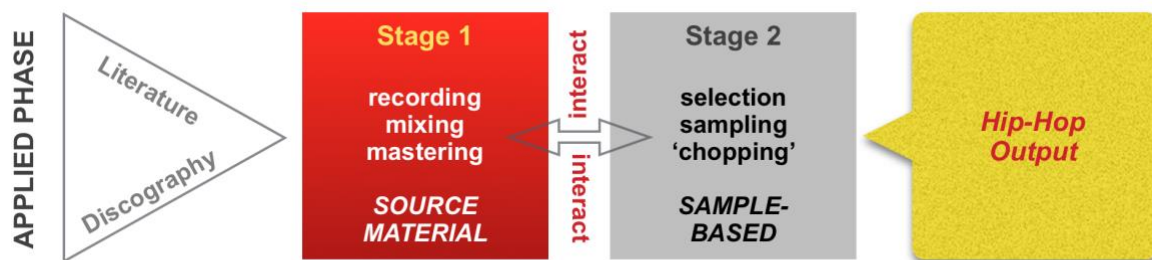
Figure I.3 Second—applied—phase of the research design comprising two practice-based stages. The primary stage involves the recording, mixing, and mastering of original content, informed by historical and technical detail derived from the first phase. The second stage involves the selection of samples from the recordings/masters made in stage one, facilitating the beat-making process that leads to the research project's end practice-based outputs.

Reflective analysis, (hermeneutics) and journaling

The next step in the cycle is to reflect on ongoing practice (and interim outputs) via the use of further theory, reflectively analysing the practice/experience to 'see' or interpret it in developmentally informed ways. *Reflective analysis* here can take a hermeneutic look at 'texts' created out of the practice: these include textual journaling, as well as the capture of praxis through various media (photography, sonic archiving,

video footage).[21] Here, patterns can emerge out of the tacit reflexes, and significant events can be recorded (and acknowledged) in the praxis: what autoethnographers refer to as "aesthetic moments" (Adams, Holman Jones and Ellis, 2015, p. 49), "epiphanies", or "transformative experiences" (Ellis, Adams and Bochner, 2011, p. 275). From an autoethnographic perspective, the creative work in its natural context (studio/technologies) functions as fieldwork, and the varying media used to capture and initially reflect on it offer a range of opportunities for interpretation and "thick descriptions" (Ellis, Adams and Bochner, 2011, p. 277).[22] Textual journaling, for instance, inherently offers an initial level of interpretation as an active recording of events, while photography and video footage represent rich, if more passive (pre-reflective) recordings of events, which in turn require interpretation, description, and added narrative. Autoethnography opts for a 'thematising' of narratives, rather than a strict coding of data, which Adams et al. (2015, p. 77) describe as a search "for *clues*: repeated images, phrases, and/or experiences … [which] helps us imagine a logic or pattern to our narrative and to explicitly connect personal experience with culture" (original emphasis). This form of thinking-in-action has notable benefits when interjected with practice, allowing new theoretical understandings to emerge and positively affect further praxis.[23]

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[21] Hermeneutics is an interpretive paradigm preoccupied with an intuitive revealing of underlying, coherent meaning—or disclosure of truth—hidden within (initially, religious) texts; relying on intuition rather than rigid interpretive rules (and pursuing understanding rather than explanation), hermeneutics questions the text to relate partial or *pre*-understandings to the *whole*, deploying empathy and considering context in order to understand the producers of the texts potentially better than they understand themselves (Alvesson and Sköldberg, 2018, pp. 91–106).

[22] This is facilitated in this project through the use of NVivo—a qualitative research database that enables multi-level coding of text and media through thematic organisation.

[23] One of my key concerns embarking upon the doctoral investigation was to avoid stifling creative flow due to analytical meta-cognition—but I found that the parallel actioning of theoretical development and ongoing practice, opened up new conceptual horizons that inspired a prolific period of creativity, resulting in a stated aesthetic footprint (which the scope of the associated practice-based work should reflect).

It is also possible to conceive of the first creative practice stage in this design as a process of construction that itself carries pre-understandings due to its intentionality, and the second, sample-based stage as an opportunity for *sonic interpretation* (testing and using the content produced in the first stage within a specific stylistic frame). Furthermore, the possibilities offered by contemporary music technology in terms of sonic archiving mean that, from a musicological perspective, it is feasible to closely study the parts, elements, or layers that contribute to the whole (record or phonographic moment), mirroring a hermeneutic, if rather intrinsic, paradigm.[24]

Critically reflexive questioning, (post-structuralism) and the 'outside'

However, the limitation of the hermeneutic approach is the pursuit of a single, underlying, and unifying interpretation. In the context of a self-study this may minimise the verisimilitude of investigative findings, as the interpretive effort can be limited by a sole practitioner's artistic frame. This is where the pluralism of a *critically reflexive questioning* may be of benefit. This multiplicity is expressed in two fundamental ways in this design. Firstly, in the cyclical interplay of theoretical development and creative praxis, developing theories and assumptions become *tested* in what Ihde (2012, p. 108) describes as artistic—resembling phenomenological—*playfulness*: "In actually exercising fantasy variations, the arts echo the Aristotelean dictum that poetics is ultimately more true than history. It is out of possibility that the undiscovered is found and created." Or in Cunliffe's (2016, p. 751) words: "instead of applying theory to practice, critical reflexivity emphasizes praxis—questioning our own assumptions and

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[24] An approach Harrison (2014, pp. 10–12), for example, resorts to in his arts-based autoethnography of hip-hop song making. This project deploys a bespoke track/file-naming scheme as part of its archiving strategy, capturing detailed information about the signal flows pertaining to, and the range of processing—serially—applied to, audio recordings (see chapter 5).

taken-for-granted actions". Producing music within a stylistic frame alone constitutes a *dialogue* with members of an invisible cultural network.[25] These include past and present peers perceived as musical influences, and their works and practices functioning as points of reference and inspiration. Small (1998, pp. 203–4) argues that "since style is concerned with the way in which things relate, it is itself a metaphor for the way in which the society conceives of the pattern which connects".

A second, more direct strategy is to seek peer or audience interaction, feedback, and involvement, in response to developing research outputs. Examples may include creative collaboration, public performances or dissemination of audio(visual) works;[26] presentations of findings at academic conferences; and the publication of interim texts communicating ongoing research.[27] Further examples here include collaboration with other artists in the recording studio;[28] and semi-structured interviews with peers, which have unveiled a level of personal and technical detail that would be unlikely to acquire from aural analysis alone (at times correcting assumptions drawn and offering nuanced geo-cultural rationale for essential innovations leveraging inter-stylistic syntheses).[29] These have provided holistic understandings of contextual and cultural factors contributing to unique production signatures.

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[25] Williams (2010, p. 27) refers to this as an "imagined community".

[26] Edited segments of the project's video journal, for example, are public-facing as part of the #HipHopTimeMachine vlog, available at: https://www.youtube.com/channel/UCsNRAkIU9wG4GtjBxV3y0hg

[27] Chapters 1-5 comprising the main body of this thesis (as well as auxiliary texts referenced throughout) have been published in earlier form as articles or chapters in journals or edited book collections following conference presentations; these constitute outcomes of a strategy to produce research outputs *during* the doctoral project and benefit from peer feedback and ongoing discourse *as part* of the bricolage design.

[28] Specifically, in the guise of: song-writing and producing original content with musical partners Jo Lord and three-piece band Fet47; and recording and mixing for Latin band Sarabanda and Afro-Cuban band Grupo Lokito. In all of these scenarios, I have previously agreed access to source material for sampling purposes (in the case of the latter bands, in exchange for providing engineering services).

[29] See, for instance, Amerigo Gazaway's retelling of the software-assisted extraction of BB King bassist's rhythmic signature to trigger synthetic sub bass in chapter 1.

A note on aural/phonographic analysis and its phenomenological dimensions

A crucial tool deployed in the analysis of the sonic domain in this study that cannot be taken for granted, is the process of *listening.* In *Recording analysis: How the record shapes the song*, Moylan (2020, pp. 59–60) acknowledges that "listening is personal", so it is important to consider more explicitly how personal observations and evaluations of aural phenomena can illuminate wider cultural practices (of the imagined beat-making community). In resonance with previously discussed precautions relating to auto-methodologies, a systematic exposition of listening as an analytical process can be beneficial for the transferability of findings. In *Recording analysis,* Moylan (2020) offers an analytical framework that adopts a phenomenological systematicity toward describing, deconstructing, and explaining aural phenomena contained in phonographic records through the listening experience. Moylan here adheres to fundamental rules of the phenomenological method— attending to phenomena of experience as they appear (sound); beginning with description, not explanation; avoiding hierarchical assumptions or judgements; and drawing out "*essential*", "*structural features* or *invariants* within phenomena"—to identify patterns across multiple phonographic examples (Ihde, 2012, pp. 2–22, original emphasis). He does so by breaking down all aspects of phonographic content into music (elements), lyrics, and recording (material attributes) domains, and these, further, into elements and material content that become the subject of focused study. He adopts visual representations graphing these materials and their interaction as a means to capture nuanced aspects of the audio phenomena, "crystallise" them (Moylan, 2020, p. 338), and bring them closer to textual/visual reification for critical examination. Finally, he stresses the importance of specifying the analytical vantage point and choice of domain-focus as part of the musicological interpretation. In this

way, Moylan's 'personal listening' intent functionally satisfies Ihde's (2012, pp. 27–31) "reflexive move":

> Analysis moves from that which is experienced toward its reflexive reference
> in the how of experience, and terminates in the constitution of the "I" … the
> phenomenological "I" takes on its significance through its encounter with
> things, persons and every type of otherness it may meet.

The chapters comprising the main body of this thesis adopt this analytical paradigm to draw out the material *invariants* contributing to the sample-based aesthetic, with a focus on elements of the sonic domain—taking a variety of 'probing' approaches facilitated by the multi-method opportunities contained within the bricolage design. As such, the stance assumed towards knowledge (articulated or emergent) subscribes to Kincheloe's *critical constructivist* position that it "is temporal and culturally situated" (Kincheloe 2005a, cited in Rogers, 2012, p. 10). It also aligns with Kincheloe's "symbiotic hermeneutics" approach, which according to Rogers (2012, p. 10) "means that bricoleurs seek out ways that phenomena are interconnected with other phenomena, and socially constructed in a dialogue between culture, institutions, and historical contexts". In all, the bricolage design synthesises autoethnography, hermeneutics, ethnographic strategies (interviews), aural and literary analysis, and arts-based inquiry to facilitate a phenomenological questioning of phonographic phenomena in the context of sample-*creating*-based Hip Hop.

Structural organisation

The following chapters deploy bespoke combinations of the methodological strategies comprising this bricolage palette, in order to deal with the respective foci from a number of perspectives and offer triangulation (or *variations,* in the

phenomenological sense). A crucial catalyst for the theoretical positions that will emerge, remains my specialisation as an audio engineer, providing a (trained) *mixing* lens/ear to the sample-based investigations and phonographic deconstructions that follow.[30] Mixing craft in the case of sample-based musics, constitutes much more than a post-production process: it is an essential praxis responsible for, and situated at the heart of, their inception and creation. It is also the means by which the sonic character of their outputs and unique timbral footprint are negotiated, sculpted, and manifested. The materials 'jammed' within sample-based practice may appear like motifs, 'hooks', or phrases to the listener, but they really are the perceived music-language abstractions emanating out of the interplay of phonographic objects. These objects, the research will show, are in themselves complex material entities rich in elements pertaining to the sonic domain—their poeisis (manipulation, interaction, and juxtaposition), resulting in aural phenomena of sublime aesthesis, both for makers (inspiring creation) and listeners (enticing reception). In pragmatic contexts, where the raw materials necessitate a *reimagining*, the study of the underlying mechanics can empower informed creativity and, potentially, *innovation*. As such, the conceptual framework that emerges for a reimagining of sample-based Hip Hop—and which underpins the evolving practice and remainder chapters—can be summarised under the following pre-understandings:

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[30] Ihde (2012, p. 95) argues for a pragmatic post-phenomenology that interacts with other disciplines so as to offer verticality of variational method:

> to be informed, phenomenology must necessarily rely upon other disciplines. Its view of these disciplines, and particularly its interpretation of what they are doing, may be widely different from what those within the disciplines interpret their task and method to be, but without these other disciplines, phenomenology would be restricted to the realm of first-person experience. Intersubjective phenomenology is necessarily interdisciplinary phenomenology.

i) Sample-*creating*-based practice is part of a contemporary artistic-cultural zeitgeist— responding to crisis (necessity) with (creative) synthesis

ii) Beat-making is a manifestation of 'play' with sonic objects

iii) Source objects in sample-based Hip Hop are constructs communicating phonographic context, typically characterised by past sonic signatures

iv) The appeal of the sample-based aesthetic is the result of a juxtaposed phonographic poiesis, interacting with previously crystallised phonographic poetics

v) Newly recorded live performance benefits from a sonic 'distancing', which can be expressed through mixing practices that imbue spatial and temporal qualities in their *staging*

vi) The staging manifestations of sonic-domain relationships are expressed as material ephemera that facilitate a fertile palette of creative opportunity for sample-based music making.

Chapter 0 functions as a juncture between this introduction and the main-body chapters of the thesis, firmly placing myself as the author at the centre of the phenomenon. Having come face-to-face with the described conundrum in the context of a career as professional musician, the realisation is narrated as a tale of pragmatic ultimata requiring resolution. The narrative leads to an interpretation of the experience as an opportunity for a practice-based examination of alternative sample-based approaches (the *need-for-study* area), recognising their implications for a wider creative community. Sample-*creating*-based practice is therefore deliberately framed as a response to this arising necessity, and its manifestation explored as part of wider contemporary artistic trends. The chapter addresses the geographical remit of the project, contextualising my experience as a European hip-hop artist (a UK-based beat-

maker rapping in Greek), who sonically communicates through—and creates from within—an African-American stylistic lexicon. This frame presents an opportunity to examine the implications of the contemporary sample-licencing landscape on beat-making creative practices from a universal, diasporic lens. Opting for autoethnography (and a neonarrative writing ethos) to kick off the multi-methodological strategy, the interpretation of personal studio practice rendered as fieldwork enables the extraction of developmental interpretations from the textual (journal), sonic (archiving), and (making-of) video data collected. The process, in turn, leads to reflexive understandings, connecting the insider practice to the larger aesthetic phenomenon. As Ramsey, Jr. states in *Race music* (2003, p. 22), one of the goals of such projects is "to have readers understand something about some of the sources and grounding of [the author's] own critical voice and biases".

Chapters 1-5 thematically encompass the sequence of creative stages typically comprising a music production trajectory, with respective foci on:

1. (inter-stylistic) *composition;*

2. (re)*engineering;*

3. (the 'magic' of sample-based) *production;*

4. *mixing* (records within records); and

5. (a form of 'exponential') re/*mastering.*

In chapter 1—through the merging of literary analysis, phonographic case studies (enriched by semi-structured interviews with practitioners), and own creative practice—the bricolage approach takes *Blues Hop* as a subgenre case-in-point: the objective is to illustrate how sonic pursuits, informed by a sample-based aesthetic context, drive compositional innovation (with motivic, harmonic, and *textural* implications). Structurally, the phonographic case studies assume an inverse probing

direction, starting with the analysis of music domain utterances, to expose their underlying sonic rationale and hidden dimensions. As proposed by the research framework, this exposition aims to reveal the compositional, performative, and (inter-)stylistic resonances of beat-making, when understood as a creative form that prioritises sonic objects in its interplay. The interviews carried out with remixer extraordinaire Amerigo Gazaway and rapper Abdominal (and the Obliques) illuminate the phonographic analysis with insider knowledge (a Salaam Remi production for a Nas track is also put under the aural microscope); while the ensuing deconstruction of an original blues composition written to provide the raw sonic content for subsequent beat-making is added to the bricolage mix. Accompanied by work-in-progress soundbites extracted from the sonic archiving, the musicological findings are expressed in both sonic and textual terms, amplifying the performability of the process(es), and demonstrating the Afrological dimensions of the percussive reimagining of multitrack content via the use of sampling drum machines. Furthermore, the chapter extrapolates on the cross-genre implications of the, a priori, inter-stylistic workflows discussed.

As sample-based practitioners have been pursuing alternative routes towards music creation, including the recording of live instrumentation and the production of intermediate sampling material, it is important to consider the variables that enable an effective interaction between original source content and the hip-hop process. Chapter 2 addresses source objects deployed in sample-based Hip Hop as constructs that communicate phonographic context, typically characterised by past sonic signatures. It proposes that Hip Hop's 'meta' aesthetic is borne out of the fusion of sampling processes and phonographic signatures, examining the bi-directional dynamic involved in their (re)construction, and questioning the genre's complex relationship

with the past. Covering, but also expanding beyond, a deterministic approach to re-engineering that classifies signal flow variables, the chapter problematises the notion of phonographic context, extending the understanding of record production as—a form of material—composition. Four aesthetic deductions form the main arguments of the text (the function of nostalgia, the amount of historicity required, the notion of phonographic 'magic', and the irony of reconstruction), paving the way for the foci of the following chapters; and drawing parallels between the reconstructive phenomena in hip-hop practice discussed and a wider *metamodern* "structure of feeling" (Vermeulen and Van Den Akker, 2010) observed in contemporary culture.

Since rap producers attribute an inherent 'magic' to working with past phonographic samples and fans appear spellbound by the resulting sonic collage, chapter 3 examines the music's unique recipe of phonographic juxtaposition. It does so by exploring the conditions of this ascribed 'magic', investigating gaps in perception between emotional and intellectual effect, and deciphering parallels in the practice and vocabulary mobilised against a range of genres in performance magic. The chapter traces the appeal of the sample-based aesthetic in the creative and performative interplay between multiple levels of phonographic poetics crystallised in material (sonic domain) form. By taking a systematic approach to deconstructing examples from discography and blending the aural analysis findings with practice-based investigations, it illustrates—via schematic representations—exponential staging phenomena recognised as essential for the music's mesmerising effects. The notion of staging is therefore extended to cover the striking juxtaposition of spatial illusions taking place in sample-based record production.

By looking at sample-based record production through the lens of "meta-music (music about music)" (Mudede, 2003), chapter 4 amplifies the multitude of material

implications this understanding has for the musicological study of sample-based Hip Hop. Therefore, the chapter questions what renders a sampled source into a phonographic object—a phonographic 'other'—that is aesthetically desirable for, and usable in, the context of hip-hop record production: what are the mechanisms, processes, and practices that infuse sonic signatures of phonographic *otherness* onto newly created objects, and how can this 'otherness' be defined? The chapter acknowledges that newly captured live performance benefits from a sonic 'distancing' or infused alterity, and explores how this quality may be expressed through mixing practices that consciously imbue spatial and temporal dimensions in their staging. Synthesising the technical with the aesthetic, the chapter deciphers the exponential staging phenomena situated at the heart of how this 'otherness' is negotiated (and constructed) in practice. Sections focus on the spatial-textural continuum, the sonic draw of samples, as well as notions of multi-dimensionality, juxtaposition, and additive processes in sample-based music making. The gap between live performance and the phonographic sample is re-addressed, a sample's 'aura' deconstructed, and the notion of making records—*not recordings*—within records further exposed.

The final chapter attributes the appeal of past phonographic signatures also to *mastering* practices, extending the investigation beyond the recording and mixing realms, and deconstructing how their sonic manifestations interact with beat-making. The chapter proposes that the staging manifestations of sonic-domain relationships materially crystallised within phonographic *masters* present a fertile spectrum of malleable variables in the hands of beat-makers. In this context, the lesser attention given to the sonic 'object' calls for a focused examination of the specific variables involved in the fusion of 'past' (or previously constructed), and present phonographic processes. This inquiry focuses on the merging of 'staging' illusions as a subset of

such variables, questioning how full-range masters function as source content in sample-based engineering and production practices. The examination explores how hip-hop producers negotiate the dimensions of 'depth,' 'height,' and 'width' imbued into masters when used as sampled sources; but also the ways in which beat-makers stage previously-constructed mix architectures into newly-juxtaposed sonic illusions.

At the end of each chapter, a recommended chapter playlist (in order of track appearance in the text) outlines the beats discussed, deconstructed, exemplified in, or informed by the text, provided as sonic summaries of the theoretical notions manifested in the practice-based component. Some of these tracks appear in more than one chapter, as they express multiplicities of theoretical notions or expositions, and contain sonic elements that warrant discussion in multiple sections.

Chapter 0

Sample-based Hip Hop as metamodern phonographic practice:

An autoethnography of oscillating between—*and beyond*—analogue nostalgia and digital futurism[31]

> …the purpose of this essay, much like the purpose of metamodernism itself, is merely radical transparency. Indeed, the point is to capture both the sincere and the cynical components of transparency, as transparency means revealing everything in a given "field" — not just what we're comfortable sharing. (Abramson, 2018)

At the end of my first ever academic paper presentation, sometime in the summer of 2016, the conference organiser—an old colleague of mine—asked: "you know this is impossible… why are you doing it?" I jokingly responded, "masochism", before providing a somewhat more scholarly answer. The impossibility he was referring to was the creation of sample-based Hip Hop out of self-made music samples. This was the objective I had set out to—practically—pursue, and—theoretically—question, as part of this doctoral research project; itself the next step in a ten-year career as hip-hop artist, and incorporating my fourth solo album as applied context.

During the presentation, I played a snippet of a blues idea I had performed and recorded in the home I had been renting, for the purpose of turning it into a hip-hop sample. It featured upright piano, blues harp, acoustic drums, and electric bass. Having occupied the first floor of that house during the making of my last three albums,

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[31] This section of the thesis has been presented as part of a video paper at the *London Calling: IASPM UK & Ireland 2020* online conference (Exarchos, 2020a) and can be accessed at: https://london-calling-iaspm2020.com/mike-exarchos-university-of-west-london-uk/.

the place had been gradually converted into a home studio; not unlike the DIY setup Joe Meek had fashioned out of the rented property depicted in the *Telstar* documentary (Moran, 2008), albeit featuring somewhat less vintage equipment. The house's box room—now functioning as a drum booth—had been treated with re-upholstered acoustic material deemed obsolete by the university where I used to work at as a music production lecturer. I had turned one of the bedrooms into a control room, with cables connecting its mixing console to the adjacent rooms' microphones. The microphone cables could just about fit under the old house's skewed doors (and in one case, I had to saw off the lower tip of a door to squeeze through a thicker cable loom, hoping the landlord would not notice). Thick rugs doubled as both absorption material and means to cover the cabling. In what was the actual bedroom, I sacrificed the space previously occupied by a double bed to fit in the piano, and now a sofa bed situated across it provided mild absorption and a seating/sleeping solution. Inspired by my trips to maverick studios in the US—particularly Chess Records in Chicago and Sun Studio in Memphis—I would sometimes use the bathroom as an 'echo chamber', connecting a speaker and microphone to my recording interface, sending the instrumental recordings to the bathroom speaker facing the tiles, and experimenting with capturing different levels of reflection at varying angles.[32] I had definitely been emboldened by researching the 1950s "sound of musical democracy" (Zak III, 2018).[33]

Comparing the blues examples *before* and *after* the 'echo chamber' treatment, I remember scanning the conference floor for reactions—as I would often do when rapping in concerts—and noticing the co-organiser, also a colleague, meta-bob

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[32] The following #HipHopTimeMachine research vlog episode accounts some highlights from these trips and demonstrates how the echo chamber concepts were applied in a DIY sense—available online at: https://youtu.be/lfdABBRe4Ww.

[33] In 'The death rattle of a laughing hyena: the sound of musical democracy' (2018), Zak demonstrates how the pop mainstream landscape of the 1950s was reshaped by records made by maverick producers in small or home studios, contributing to a precursor of what would later be defined as a 'lo-fi' or DIY sound.

positively to the echo-chamber-treated ride cymbal, extending what I perceived as a sonically satisfied smile. I appreciated the silent feedback, as I felt rather self-conscious about only being able to play the piano well—my main instrument, long before I fronted any of my beats as MC. I had only picked up the bass a few years prior, and this recording featured some of my first ever attempts at performing acoustic drums and the blues harp. But I kept reminding myself that the point here had been to create and then capture useful phonographic moments for subsequent sampling, not to showcase musical 'chops'. Furthermore, these moments had to be steeped in vintage sonic signifiers—"sonic signatures" (Zagorski-Thomas, 2014, pp. 66–69)—as far as the recording and mixing artefacts were concerned, in order to be effective; or so my initial hypothesis went. I was trying to reach beyond the more abstract music domain arguments dominating hip-hop musicology and demonstrate the implications of the sonic materiality (the architectural make-up) of the phonographic moment for sample-based music producers—what Zak (2001, p. 89) refers to as phonographic "ephemera". My aim had been to analyse the sonic mechanics and underlying patterns of what makes an effective, impactful, and—dare I say—'authentic' sample. Zak (2001, pp. 41–42) highlights the impact that a recognition of sonic materiality can have on musicological analysis:

> What must not be overlooked, however, is that records, unlike scores, also have *material* content. That is, ... they insist as well on being exactly what they are: sound, directly experienced. Interpretation that fails to take this into account will inevitably distort the picture in some way. (original emphasis)

The research project had, thus, been originally entitled: 'Applying vintage production techniques to contemporary Hip-Hop in pursuit of 'sample-based' impact and authenticity: Producing multiple records within a record'. But in its revised and

current title, I have only retained a paraphrasing of the latter part, which encapsulates the praxis ('Reimagining the 'phonographic' in sample-based hip-hop production: Making records within records'). I gradually came to view the sonic manifestation of the *past* in samples—via the deployment of vintage production techniques—as more of a surface (textural), albeit important, characteristic (this is extrapolated in detail in Chapter 2). But where, and why, did this painstaking journey toward the creation of original sample content commence?[34] And how does this interplay between (re)engineering analogue production signatures and contemporary digital praxis lead to metamodernism?

Wayne Marshall (2006, p. 869) has accurately identified the predicament facing contemporary beat-makers in his article, 'Giving up hip-hop's firstborn: A quest for the real after the death of sampling':

> Producers working for large record labels, enjoy production budgets that permit them to license any sample they like ... Independent and largely local artists, operate well enough under the radar to evade scrutiny or harassment and continue to sample with impunity ... Acts with a sizeable national, if not international, following but who lack the resources of a "major label"—find themselves in a tight spot: to sample or not, to be real or not, to be sued or not?

That is exactly the 'spot' I found myself in at the brink of signing a major-label contract with my second (and rather sample-laden in its pre-production) album. Although my presumptions of benefitting from major-label resources did align with those described by Marshall, the national—rather than international—exposure I was about to embark

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[34] Episode 0 of the #HipHopTimeMachine research vlog provides an autoethnographic account of the birth and aims of the project in the form of a video narrative—available online at: https://youtu.be/U0wyMoTjp5E.

on, brought me face to face with the dilemmas of a worldwide beat-maker majority: *having to seek alternative routes toward sample-based authenticity*. It was also clear in my mind—as myself and musicians in my immediate network could indeed play instruments rather well—that this was an issue of sonic, not motivic, authenticity. The experiments of this and the next album made it clear that there was an essential difference between chopping, juxtaposing, and manipulating segments of *recordings,* as opposed to doing so with segments of *records*; and even a momentary snippet of the former rather than the latter carried notably different aesthetic value within a sample-based context. The Bomb Squad's Hank Shocklee (2004) encapsulates this issue best:

> We were forced to start using different organic instruments, but you can't really get the right kind of compression that way. A guitar sampled off a record is going to hit differently than a guitar sampled in the studio.… It's going to hit the tape harder. It's going to slap at you.… So those things change your mood, the feeling you can get off of a record. If you notice that by the early 1990s, the sound has gotten a lot softer.

In Chapter 2, I theorise about the aesthetic issues with making one's own samples, and question the function of—and need for—the manifestation of the 'sonic past' within them.[35] I observe that sample-based Hip Hop sonically celebrates the interaction of old and new music as part of its recipe. Therefore, beat-makers who create their own source content consciously invoke vintage sonics in its production, to stylise it appropriately for, and inspire, subsequent sample-based music making. The trend can be observed in the production approaches of many contemporaries, from

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[35] The chapter has been published in an earlier form as a book contribution to *Innovation in music: Performance, production, technology, and business* (see Exarchos, 2019c).

Portishead and Boards of Canada, through to J.U.S.T.I.C.E. League, Frank Dukes, Marco Polo, and De La Soul (for more on this, see Exarchos, 2018). To offer a number of representative examples, we can observe: De La Soul with *And The Anonymous Nobody* (2016), getting themselves out of their "digital limbo" by recording over 200 hours of live music to then sample (Cohen, 2016);[36] J.U.S.T.I.C.E. League adopting a thoroughly researched form of sonic archaeology to power the orchestral backbone to hits such those by Rick Ross (Law, 2016); and Frank Dukes becoming a multi-instrumentalist and sample-library company owner on his way to reverse-engineer original, but retro-sounding samples (such as those powering hits by Kanye West and others) (Whalen, 2016).

The apparent irony in such a (re)constructive notion, however, lies in the creation of original music recordings, only to imbue them with artificial retrospective qualities. I found myself struggling with this conundrum. I knew my practice of making new samples of stylistically old (and old-*sounding*), yet original, music was an honest reaction to a creative issue I had faced in my professional work; and one shared by beat-makers worldwide. As an adolescent who played keyboards in bands—and forever jammed with friends and colleagues as a means of socialising *and* communication—I also really enjoyed performing in the more traditional sense, and truly loved many different forms of music (especially, the Blues, Funk, Punk, and various other forms of heavy Rock). In fact, I vividly recall how *Ill Communication* by the Beastie Boys (1994) unified all stylistic dichotomies I appreciated under one lo-fi, noisy roof and became an album that defines me to this very day; it also worked as a

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[36] Finn Cohen (2016) describes the unavailability of De La Soul's first six albums on downloading or streaming platforms as a "Legacy … Trapped in Digital Limbo"; and goes on to trace the "complication … in the language of the agreements drafted for the use of all those [phonographic] samples", which "do not account for formats other than CDs, vinyl LPs and cassettes".

legitimisation of my diverse tastes to my rather stylistically 'tribal' groups of high school friends. One of the reasons I think Hip Hop did become my main expressive vehicle is this very inclusiveness of other musics within it: being *inter-stylistic* by default (I expand on the inter-stylistic aspect of Hip Hop, discussing the material implications of compositional hybridisation, in Chapter 1).[37] So, it is no surprise that the culmination of my musical and academic careers under this research project became an experiment in sampling my other stylistic personas under the very boom-bap aesthetic that defined the decades that… defined me.[38] In the years since the project begun, I would spend periods of three-to-six months completely immersed in living, breathing, listening to, playing, and recording just one particular genre of music, which I would subsequently sample (see figure 0.1 for a stylistic mapping of source content to end sample-based productions). My process consciously resonated with Simon Frith's (1996, p. 111) dictum that: "Making music isn't a way of expressing ideas; it is a way of living them". The stylistic personas inhabited through active participation in these musical genres have enabled the construction of serial musical identities, simultaneously both ideal, "what [I] would like to be", and real, participating in the "social world[s] … enacted in musical activities" (Frith, 1996, p. 123). Sometimes, the approach involved picking up new instruments characteristic of the genre/style and practicing them until I could perform them functionally enough on record. I would filter my listening habits to only relevant discography and playlists during these periods. I would also consistently study the sonics of that era, representative studios, and labels (which often involved research trips to these locations): what were the rooms,

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[37] The chapter has also been published in an earlier form as an article in the *Journal of Popular Music Studies* (see Exarchos, 2020b).

[38] Boom Bap is a subgenre/style of Hip Hop, referring onomatopoetically 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 (see Exarchos, 2019a).

instrument setups, amplifiers, microphones, mixing desks, signal paths, and production workflows deployed?
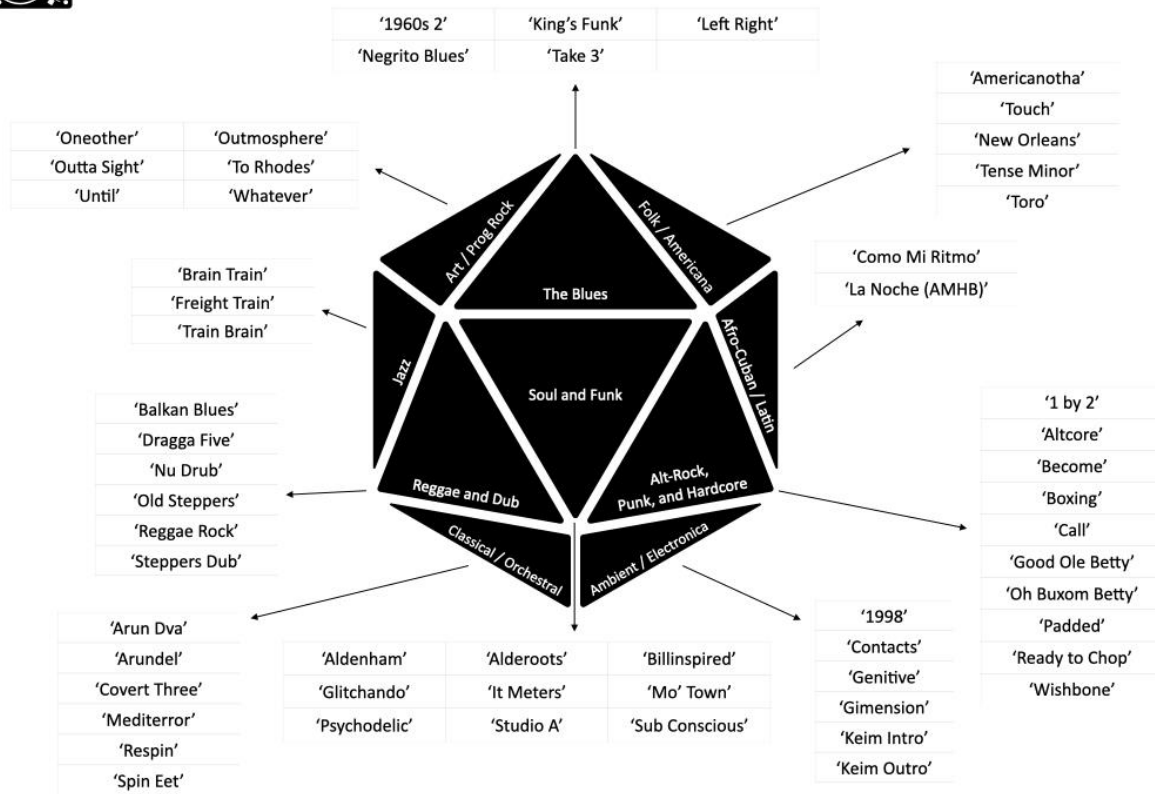
Figure/multi-table 0.1 A mapping of the genres/styles of source audio produced to facilitate the beat-making process, mapped against tables of the final sample-based productions comprising the project's practical component. Note that the mapping only indicates source content that serves a foundational function in the end beats—there is much overlap between source elements from different stylistic categories and secondary layers in many of these productions (for example, *hardcore* vocal samples serving an ornamental function over *classical/orchestral* fundamental layers in beats like 'Arundel', or Augustus Pablo-inspired melodica from the *dub* pool of source content serving as a lead element in *soul/funk*-driven beats like 'Billinspired'; drum samples tend to be the most featured element behind such overlaps—percussive *rock* or *soul* loops can be found behind virtually every end beat).

And, yet, a number of underlying issues made me uneasy. Firstly, was this synthesis inorganic and led by a *script*? And by script, I refer both to the academic hypothesis at the heart of this research project, and the creative frame drawn by the sample-licensing limitations highlighted by Marshall. I took solace in the fact that expert peers whom I respected—such as the artists/producers mentioned above—

were also indulging in the self-sampling practice, and this kept me going creatively.[39]

Secondly, I was aware that my classical piano upbringing in the WAM tradition had inadvertently planted some lone-white-man-genius seeds in my inherent respect barometer (and compositional ideology).[40] The classical music paradigm (and especially the pedagogy perpetuating it) had come to conflict with my 'real' musical life before, first when I joined high school bands and found that any dexterity and sight-reading skills I may have acquired from it were pretty useless without a basic grasp of the blues scale, or a modicum of improvisational ability.[41] In the context of falling in love with Hip Hop—and much other sample-based Electronica of the 1990s, from The Prodigy through to Massive Attack and Fat Boy Slim—the conflict manifested again when I realised that the sonic *aesthetics* I was drawn to were, in fact, largely sample-based in their *poetics*. Sitting in my first computer-sequencing class of a Music Technology degree in 1996, I was aware that my Electronica sounded inferior in comparison to my influences, courtesy of its dependency on legitimate yet sterile sound libraries blindly adhering to the General MIDI protocol. Furthermore, the music (and sonics) I was drawn to resonated in no small way with Afrological, cyclic sensibilities as eloquently explained to the academic world by Tricia Rose (1994) in *Black noise,* Guthrie Ramsey, Jr. (2003) in *Race music,* or Lauren Kajikawa (2015) in *Sounding race in rap songs* (and other excellent scholars; in reference to Jazz and improvisation, for example, see Lewis, 2017). To sum up, I was questioning whether

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[39] For instance, Griselda/Shady Records collaborators Beat Butcha, Conductor Williams, Just Blaze, Alchemist, and Daringer exemplify the contemporary boom-bap resurgence in their footprint often via non-phonographic sampling. Westside Gunn's *Who Made The Sunshine* (2020b) is a case in point, as the artist proudly announced: "I wanna thank @daringer @beatbutcha_soi @conductorwilliams @justblaze @alanthechemist for the production of the album IT HAS NO SAMPLES!!!!!!!!" (Gunn, 2020a).

[40] The WAM acronym refers to Western Art Music.

[41] In her article, 'Getting it right: Why classical music's "pedagogy of correction" is a barrier to equity', Anna Bull (2021) questions "[w]here … the balance lie[s] between getting it right and letting pupils go their own way", and asserts that in classical music this pursuit, "with its ideals of being faithful to the score and the composer's intentions … perhaps reaches its zenith".

the synthesis this project was attempting was: a) (pun intended) too synthetic (read scripted); and b) too much of a compromise (or resolution?), opening the door for WAM compositional objectives to trickle in to the Hip Hop I was trying to make (even if this was a case of legislative necessity becoming the mother of creative invention.) Although initial experiments filled me with hope, philosophically, I was still worried about the creative legitimacy of the journey rather than the actual outputs at this stage. I guess my colleague's words still resonated: "you know this is impossible…" Was this a valid way of making music? How did I fit in within the wider fabric of contemporary "musicking" (Small, 1998), politics, culture, and art?

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Enter Metamodernism. Much like Shia LaBeouf's eureka moment (Wisecrack, 2016), or Abramson's (2018) discovery (beautifully and reflexively told in his blog entry 'On metamodernism'), when I came across Vermeulen and Akker's (2010) 'Notes on metamodernism', and Turner's (2011) 'Metamodern manifesto', I felt the tectonic plates shift underneath my musical and philosophical feet. I felt understood. I felt explained. After further reading, I realised that the tectonic plates in question had actually shifted much earlier in the new millennium—the alignment I was experiencing was simply a delayed recognition of my own condition as part of this new "structure of feeling" (Vermeulen and Van Den Akker, 2010).[42] And my convoluted practice started to make sense as part of it, too; it was a "romantic response to crisis"—a phrase consistently used to describe much metamodern art today (Abramson, 2017b).

But let me rewind for a moment… What *is* Metamodernism? Proponents of Metamodernism describe it is as "a new cultural, political, scientific, and social

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[42] Abramson's (2016, 2017a, 2017b) Huffington posts are excellent, as are Brent Cooper's (2017, 2019) Medium essays on Metamodernism, and almost every article on Metamoderna.org (*Metamoderna*, 2021), alongside fictional philosopher Hanzi Freinacht's (2017) *Listening society: A metamodern guide to politics*.

movement representing a post-ideological, open source, globally responsive, paradox resolving, grand narrative" (Cooper, 2017); or more laconically, a "cultural philosophy of the digital age" dominant since about 2005 (Abramson, 2017b), "meant to replace postmodernism [which] can't come soon enough" (Cooper, 2017); also "a philosophical system, an intellectual stance, an artistic sensibility, the current cultural zeitgeist, or the "structure of feeling" of the times in which we live" (Salguero, 2019). Its mantra? That "reconstruction must (finally) follow deconstruction" (Freinacht, 2015).

> Generally speaking, metamodernism reconstructs things by joining their opposing elements in an entirely new configuration rather than seeing those elements as being in competition with one another. If postmodernism favored deconstructing wholes and then putting the resulting parts in zero-sum conflict with one another—a process generally referred to as "dialectics"—metamodernism focuses instead on dialogue, collaboration, simultaneity, and "generative paradox" (this last being the idea that combining things which seem impossible to combine is an act of meaningful creation, not anarchic destruction). Metamodernists will often say that they "oscillate" between extremes, which really just means that they move *so quickly* between two extremes that the way they act incorporates both these two extremes *and* everything between them. The result is something totally new. (Abramson, 2017b, original emphasis)

The oscillation described hit a nerve when it came to how I felt transitioning between my blues, funk, rock, country, or punk personas; but also my roles as their recording, mixing, or even mastering engineer; and finally as the beat-maker juxtaposing and manipulating these previous creations. In a recent article where I was examining the pedagogic implications of the idea, I noted:

Sample-based Hip-Hop is a form of 'meta' record-production process, as it involves the application of phonographic processes upon material that has itself been the result of a phonographic process … Part of its mechanics is this very manipulation of content that was created without the meta-genre in mind: a funk or soul record made for its own sake, with its inherent syncopation used or abused, exaggerated and overexposed through repetition and reprogramming, chopping and truncating within the new context. This raises important questions about the amount of distance that should be practised when creating source content for incorporation into a sample-based hip-hop approach. (Exarchos, 2018, p. 55)

The research journal maintained throughout the project is full of reflections about getting too attached to 'songs' made in the earlier phases, initially creating beats that were far too respectful of the original structures, and eventually accumulating enough source material to afford sufficient distance from the raw content.[43] I found out that this "overlap (of) multiple subjectivities – … allowing yourself to be many different people at once without putting any one of them at the forefront" (Abramson, 2017b) was also congruent with the metamodern condition; importantly, and conversely to postmodernism, "metamodernism holds that overlapping different identities [does not destroy but] only *empowers* all of them" (Abramson, 2017b, original emphasis). As I continued studying metamodernism as an artistic sensibility, I realised that its proponents had become rather systematic in identifying traits that make one metamodern, providing detailed manifestos, colourful descriptions, typologies of principles, and even comparative charts against modernism and postmodernism. Cross-referencing the discourse against the nuances of the self-sample-based

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[43] Numerous 'vignettes' throughout the forthcoming chapters will illustrate.

practice, I could not ignore the correlation, indicating that the process had to be an artistic manifestation of the larger paradigm.

Later beat-making experiments evolved to involve a re-composition of the constructed source materials' staging architecture, by allowing myself to open the door to multitrack elements rather than just the end (stereo) master (see Chapter 5); this was more akin to remixing really. Initially, I felt the access limitation was more 'authentic' processually, but an interview with Amerigo Gazaway (2016)—shedding valuable light on his multitrack sampling mashup approach—and my new-found metamodern boldness, empowered me to explore the rupture.[44] As Abramson explains:

> A great example of a metamodern phenomenon is the "remix." When a musician remixes someone else's work, in a sense what they've created is dependent upon what someone *else* has created—that's one "pole"—and in a sense what they've made is something entirely *new* (a second pole). Is a "remix artist" a scavenger or a creator? Is their artwork old or new? Well, both! And therefore, in a sense, neither. In other words, when you're simultaneously creating and scavenging you are doing something that is both of those things and *also* an entirely new thing. Namely, you're *remixing*.
>
> This idea of "doing both of two very different things at once to create something new" leads many metamodernists to use the shorthand phrase "'both/and' thinking."
>
> "Both/and" means thinking that's "both" of two things "and" (therefore) something entirely new. (Abramson, 2017b, original emphasis)

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[44] See chapter 1 for more.

It was at this point that the practice came to its most innovative. The source material was not someone else's work, but it might as well have been. It was another (one of my) persona's work. Being able to access multitrack elements rather than simply the whole master—whilst respecting their staging architectures arrived at as part of the source's mix context—blurred the lines between hip-hop sampling and remixing. It became both/and. Of course, the choice was always there, should I want to opt for limitation (and I made many beats exploring both/and approaches within them).

In Chapter 2, I conclude that if sample-based Hip Hop was deemed postmodern by scholars (Potter, 1995; Reynolds, 2011), this hybrid of reconstructive sample-based Hip Hop had got to be metamodern. And, perhaps, sample-based Hip Hop has always been reconstructive in its essence: it was hardly ever satisfied with the "zero-sum" game.[45] An effective sample-based hip-hop production truly exemplifies "the metamodern awesome (…the twenty-first century equivalent of "the sublime")"—"the feeling of understanding something, or at least thinking of it as "coherent," *without* being able to deconstruct it into its parts" (Abramson, 2017b, original emphasis). My version of this, is discussed in Chapter 3 under the notion of 'sample magic'.

I wonder if King Tubby and Lee Perry can be regarded as the first metamodern musicians/remixers.[46] As Cooper (2019) states: "The point is that black culture was

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[45] I am aware of the irony that some of the practices cited in these sections (for example, remixing and sample-based Hip Hop) are framed as metamodernist, albeit originating in an earlier (in this case, postmodern) period. Their 'both/and' syntheses, however, exemplify that the oscillation between—and beyond—previous thought structures (i.e. modernism and postmodernism) is very much a characteristic of the new cultural developments articulated, superseding postmodernism. As such, metamodernism is not presented here as a prescriptive phenomenon, but rather a descriptive grouping of evolving thought patterns and artistic tendencies (such as the 'reconstructive' in sample-*creating*-based Hip Hop).

[46] Of course, pre-existing repertoire has been continually reworked in all of the world's musical cultures (such as, in Indian, Persian, Irish/Celtic, or Blues musics); but the relevance of the dub pioneers cited, for this project, is that *their* form of re-construction involved 'play' with multitrack sonic objects of material dimensions (not in an abstract musical sense), morphing one popular music form into another.

metamodern before some industrious white people rediscovered metamodernism". I hope this autoethnography is a metamodern act of expression as well.

Chapter 1

Sonic necessity and compositional invention:

Composing the Blues for sample-based Hip Hop[47]

> 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 in Levin, 2004, p. 187)

From Memphis Minnie's 1930 talking-blues hit *Frankie Jean* (in Various, 1996), through to rapper Nas's collaboration with his father—jazz-blues musician Olu Dara—on *Bridging the Gap* (2004), Abdominal and The Obliques' *Sitting Music* (2012), and, more 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 (for example: Rose, 1994; Guralnick, Santelli and George-Warren, 2004; Chang, 2007). In *Can't stop won't stop,* 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* (1968) album*,* rapper Chuck D of Public Enemy explains:

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[47] This chapter has been published in an earlier form as an article in the *Journal of Popular Music Studies* (see Exarchos, 2020b).

> 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. (Chuck D, 2003, p. 281)

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 breaks;[48] and, thus, provided a rhythmical foundation for MCs to rap over (see, for example: Toop, 2000; George, 2005; Chang, 2007; Kulkarni, 2015; Serrano, Torres and Ice-T, 2015).[49] 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)

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[48] 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.

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

became the most sampled song in popular music history, powering the majority of East Coast's boom-bap productions;[50] while P-funk inspired West Coast's synthesiser-driven divergence via interpolation and live performance.[51] As a result, the lion's share of rap releases became literally powered by late 1960s and 1970s Funk and Soul, either by way of direct phonographic sampling or through compositional referencing;[52] 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):

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

[51] 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).

[52] This is a delineation Williams (2010, p. 21) describes—citing Lacasse—as "autosonic" versus "allosonic" quotation, respectively.

> 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.

Methodology

To answer these questions and consequently inform creative practice there are a number of areas that require closer examination. Firstly, if sampling is the predominant methodology in beat-making, 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 '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 interpolation, 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 (see, for example: Rose, 1994; McLeod, 1999; Marshall, 2006; Collins, 2008; Schloss, 2014). Through literary analysis, this chapter will aim to identify the musical and *sonic*

signatures that render audio material preferential to sample-based music producers. It will then explore production approaches that may prove effective in infusing original material with these qualities, whilst supporting 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' (for example: Demers, 2003; Moorefield, 2010; Morey and McIntrye, 2014; Navas, 2014; Warner, 2017), the methodology will involve an applied stage of creative practice, where original blues composition, improvisation, and performance interact with an integrated beat-making 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 (2006, 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 Zak (2001, p. 73) states, "[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' (from *Street's Disciple*, 2004) referencing Muddy Waters's 'Manish 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 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 (Nas, 2004).

This is consistent with an early blues tradition of shared motifs and a more inclusive notion of composition, which Rothenbuhler (2006, 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 performances, 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 DAW.[53] The up-front placement of the drum mix, its consistent two-bar repetition, the rhythmical interruptions of the beat, and the tight placement of what feels like a 'chopped' 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 1950s Chess label 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 track, may suggest that the producer purposefully pursued particular era-invoking timbres from alternate technical setups when dealing with the different instrumental groups.[54] The drum figure is reminiscent—both in its accents and sonics—of 1970s funk break-beats, such as Clyde Stubblefield's drum break from *Funky Drummer* (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

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[53] The DAW acronym refers to Digital Audio Workstation software.
[54] 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).

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

[Case 2:] Amerigo Gazaway is a Nashville-based producer who is well known as a "chemist" (Caldwell, 2015) of the mashup 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 method places him in 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 method 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-sampling processes, but also because of characteristics inherent in the *type* and era of blues that he chooses to sample.[55] 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 Hawkins (1951/2000) in 1951. The B.B. King version is characteristic of a late 1960s or early 1970s 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-1950s Chicago Blues

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[55] In an interview with the author, Gazaway details how he accesses the needed samples for his "conceptual collaborations" from multiple sources: available multitracks, 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.

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 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 sample-based music producers such as Gazaway. The link with Funk has already been established within 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 the 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, as well as 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-1990s, justifying the inter-stylistic intentions here also from the perspective of Hip Hop's

evolution.[56] 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 instrumentation, regarding the latter as a pioneer in "making Southern Rap music that was melodic and had harmony" and "blending the old with the new".[57] In other words, Gazaway finds commonalities between later (funk/soul-contaminated) Blues and more recent hip-hop divergences, 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-morphing", where he not only successfully mixes the two genres but arguably creates a new, hybrid one;[58] 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 12bpm supports idiosyncrasies characteristic of Southern Rap subgenres, and this may be one of the most crucial decisions Gazaway makes initially.[59] 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 multitrack by widening it to an audible extent in order to allow for a distinct 'center-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

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

[57] Gazaway (2016) 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.

[58] Beer and Sandywell (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".

[59] The track further abuses the pitch-tempo relationship at 5:12, down to Fm and 65bpm.

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, perhaps, his further equalisation of the samples), interplaying between eighths, 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 of as part of cross-genre mixing, informing the creative processes that follow in the applied leg of the chapter's methodology. In a move that mirrors his elegant sonic trans-morphing, Gazaway 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 subgenre (for more on *trill*, see Bun B's interview in Harling, 2013). 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 on other tracks of the *B.B. & The Underground Kingz* (2015) album by "working with it a little bit more, massaging it [further] and pushing it … more" (Gazaway, 2016).

[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* (2009)—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 often 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 #BluesHop tag in the online world, 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), offering a useful case-study of hybridisation with its own compositional and sonic problematics. Thomas Quinlan (2012) provides the following review:

> 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 required a different sound and "some time apart" from what he describes as "traditional Hip Hop". 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 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' to take place, and not overly polishing the post-production process (Bernstein, 2016).[60]

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[60] 'Spill' in studio recording refers to the leakage of sonic content reaching a microphone positioned closest to the intended source from surrounding instruments.

The general 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) there are complete instrumental stops resembling DJ 'cuts'.[61] 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

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[61] 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.

early recorded country or folk blues where performers would extend their own accompaniments to cater for the uniqueness of their melodic or lyrical lines.[62] 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 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 the wider research project, more than 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 specific examination, late-1960s to early-1970s minor blues examples are 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

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[62] 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.

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:

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

Table 1.1 Harmonic progression of the blues recording.

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 beat-making phase.[63] 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

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[63] 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 though 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.

accents progressively employing the full snare. These were consciously performed to mirror a range of references, again with the aim of enriching the potential sampling pool of the later phases.[64] 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 multitrack components and (given the track-count of fifteen channels for most parts of the structure) resulted in 1,854 audio files.[65] The synchronised stereo segments were brought into another DAW for mixing, utilising software emulations 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

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[64] The references range 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.

[65] The recording process was designed to honor 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)

multitrack, 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 phase.[66] 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 program) to fuel the following phase.[67]
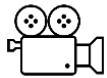
Video 1.1 A video edit from the project's research vlog showcasing a short section of the blues improvisation recorded over a number of instrumental overdubs, with embedded captions.

Chopping the Blues: sample-based composition

A lot has been written about 'sample-based' composition, some of it polemic (for example: Goodwin, 1988) and some supportive (for example: Rodgers, 2003; Harkins, 2008, 2010; Schloss, 2014; Swiboda, 2014; Williams, 2014a), while much of the literature is focused on the ethical and legal dimensions of what is regarded as new or original work (for example: McLeod, 1999; Collins, 2008). 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 both *sampling* and being *sampled*. This context allows for a focused reflexive analysis of the interaction between sampling practice and the construction of pre-recorded material, without

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[66] 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 rap production methods. 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.

[67] The MPC operating script uses programs as groupings of multiple samples, sharing a number of user-definable parameters, such as polyphony, effects and output assignments (for more on the relationship between MPC technical specifications and aesthetic/stylistic implications for Hip Hop, see: Exarchos, 2019a).

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, software, or hybrid incarnations—invite a percussive style of triggering 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 (see, for example: 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 lower fidelity and a dynamically limited headroom that is actually helpful to beat 'placement' within the mix.[68] 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 and sonic 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

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[68] 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 (for a timeline of sampler development mapped to seminal hip-hop releases, see Exarchos, 2019a).

original piece was still perceptible for any sample longer than an individual percussive hit, so the whole program was detuned by two semitones, consequently reducing the tempo of the segments by approximately 12bpm.[69] A typical boom-bap practice is to set a program's polyphony to mono, so that each segment triggered, mutes the previous one already playing.[70] Although this was historically practiced partly as a means to obscure the origin of phonographic samples (by keeping them shorter, and presenting them in reimagined sequences), 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 aesthetic and pragmatic reasons, the following sequences were composed, stemming from the original 'chops':

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

Table 1.2 Harmonic progression of hip-hop production (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

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[69] This echoes Gazaway's method 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 lends itself to a Southern Rap sensibility, which frequents slower tempi.

[70] DJ Premier's work on Gang Starr's *Hard to Earn* (1994b) constitutes a prime demonstration of this function.

process and triggering. Importantly, as can be seen in Table 1.2 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 coloration. 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 layering.[71] What's more, the sonic manipulation of sampled content within a sampler or during mixdown 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

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[71] In the case on hand, a Hammond organ part has been added in post-production to support these harmonic 'suggestions'.

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 the 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 drum-hit 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* interacts 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, while

exploiting the rhythmical tendencies described, 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 it may be worth considering the creative possibilities available should this 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 the context of untapped potential that inter-stylistic evolution can be pursued further. Some of the creative answers to the ongoing debate on sampling versus live performance regarding 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 pertaining to the sonic domain between the sample-based method and the live approach that are of interest. Despite live hip-hop bands' best efforts to stay within the genre, the debate continues. The Roots drummer and producer ?uestlove, has dedicated a large part of his professional life to achieving authentic hip-hop sonics on his drum kit, but what he may—purposely—be 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 Age and defined the boom-bap subgenre. Schloss (2014, p. 151) argues:

> 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…
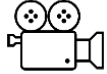
Video 1.2 A video edit from the project's research vlog showcasing an early study of hip-hop sections constructed out of the instrumental chopping, with embedded captions and citations.

Conclusion

This chapter has focused on the relationship between the sonic priorities of sample-based 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 beat-making. Although the Blues shares some of the cyclic structures that are mirrored in Hip Hop, it has also been utilised less than other forms of music in sampling practices, thus presenting some unique rhythmical and harmonic problematics in the applied aspect of this examination. Although the chapter in no way offers an exhaustive typology of the creative opportunities that exist between the sample-based landscape and original composition, the investigation has pursued 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. In terms of praxis, the informed re-enactment of vintage workflows has facilitated the pre-production of a substantial body of usable source content (referential to the Blues as exemplified in this case, and beyond as part of the larger research undertaking), offering multiple opportunities for creative interaction. The final piece arrived at—as a result of consecutive beat-making 'studies' using the source content showcased here—is 'Left Right', further illustrating the rich potential for variation that exists through 'play' with the same raw materials.[72] Conversely, source content

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[72] A practice that exemplifies Schloss's (2014, p. 159) earlier point of "original interactions [*perpetually*] organised into new relationships".

produced in the Blues period of the research journey (see figure 0.1 in the previous chapter), finds use in multiple beats comprising the end album—specifically: '1960s 2', 'It Meters', 'King's Funk', 'Negrito Blues', and 'Take 3'. Additionally, chapter 4 demonstrates how elements from this stylistic category of raw material, can further be deployed in secondary, ornamental functions, providing supportive layers to beats that leverage content from other eras/genres as their main structures (as will be shown in the deconstruction of track 'Call'). The inter-stylistic layering in such cases becomes multi-dimensional, and the sonic implications exponential—this will be the subject of the forthcoming chapters.
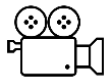
Video 1.3 A making-of video of a vocal recording session illustrating the 'Left Right' beat with rap layers.

Recommended chapter playlist
(in order of appearance in the text)
'Left Right'
'1960s 2'
'It Meters'
'King's Funk'
'Negrito Blues'
'Take 3'
'Call'

Chapter 2

(Re)Engineering the cultural object:

Sonic pasts in Hip Hop's future[73]

As seen in chapter 1, much has been written in the literature about sampling as composition, the legality and ethics of sampling, and sampling as a driver of stylistic authenticity in Hip Hop. Several scholars have also dealt with the historicity of samples from a number of perspectives. In *Black noise*, Rose (1994, p. 79) effectively demonstrates how hip-hop producers consciously quote from a musical past they resonate with as a form of cultural association: "For the most part, sampling, not unlike versioning practices in Caribbean musics, is about paying homage, an invocation of another's voice to help you say what you want to say". In *Making beats*, Schloss (2014) reveals a complex ethical code shared by 1990s boom-bap (Golden Age) hip-hop practitioners, with strict rules about the periods, records, and particular content that may or may not be sampled. It is worth stating that sampling ethics in Hip Hop have much more to do with adherence to (sub)cultural codes of practice than copyright law.

On the other hand, Simon Reynolds (2011, pp. 314–5) states in *Retromania*:

> It's curious that almost all the intellectual effort expanded on the subject of sampling has been in its defence … A Marxist analysis of sampling might conceivably see it as the purest form of exploiting the labour of others.

Despite taking a critical stance towards the politics, ethics, and economics of sampling, Reynolds here highlights a number of important problems. From the perspective of a critic who does not necessarily enjoy sample-based artefacts—and therefore self-

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[73] This chapter has been published in an earlier form as part of the edited collection *Innovation in music: Performance, production, technology, and business* (see Exarchos, 2019c).

admittedly fails to understand the popularity of musics such as Hip Hop—Reynolds (2011, pp. 313–4), however, focuses our attention on the multi-dimensionality inherent in the complex phenomenon of 'recordings within recordings':

> Recording is pretty freaky, then, if you think about it. But sampling doubles its inherent supernaturalism. Woven out of looped moments that are like portals to far-flung times and places, the sample collage creates a musical event that never happened … Sampling involves using recordings to make new recordings; it's the musical art of ghost co-ordination and ghost arrangement.

With this observation, Reynolds provides an eloquent description of the sample-based phonographic *condition*. As such, the associated problems become key considerations for any practice attempting a process of reverse-engineering: how could an awareness of this exponential or 'supernatural' multi-dimensionality inform alternative practices that pursue a sample-based aesthetic? Morey and McIntyre (2014) criticise Reynolds for ignoring the contribution of the sampling composer in this position, thus adding to the complexity of the creative equation. The tension between their position and Reynolds's is perhaps a symptom of a larger philosophical problem: in attempting to serve a sample-based aesthetic through re-construction, a practitioner comes face-to-face with the irony between materiality and cultural referencing. Does a short sound contain history, 'style', a unique sonic signature? When is this historicity motivic, i.e. relating to melody, rhythm and performance? Conversely—when not—what are the inherent sonic manifestations that infuse phonographic 'resonance' to a minute sonic segment? Can these be recreated? Zak (2001, pp. 195–7) concludes in *The Poetics of Rock*:

> The overall resonant frame amplifies, as it were, the smallest nuances with which records are filled… [Record collections] represent historical documents and instruments of instruction that provide both ground and atmosphere … Collectively, records present an image of a cultural practice whose conceptual coherence is assured … by the shared perception that its works possess the power of resonance.

Zak here supports the idea that cultural resonance can be embedded within the sonic grain of a record and consequently hints at a matrix of inter-relationships situated between phonographic artifacts of different eras. Chapter 1 argued that Hip Hop is inherently inter-stylistic, its process resulting in new musical forms out of the manipulation of past ones; while at the same time morphing into numerous sub-genres, due to the speed and power of the dissemination and interaction afforded by digital technology. In their article on 'Stylistic morphing', Sandywell and Beer (2005, p. 119) theorise convincingly on this phenomenon:

> It seems that there is no such thing as genre … 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.

The above is a useful description of the creative flux facilitated by digital tools from the perspective of practitioners, and it has the potential to inform the theoretical framework behind a reverse-engineering process. Although the majority of rap practitioners may be *reacting* creatively to the cultural and legal context surrounding them—rather than first theorising about it—a number of telling positions towards

sampling, characteristic of different rap eras, shed light onto the spectrum of creative possibility. The performative tradition of isolating, repeating, elongating, and juxtaposing sections from phonographic records on turntables by DJ pioneers such as Kool Herc, Grandmaster Flash, and Afrika Bambaataa signifies the DNA of the artform, long before it could actually be committed phonographically. Conversely, the first hip-hop releases utilised live disco, funk, and soul session musicians in order to provide the instrumental backing under proto-rap vocal performances. Kulkarni (2015, p. 37) informs us that: "In late 1982 and early 1983, hip-hop records didn't sound like hip-hop. They were essentially R'n'B records with rapping on them, created by bands, session players and producers".

Grandmaster Flash was the first of the DJ pioneers to provide a phonographic 'exception' in the form of *The Adventures of Grandmaster Flash On The Wheels Of Steel* (1981), when he committed the performative tradition of 'turntablism' to record. The importance of the release is that it carries an early manifestation of what Reynolds (2011, pp. 313–4) describes as the process of "using recordings to make new recordings". At this point in hip-hop history though, it had only been through turntable performance that the 'citation' and manipulation of previously released records could be committed phonographically; which explains why the majority of non-live Old School rap releases utilised synthesisers and drum-machines to provide the electro-rap instrumentals that functioned as an alternative to live performance.[74]

Fast-forwarding to the mid-to-late 1980s—and the more widespread availability of affordable sampling technology—a number of seminal releases leveraged sample-

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[74] The Old School period in Hip Hop is typically regarded as ranging from 1979-1982, signified by releases such as 'Rapper's Delight' (Sugarhill Gang, 1979) in the live arena, 'The Adventures Of Grandmaster Flash On The Wheels Of Steel' (Grandmaster Flash, 1981) representing turntablism, and 'Planet Rock' (Afrika Bambaataa & The Soul Sonic Force, 1982) and 'The Message' (Grandmaster Flash & The Furious Five, 1982) exemplifying Electro and Electro-funk, respectively (see, Exarchos, 2020c, for a discussion on the function of synthesisers in Hip Hop's trajectory and eras).

based composition and arrangement, taking advantage of the record industry's initial inertia in (legally) reacting to the creative manifestations afforded by sampling. Records such as *It Takes A Nation of Million to Hold us Back* (Public Enemy, 1988), *Fear of a Black Planet* (Public Enemy, 1990), and *Paul's Boutique* (Beastie Boys, 1989), are rumoured to contain hundreds of samples of previously released phonographic content, signifying maximal masterpieces of the sample-based artform that are often compared to a kind of rap musique concrète (LeRoy, 2006; Weingarten, 2010; Sewell, 2013). And yet, by 1991, the shift in the legal landscape kick-started a case of legal necessity becoming the driver of sonic innovation.

One such notable reaction can be observed in Dr. Dre's infamous flavour of interpolation. Dre's initial success with N.W.A. afforded him access to an era of musicians he revered—musicians that he could invite into the studio to (re)play elements of their own records, facilitating his sampling endeavours. Using the original players, instruments, and technology enabled the acquisition of authentic sonics from a different era, but without the need to pay high sampling premiums to record companies (holding the mechanical copyright). His heavy dependence on P-funk sonics was so impactful that it birthed a geographical divergence in Hip Hop known as West-Coast Rap (or G-funk); one that was diametrically opposed to New York's East Coast aesthetic, remaining synthesiser-heavy (and often sample-averse in a mechanical sense). Further reactions to the legal landscape, and the decreasing creative opportunities for phonographic sampling, can be summarised in three overarching approaches:

1. Live performed Hip Hop;

2. The construction of content replacing samples referenced/used in hip-hop production; and

3. The creation of original but era-referential content that can act as new sampling material.

A number of practitioner case studies are discussed below, exemplifying these practices.

Case studies

Live Hip Hop

The Roots are perhaps the most famous case in point for a predominantly live-performing (and recording) hip-hop band; and whilst they remain conscious of the aesthetic compromises resulting from not always directly interacting with sampling technology, the delineation of their outputs from proto-rap/live-based instrumentals are a result of exhaustive research on sample-based utterances and sonics, which are manifested in their performance practices, choice of instruments, and studio approaches (Marshall, 2006). Yet what sparks stylistic criticisms directed at them by the hip-hop community at large, is the fact that their live sonics and musicality have not always sufficiently interacted with sampling processes and their resulting artifacts. In the words of their own manager, The Roots' debut album, *Organix* (1993), has been characterised as: "swag deficient, lacking the grit of *sample*, *microchip*, and identifiable urban narrative that, to this day, define the genre" (Thompson and Greenman, 2013, p. 101, my emphasis).

Creating sample-replacement content

J.U.S.T.I.C.E. League on the other hand are a production duo responsible for a plethora of contemporary rap hits (for artists such as Rick Ross, Gucci Mane, Drake, and Lil Wayne) who deploy methods that lie somewhere between interpolation and a convincing re-interpretation (and then manipulation) of referenced samples. In an interview with HotNewHipHop.com they shed light on the specifics of their process:

> Ok, we have a guitar – what kind of guitar was it? What was the pre-amp? What was the amp? What was the board that it was being recorded to? What kind of tape was it being recorded to? What kind of room was it in? (Law, 2016)

Law (2016) asserts that once they have "all the information available about the original sample, they begin … recreating every aspect … down to the kind of room it was recorded in". J.U.S.T.I.C.E. League's process reveals the importance of the sonic variables that lend a sample its particular 'aura'. Their meticulous re-engineering attempts to infuse convincing (vintage) sonics onto their referential, yet newly recorded, source content.

Creating new content for sampling

There are also increasing contemporary cases where practitioners create content infused with referential—stylistic and historical—attributes, but without direct semblances to previously released compositions. Producer Frank Dukes meticulously records sonically referential, but musically original, vintage-sounding material, to facilitate his sample-based production process. When this level of reverse-engineering is applied to completely original creations, the potential exists for musical innovation that, nevertheless, adheres to the sonic requirements of the sample-based aesthetic. Interviewed in Fader magazine, Adam Feeney a.k.a. Frank Dukes explains in his own

words: "I'm still using that traditional approach, but trying to create music that's completely forward-thinking and pushing some sort of boundary" (cited in Whalen, 2016). Expanding on this approach in relation to Dukes's production of "Real Friends", from *The Life of Pablo* (West, 2016)*,* Whalen (2016) explains:

> [T]he song's "sample," [is] a delicate piano loop that sounds like it's lifted from a dusty jazz record, but that Dukes found without having to dig for anything, because he made it himself … Manipulating his own compositions like they were somebody else's is a technique that has brought Feeney—an avowed crate-digger turned self-taught multi-instrumentalist—from relative obscurity to a go-to producer for the industry's elite.

Theorising

The function of nostalgia *(Aesthetic problem #1)*

In all the practitioner approaches described above lies a conscious approach to navigate the legal landscape safely, whilst establishing links with the past, either through motivic referencing (Dre's interpolation) or via sonic referencing (The Roots in their instrumental/studio choices; Frank Dukes and J.U.S.T.I.C.E. League in their meticulous recreation of vintage sonic signatures). Hip Hop is approaching almost five decades of existence at the time of writing (*44th Anniversary of the Birth of Hip Hop*, 2017), so could its obsession with the past be regarded as a metaphor for approaching a stylistic middle-life crisis? Or is this form of sonic nostalgia a wider symptom in popular music, as Reynolds claims, which becomes exponential in a form of music that owes its very inception, architecture, and DNA to previous music forms? The website Metamodernism.com has published the following criticism on Reynolds's take on the phenomenon:

Simon Reynolds states that popular (music) culture is suffering from retromania, an incurable addiction to its own past …his analysis is based on a nineteenth century—and therefore very modern—notion of 'authenticity'. It makes himself a symptom of that which he criticizes: retromania. (Van Poecke, 2014)

Perhaps a metamodern predisposition is not essential for the criticism to stand: the problem with a mono-dimensional diagnosis of an aesthetic 'fault' (in this case, solely attributed to nostalgia) is that it is using the symptom as both diagnosis *and* condition. From antique hunters through to fashion designers and phonographic 'crate-diggers', it appears that a certain distance from the past allows the human mind the benefit of retrospective appreciation. But to avoid oversimplification, Hip Hop is a complex phenomenon that deserves more thorough analysis. Socio-economic and technological factors are entangled in its history, development, and sonic genetics, so nostalgia alone appears an easy escape notion, distracting from a meaningful investigation of the conditions shaping this more complex sub-cultural phenomenon.

In *Can't stop won't stop,* Chang (2007, p. 13) explains that social engineering, Kool Herc's Jamaican-derived sound-system mentality, the withdrawal of funding for instrumental musicianship in New York schools, and a technically-trained but unemployed young generation, became the conditions for Hip Hop's 'big bang'. As a result, sample-based Hip Hop was borne out of improbable factors colliding and, as a result, old funk breaks became the instrumental bed for a generation that needed to dance, rap, come together, party, or rebel. From this point onwards, the DJ-as-performer had begun 'jamming' with musicians from the past, reacting to their utterances, interacting with their recorded performances, collaborating (in non-real-time) and manipulating their recordings live (just like King Tubby had previously done

with dub multitracks in a recording studio environment); a trait that has been reproduced by sampling producers ever since via their interaction with (affordable) sampling technology.

It is not a stretch to consider that performing with turntables became a solitary alternative to improvising with a band—only, one recorded in the past—for a generation that was largely deprived of instrumental tuition and opportunity. Fast-forwarding to the condition of the current bedroom producer, one can observe a parallel in the solitary state of collaboration with the past: a plethora of historic audio segments residing in the hard disks, memory banks, and sampler pads of a contemporary hip-hop studio setup—providing the 'live-musician' resonances for a solitary performer/writer/producer to interact with. As a result, the sample-based hip-hop process could be described as a *jam across time* with pre-recorded musicians from the past, afforded by digital sampling technology (and initially turntables): in other words, a 'hip-hop time machine'. This can be represented schematically with the following 'equation' (see Figure 2.1 below):

HIP-HOP = (improvised performance + digital sampling technology) x (pre-recorded musicians + time)
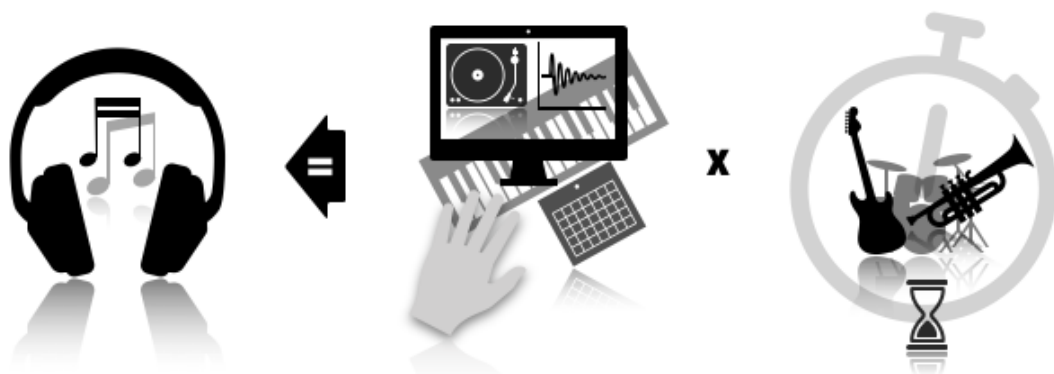
Figure 2.1 A schematic representation of the 'hip-hop time machine' equation.

The end result may sound nostalgic because of its obsession with the past, but it is really a manifestation of an inherent genetic trait that defines its very function and aesthetic. The sample-based condition has occupied such a large ratio of hip-hop outputs in its near-five-decade-long lifetime that it has elevated and celebrated the morphing, synthesis, and interaction of old and new music to the forefront of its modus operandi. Of course, Hip Hop has had an undeniable effect on other popular musics too, so perhaps 'nostalgia' is an afterthought or post-scriptum on a rhizome with a very real history, birth, and raison d'être. Furthermore, the techniques Hip Hop adopted—for a while unilaterally—have by now been inherited by mainstream pop producers, so Reynold's nostalgic generalisation may be suffering from a misunderstanding of the phenomenon in its wider cross-genre implications.

Does a consideration of nostalgia, then, have any significance for the current rap practitioner? It could be argued that facing it critically brings to the forefront the *past-present* binary inherent in the sample-based aesthetic. Additionally, understanding the problematic may be helpful in drawing a line with nostalgia (i.e. the past), isolating it as a variable, so that the process of creating new sample content to serve future hip-hop development can focus on further factors.

How much historicity is needed? *(Aesthetic problem #2)*

This brings about the question of how much historicity needs to be 'embedded' within a sample for the hip-hop aesthetic to function. It is a question that can drive a retrospective investigation of sample-based content, but also one that can inform future (re)construction. As such, it becomes theoretically important, and practically essential, should future sample-based Hip Hop continue to utilise newly constructed source content. Consequently also, defining the necessity and degree of source-content historicity will help inform the practice in a more scholastic fashion.

But what are the facets of sonic historicity that can be observed in a sample-based context? The case studies discussed above highlight a number of sonic/musical examples that help define the manifestations of this historicity in a systematic manner. There have been detailed previous attempts to provide sampling typologies (Sewell, 2013; Ratcliffe, 2014), but the focus here is somewhat different. On the one hand, the purpose of the investigation is to inform future practice, so the onus is on observing traits that are reproducible; on the other hand, this is not an attempt to account for every type of sample-use, but to do so from the perspective of what qualities infuse 'historicity' in a sample.

In the first instance, sample duration becomes an important parameter in this exploration. The longer a phonographic sample is, the more motivic information it contains. It could be argued that, conversely, a short sample—often described as a single 'shot', 'hit', or 'stab' in hip-hop practice—focuses our attention to the sonic, granular, or layered phonographic instance.[75] Philosophically, this binary allows for a theoretical delineation between the sample as sonic instance and the sample as obvious musical or phonographic 'citation'.

Sample-based music producers may be able to 'chop' individual instrumental sounds from records (should they appear in isolation in the mono or stereo master), or alternatively opt for layered instances (such as, for example, a momentary combination of kick drum, bass note, harmonic chord, and horn stab). Access to the original multitrack data of previously released recordings has become more commonplace recently (with artists openly inviting remixers to interact with their content) and there are a number of hip-hop producers that source their samples in this

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[75] Citing Gillespie, Williams (2010, p. 21) delineates the sample-based use of the two, respectively, as "syntagmatic" and "morphemic sequencing".

fashion (as in the testimony of Amerigo Gazaway in chapter 1). In all of these cases, the sample contains sonic information that—to the trained ear, crate-digger, or avid hip-hop fan—may point to: specific sources (single or layered instrumentation); real or artificial ambience captured during recording or applied in post-production; as well as unique sonic artefacts resulting from the recording signal flow, media used, and mixing, mastering, and manufacturing processes. Multiple sub-variables can be associated with these top-level sonic characteristics and Figure 2.2 below provides a schematic representation of essential qualities (with variables in parentheses applicable to longer segments).
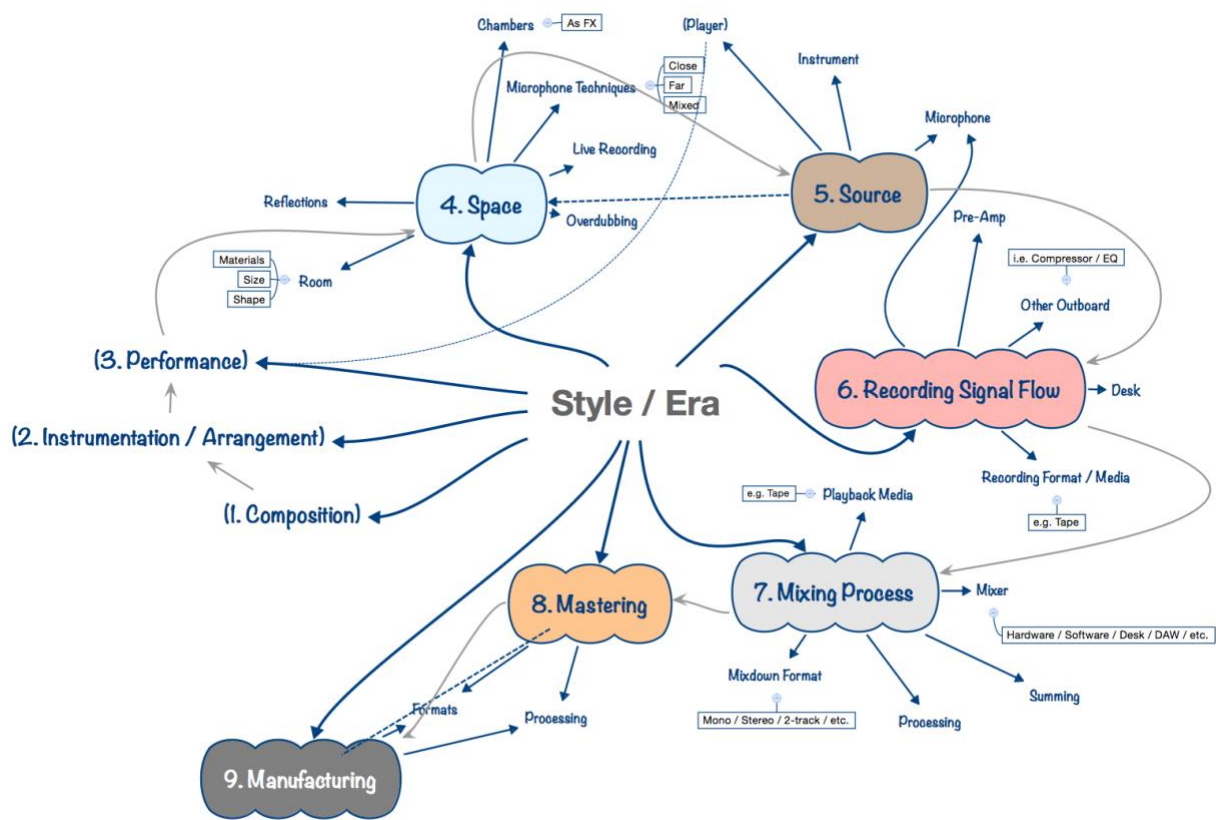
Figure 2.2 A schematic representation of essential phonographic sonic characteristics and related variables.

Therefore, the period that the phonographic sample was captured in becomes 'communicated' even for short excerpts, because of the type of sources, spaces,

equipment, and media used; but also the engineering and production processes applied that were typical of particular studios, production teams, record labels, and eras. Longer samples, on the other hand, may reveal all of the above, but also contain musical, rhythmical, performed, and composed utterances, which also become audible in the new context of the subsequent hip-hop production process. These add further layers of historicity to a sample, such as stylisation expressed by the compositional and arrangement choices, but also the performing idioms and musicianship carrying additional era signifiers.

How are these observations useful to the practitioner creating new sample content that is meant to serve a sample-based aesthetic? Before even tackling the practical implications, the very process of purposely infusing historicity into—new—samples has to be analysed. Undoubtedly, there is an inherent irony in this proposition but, at the same time, from Frank Dukes to De La Soul, the notion *is* indeed practiced, which necessitates a theoretical investigation.

On phonographic 'magic' *(Aesthetic problem #3)*

The process of digital sampling can, of course, be applied to any recording, old or new, phonographic or directly recorded from an instrumental source into a digital sampler. Tellef Kvifte (2007) provides four definitions for sampling as it has been used in literature: from analogue-to-digital conversion; to the emulation of instruments by samplers; to the 'citation' of an earlier recording within a new composition; and, finally, to corrective splicing and pasting of recorded segments on analogue tape or digital formats. For a hip-hop producer, the third definition best describes the sample-based method, particularly because a phonographic sample carries more meaning than simply a digitised acoustic vibration (and the rationale behind the process is predominantly creative rather than emulative or corrective). The distinction, though, is

useful in delineating differences in workflow, as a hip-hop production built around a phonographic sample follows a very different creative trajectory to that of a production built independently of a source sample (with live instrumentation later overdubbed on top). So, a new problem that arises is that of how live instrumentation interacts with sampling.

Newly-constructed sampling content can range from recordings produced to facilitate a particular project, to ready-made content provided by sample libraries for a multitude of potential applications. There are a plethora of sample-library companies that provide wide-ranging content, from drum loops suitable for different subgenres, to live instrumentation that may fit particular styles, often accurately replicating vintage sonic characteristics mapped to very specific eras, studios, and labels. Furthermore, today's DAWs come pre-packaged with an abundance of neatly catalogued single-shot, looped, or motivic (phrase) samples and, as such, software manufacturers at least partly assume a sample-library function. Although libraries are not explicitly disregarded by hip-hop practitioners, Schloss's (2014) work observes that sample-based producers demonstrate a preference for phonographic content, showing lesser interest for ready-made content solutions.

Practitioners may be partly adhering to subcultural codes of sampling, but there are other pragmatic and aesthetic considerations to take into account. For this part of the investigation, an autoethnographic approach has been undertaken to shed further light onto these considerations. The methodology has consisted of both composing, performing, and engineering source content to be subsequently used in a sample-based process, but also researching the historical spaces, tools, and practices behind the source references (phonographic records) pursued. In these practice-based pursuits, I have found the indefinable 'magic' of phonographic samples challenging to

recreate with new recordings. As part of the historical research conducted, I have visited a number of classic studios related to the eras and records that have previously attracted me as a sample-based music producer (Chess Records in Chicago, Stax and Sun in Memphis, J&M studio in New Orleans, RCA B and Columbia in Nashville), attempting to ascertain the conditions of this 'magic': noting the spaces, microphones, signal flows, media, and equipment used, but also deciphering clues about the techniques, recording approaches, and production philosophies practiced by the teams behind the recordings.

At Columbia in Nashville, staff relayed to me how Toontrack—a well-known sample-library company—utilised the facility to recreate authentic country samples for their *Traditional Country EZX* release (2016). This highlighted the oxymoron with great clarity: if there are specialists ensuring all sonic variables are adhered to in the creation of legally-usable sample content, then why do hip-hop producers still opt for phonographic sources, despite the inherent copyright complications. Is the (historicity and) phonographic 'magic' more than the sum of perfectly recreated sonic—and musical—parts? Practitioners and analysts struggle to define the missing link, attributing it to a certain 'je ne sais quoi'. Citing Bill Stephney of S.O.U.L. Records, Rose (1994, p. 40) exemplifies this phonographic lure in producers' sampling rationale:

> [Rap producers have] tried recording with live drums. But you really can't replicate those sounds. Maybe it's the way engineers mike, maybe it's the lack of baffles in the room. Who knows? But that's why these kids have to go back to the old records.

Zak (2001, pp. 82–3) provides another telling account of how the phonographic process can result in such unique sonic 'ephemera', responsible for drawing the sample-based music producer in:

> The guitar's sound was bleeding into other instruments' microphones, but it had no focused presence of its own. Spector, however, insisted: this was to be the sound of "Zip-A-Dee-Doo-Dah". For it was at this moment that the complex of relationships among all the layers and aspects of the sonic texture came together to bring the desired image into focus.

This demonstrates contextual 'happy accidents', which are difficult to imagine outside of an actual record-making engagement. If there is a philosophical lesson to be acknowledged here that can then inform (re)construction, it is that of phonographic *context*. This is where sample libraries and new recordings may fall short in facilitating the sample-based artform, process, and aesthetic.

In the practice-based experiments inspired by this realisation, there was a slight shift of focus from the blues-style jamming described in the previous chapter, toward the crafting of more complete songs and structures created in pursuit of phonographic context. The following journal entry—written after an americana/folk production phase that followed the Nashville trip—exemplifies:

There are discernible benefits to becoming fully immersed in a style/form/era of music. Listening to it almost exclusively for a period of time, picking up the relevant instruments, and engaging in record-making pursuing the auralities and the recording processes each music form requires does result in pretty convincing results—little *sound worlds* … And I am aware I have started using the term 'songs' for some of the samples. As some of the older multitracks are sounding rather complete and multi-layered, it is time to consider the production of vocal elements for some of the samples. In order for vocals to be meaningful, though, I require concepts (rather than just 'yeahs' and 'oohs') and this has led me to some more complete songwriting recently. It is at this point I need to balance how far I go with the completion (production) of these songs, as this is not the end objective (and it is time consuming). I am consciously reminding

The idea was pursued within the americana/folk stylistic frame and beyond, delivering an expansive spectrum of source material. This ranged from the construction of instrumental A-B structures, through to the crafting of complete (solo) songs and demos with lyrics, songwriting collaboration with co-writers in duets and band settings, as well as progressive/fusion instrumental productions featuring more complex arrangements. Figure 2.3 provides more information on the respective source outputs and their correlation to end beats created:
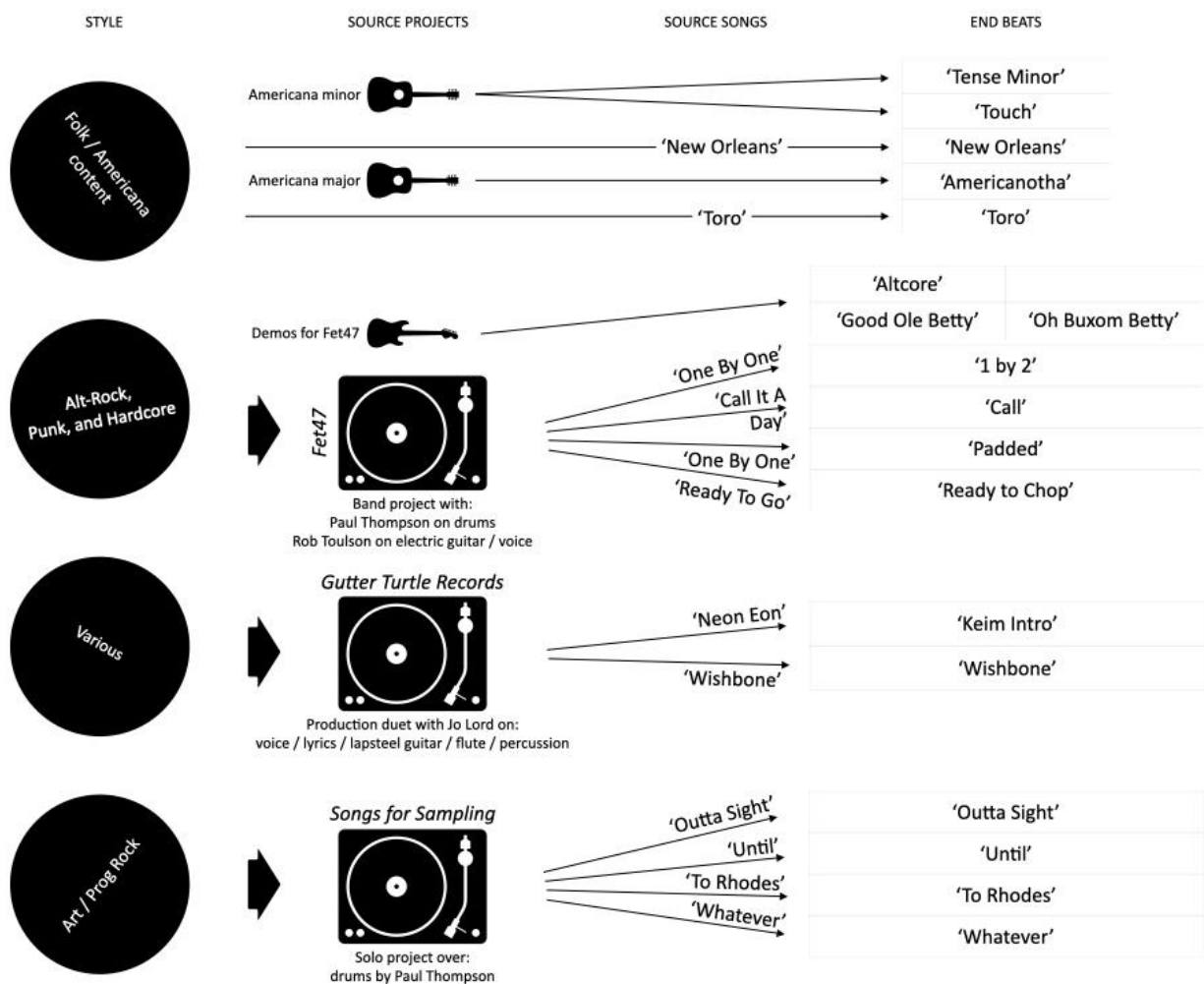
Figure 2.3 A schematic representation of source outputs correlated to end beats.

But phonographic context can be influenced not only by establishing a songwriting/compositional frame, but also through the pursuit of conceptual objectives—interacting with stylistic considerations—in the sonic domain. Taken from the same americana phase, and following recording experiments combining close/mono with farther/stereo microphones upon the same acoustic sources, the journal vignette below illustrates:

As a result of my previous experiments, I felt that the slightly farther, stereo perspective would provide a consistent layer of 'space' to each recording, adding to their combined sense of spatial 'glue'. I wanted the individual recordings to feel as if they had been recorded by a bunch of musicians in the same recording space.

The spatial side was only part of this pre-meditated vision toward sonic consistency. I felt it was equally important to infuse character onto the recordings by means of a 'colourful' signal flow [which consisted of a hardware tube preamplifier with an embedded compressor and equaliser on the mono source, emulations of the same preamp on both sides of the stereo microphone, and tape emulations upon all incoming channels … I layered the mandolin first, then let it cycle, trying the ukulele on top … I listened to how the ukulele was sounding over the mandolin, going through the same preamp and EQ settings … After a practice 'lap' I tracked it as well, quickly following it up with the Martin acoustic guitar. Following the same audition, review, and recording workflow, I tracked the acoustic guitar and banjo, with minor alterations to the mic angles and preamp settings.

It is at this point that the resulting sonic 'glue' became apparent in an obvious, pleasing 'phonographic' sense: the layers of instruments with the complimentary EQ strategy, captured space, and same preamp/tape colourations started to add up to *more than the sum of the parts*. By the time I reviewed the fourth layer (the banjo)—each captured on three channels (one for the dynamic mic and two for the stereo recording)—I was listening to twelve tracks with shared characteristics and an augmented sense of shared space. There was 'glue' in their image and depth, but also in their timbral footprint, leading to a sonic sensation that felt both vintage and 'complete'. Reminiscent of an era, style, location but also characterful enough that it would stick out as a potential *sample*. One particular aspect that illuminated this upon playback was how being incrementally layered, the 'wall of sound' reached a point where it blended with the vinyl crackle I had sampled and programmed as part of the MPC beat. Much less than a self-fulfilling prophecy, the instrumental mix and crackle merged into a single aural sensation, feeling like the whole thing had been lifted off an americana vinyl record.

Once I (mentally) noted this epiphany, I wanted to push it further. So, I ran the mix through (Massive Passive) mix-bus EQ, (API) compressor, and (Ampex) master tape emulations, paying tribute to the relevant sonic references with my choice of tools and settings (generally, inspired by analogue, Nashville sonic signatures). I added some Telecaster [guitar] licks using the incremental signal chain I had finalised in yesterday's recording sessions (I recorded two tracks, one blues-funk and one psychedelic/southern-soul, focusing on developing a strong guitar signature through a combination of hardware pedals and software emulations of amp, preamp, tape, and spring reverb).[76] Finally, I tracked the … bass … and a Nord Wurlitzer patch through the hardware [preamp] with minor gain-staging and EQ adjustments for the same complimentary consistency, and tweaked the stereo placement of these final additions aiming for a retro "W" image.[77] As the tracks looped around, I consciously appreciated the 'wall-of-sound' effect, striking a pleasing balance between overall mix 'glue' and individual instrumental definition, albeit with shared, complimentary characteristics. I asked myself the central question: would I sample this? Oh, yes, I would.

The irony of reconstruction: a metamodern 'structure-of-feeling' *(Aesthetic problem #4)*

Phonographic context therefore appears as an essential condition in rendering samples useful to the (sample-based) hip-hop aesthetic. It could be argued that Hip Hop is borne out of the interaction between sampling processes and past phonographic content (see Figure 2.4 below).

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[76] These respectively led to the 'King's Funk' beat, in reference to Albert and Freddie King; and the 'Psychodelic' beat, referencing work such as *The Baby Huey Story – The Living Legend* (Baby Huey, 1971).

[77] Roey Izhaki (2008, p. 71) defines a W image as a common "stereo spread imbalance" that can be found in "a mix that has most of its elements panned hard-left, center and hard-right". He offers the verses of OutKast's 'Hey Ya!', from *Speakerboxxx / The Love Below* (2003), as a telling, retro-inspired, example.

HIP-HOP = sampling processes x phonographic (past) sonic signatures
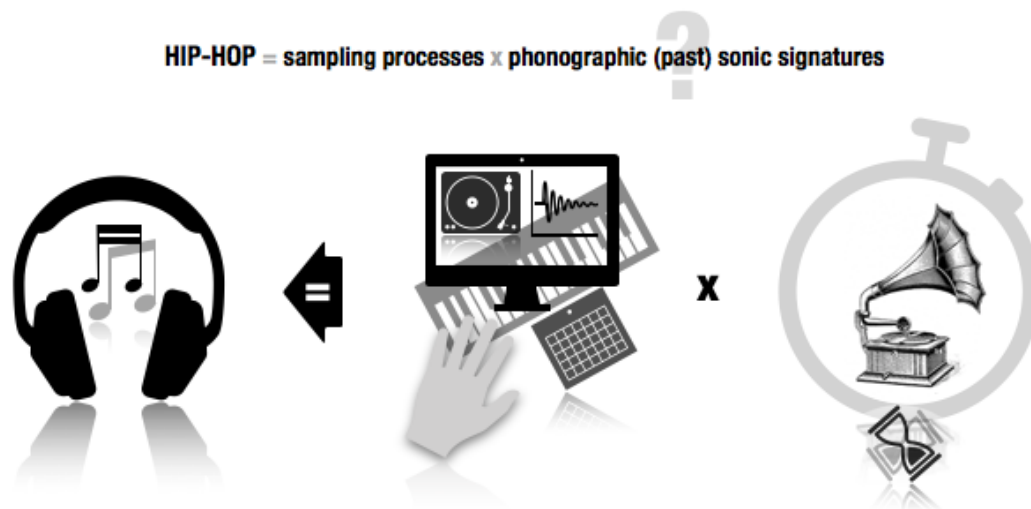
Figure 2.4 A schematic representation of the interaction between sampling processes and (past) phonographic sonic signatures, defining the hip-hop aesthetic.

But is the past—manifested as nostalgia and historicity—essential in this 'equation'? Or could convincing phonographic context—i.e. a newly constructed *record*—suffice as useable content? Some contemporary Hip Hop has indeed started quoting from more recent phonography, but the lion's share of sample-based releases focus on a more distant past. This is no surprise, as the lifespan of the style has had such a disproportionately long dependence on the sonic past that it continues to project this (past-present) temporal juxtaposition upon the majority of its outputs, almost as stylistic dogma. As Hip Hop evolves, the past may become less essential as an aesthetic qualifier, and phonographic context may become prioritised as the driver behind (the creation of) suitable sampling content. But for now, it appears that most practitioners resort to stylisation and sonics referential to past eras, in order to infuse their raw sonic materials with substantial potential for forthcoming sample-based processes.

The obvious irony observed here is that this reconstructive proposition sees the practitioner pursuing new musical content—which is (mechanically) copyright-free—whilst artificially infusing it with vintage sonic characteristics. This is both forward-thinking and pragmatic, but also nostalgic and 'retro-manic'. Hip-hop producers who practice this conscious duality are sonically oscillating between analogue nostalgia and digital futurism. As such, they demonstrate an awareness of Hip Hop's addiction to the phonographic past—they adhere to its nostalgic romanticism and honour this naivety—while both constructing and re-constructing: constructing new music, but *re-*constructing vintage sonic signatures. This is both naive and cynical; it puts faith in future development whilst paying homage to the dogma of historicity; and it simultaneously represents multiple dualities in a mixed, juxtaposed, and synthesised fashion, consisting of all of these polarities at once. Vermeulen and Akker (2010, p. 56) have described such a "discourse, oscillating between a modern enthusiasm and a postmodern irony, [as] metamodernism". And while the retrospective necessity in the aesthetic condition of sample-based Hip Hop is to a certain degree explained by its own historic development, technical processes, and phonographic dependences, Vermeulen and Akker's observation of a new *structure of feeling* across architecture, art, and film, (even politics) puts this (re)constructive proposition within a wider, contemporary multi-arts context.

Consequently, the notion does not simply provide a legitimisation for the conscious practice of 'irony' in this context; it rather appreciates the process as an artistic invention—or creative solution—borne out of pragmatic necessity, as *part* of an interdisciplinary movement, universal condition, or structure of feeling. It could therefore be argued that, if sample-based Hip Hop was postmodern, *reconstructive* sample-based Hip Hop is metamodern. The approaches discussed in the case studies

above embrace further manifestations of metamodernism, such as: exercising multiple practitioner 'personalities' as part of the process (composer and engineer, performer of past styles and contemporary remixer); expressing romantic compositional freedom within an Afrological, cyclic sensibility; synthesising technical precision with—and towards—the poetics of an envisioned sonic; collapsing 'time' through the juxtaposition of multiple sonic epochs; removing the historical 'distance' afforded by samples, and creating cross-genre work that offers synchronous opportunities for inter-stylistic morphing.

A practice-based anecdote

Most of the praxis, thus, in this research project expresses these manifestations in the trajectory of conceptualising the dual content, and in embracing multiple roles for its construction—a process of construction that pursues a spectrum of sonic signatures (record production variables) signifying phonographic 'time' and space (eras/styles/labels/studios/locations) to invoke 'magic' or a sense of context in the source material. Armed with this conscious duality of—informed—oscillation in later parts of the journey, I began to pursue spontaneous creative events rich in contextual meaning, whilst holding an expectation of forthcoming developmental phases. The following anecdote provides a telling illustration:

> A small social gathering between my partner (Jo), one of her close musical friends (Andy), and I—involving drinking and political discussion—led to a notable expressive event. The friend's commentary gradually evolved into a form of political slam/punk poetry, inspiring me to grab an electric bass and improvise a series of punk/garage-inspired lines. Andy responded with a more rhythmical and dynamic flow of delivery, we triggered a virtual drummer [in a DAW], and the spontaneous interaction evolved into a musical jam. My partner—the co-writer/singer of other source material on this project, and a spatial sound engineer—suggested that we should capture the 'energy' in the room, placing an omni-directional microphone near her listening position, and record the blend of voice and amplified bass as it emanated in the room. Anticipating that

multi-tracking control would be beneficial in later creative stages, I handed Andy my (handheld) bullet mic, which was pre-connected to a spring reverb pedal and a fuzz stomp box (from previous, blues experiments); we put on headphones to monitor the drums (keeping us in groove), and I also miked up the bass amplifier, so that we were capturing close recordings of the (effected) voice and bass, as well as the ambient recording of the acoustic performances in the room. In haste, I chose virtual [console] pre-amplifiers on the software mixer bridging the real sonic world with the computer conversion (the recording interface) that matched the aggressive energy of the performances (emulating Neve consoles). We recorded constantly for two cycles of the virtual drum arrangement (approximately eighteen minutes in total).

[A few days after this event] I revisited the recordings and layered more instruments… Inspired by the punk/garage attitude of the instantaneous performance captured (it reminded me of the energy in early Velvet Underground records), I recorded layers of overdriven electric guitars and upright piano stabs (all in the same room, pursuing a post/retrospective spatial blend with the previous performances). Not having worked with a real drummer in the initial jam, I felt that the only unrealistic timbre in the resulting mix was that of the virtual drums. I connected the computer to the Bluetooth speaker positioned on top of the piano, singled out the drum mix, played it loud, and recorded it from some distance with the same omni mic deployed on day one. I ran the mic signal through my vintage hardware compressor/pre-amp, 'squashed' it hard, and boosted the extremes of the frequency spectrum. It began to sound like a room microphone tracking a loud drum performance in a drum booth. The song/jam was mixed deploying software approximations of technologies characteristic of the era (multitrack and master tape, console, and effect emulations).

The vignette above provides a set of phonographic 'sparks' resulting in contextual 'ephemera', as well as an illustration of both naïve (in flow) and calculative (analytic) actions characteristic of the metamodern oscillation.[78] The eighteen minute 'record' has been utilised in four different beats and at varying degrees in the end project. Sampled and chopped as an intact stereo master, it has provided the

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[78] Keith Sawyer (2017, p. 96) asserts that "creative sparks are always embedded in a collaborative process, with five basic stages" (preparation, time off, the spark, selection, and elaboration); and even when sparks appear as individual insights, they are "deeply embedded in the knowledge and social interactions of the preparation and time-off phases, and [they build] on sparks that others have had". Collaboration in Sawyer's terms thus includes thinking and acting as part of an invisible network, which he refers to as "the collaborative web" (Sawyer, 2017, pp. 207–33). Citing art sociologist Howard Becker (1982, p. 25), Vera John-Steiner (2006, p. 4) agrees that even in supposedly 'lone' artforms such as painting and poetry "the artist … works in the centre of a network of cooperating people whose work is essential to the final outcome". This echoes Zak's idea of the aforementioned phonographic "resonant frame", in which record collections "represent historical documents and *instruments of instruction*" (my emphasis) for record producers.

foundational samples of 'Boxing'. Elements of the isolated voice—nevertheless effected for the context of the source multitrack (and additionally processed in the context of the mix/master process)—have been used in three further beats: 'Keim Outro', '1960s 2', and 'Genitive', which will reappear in discussions concerning the remainder of their foundational samples in later chapters. 'Boxing' showcases the source material in a more exposed fashion at 2:30"-3:00" (and again at 4:29" and until the very end of the sample-based production).

Conclusions

The chapter's narrative commenced with a hypothesis that the sample-based hip-hop aesthetic is borne out of the interaction of sampling processes with past phonographic signatures, before questioning the nature and degree of the manifestation of the past as a variable in this creative equation. Acknowledging a number of contemporary approaches where hip-hop practitioners create new content in order to facilitate sample-based processes, the investigation has consequently examined the variables that enable an effective interaction between newly created content and beat-making. The aim has been to theorise on this dynamic, arming future practitioners (and creative praxis) with a better understanding of the aesthetic implications of dealing with both phonographic and newly created sampling content, so that referential sonic 'objects' (Moylan, 2014) can be (re)constructed, aiding the future evolution of the (sub)genre.

Looking at representative practitioners deploying a number of alternative contemporary approaches as a way to innovate and negotiate the pool of available sampling material, the examination has theorised on four areas of aesthetic concern: the function of sonic/musical nostalgia; the infusion of 'historicity' onto source content; the notion of phonographic 'magic'; and the identification of this reconstructive

proposition as metamodern practice. In comparing phonographic samples to newly recorded source material or sample-library content, a number of differences have become apparent, which point to the techno-artistic processes deployed in the construction of vintage sonic material. These, nevertheless, can arguably be re-constructed to close proximity as exemplified by the meticulous reverse-engineering of both sample-library companies and practitioners alike.

Therefore, the missing link in explaining sample-based producers' preference for phonographic content, and the unquantifiable 'draw' towards it, may be situated in the ephemeral manifestations of cultural resonance that result from the complex interactions and chaotic dynamic of the record-making process: sounds and utterances resulting from phonographic *context*. Perhaps the most promising potential for the future of a sample-based approach (in Hip Hop and beyond) lies in the exponential promise of 'making records within records', consciously *squaring* phonographic context, and synthesising the paradigm with that of a metamodern 'structure of feeling'. Far from simply adopting a fitting reconstructive frame, the empowerment for the practitioner in this synthesis stems from the realisation that the simultaneous irony of (postmodern) reconstruction merged with the enthusiasm of (modern) creation represents indeed a universal and interdisciplinary cultural paradigm. As a result, a subset of contemporary rap artists and producers may just be engineering new or future cultural objects, whilst consciously *and* naively entertaining their nostalgic predisposition toward stylisations resulting from the interaction of sampling processes with phonographic ephemera. This way, the oscillation between sonic pasts and hip-hop futures may result in a collapse of time and historical 'distance' via the very synthesis of vintage production techniques and sample-based processes. As Whalen (2016) identifies in the work of Frank Dukes: "By reverse-engineering the

art of flipping samples, Feeney is looking at the past, present, and future simultaneously".

Recommended chapter playlist
(in order of appearance in the text)
'Tense Minor'
'Touch'
'New Orleans'
'Americanotha'
'Toro'
'Altcore'
'Good Ole Betty'
'Oh Buxom Betty'
'1 by 2'
'Call'
'Padded'
'Ready to Chop'
'Keim Intro'
'Wishbone'
'Outta Sight'
'Until'
'To Rhodes'
'Whatever'
'King's Funk'
'Psychodelic'
'Boxing'
'Keim Outro'
'1960s 2'
'Genitive'

Chapter 3

Sample magic:

(Conjuring) Phonographic ghosts and meta-illusions in contemporary hip-hop production[79]

From '(al)chemists' and 'wizards' of the beat to the 'magic' of phonographic sampling in hip-hop music, the practice and literature surrounding sample-based music production are inundated with supernatural references. But as we have seen in chapter 2, sample-based music creation has also been criticised as "a mixture of time-travel and séance" (Reynolds 2012, p. 313), where subjects from the past are unwillingly manipulated by contemporary music-makers. Whether 'magical' vocabulary is mobilised in these contexts in a complimentary or critical sense, it is important to question why it is used to describe musical phenomena and, specifically for the focus of this investigation, how it applies to sample-based music creation.

At first glance, it is easy to see how the amazement resulting from musical feats or pleasing aesthetic results (in any artform) can lead to exclamations of awe and an elevation of the artist's skill to supernatural dimensions. It is important, however, to investigate more explicitly the conditions under which a musician—and for the purposes of this chapter, a beat-maker—becomes a magician in the eyes (ears) of their audience, as well as the implications of this transformation for both artistic effect and the audience experience. Furthermore, it will be useful to explore whether the frequent use of magical or supernatural characterisations simply substitutes complimentary (or critical) language directed at artists, or whether there is something

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[79] This chapter has been published in an earlier form as an article in the *Popular Music* journal (see Exarchos, 2019d).

more profound about their unanimous and universal usage. This will also provide the opportunity to explore whether such terms have become pivot mechanisms in popular music parlance diverting attention away from the serious study of artistic phenomena, when there are unexplained aesthetic effects taking place that warrant more careful examination.

Conditions and parallels

A logical position for the investigation to start from is the pursuit of the conditions necessary for magic in a sample-based musical context to occur. But first 'magic' itself requires a definition relevant to an artistic context. The focus here will remain on one understanding of magic as 'stage' or 'performance' magic, examining the conditions necessary for performance magic to occur, before drawing parallels to sample-based music creation. In doing so, it will demonstrate that music and magic work as reciprocal metaphors not only because music is frequently compared to magic, but also because stage magicians consistently use time-based, musical metaphors when explaining their practice. Furthermore, the obstacle of comparing a predominantly performable artform (stage magic) with a mediated one (sample-based music production) will be dealt with, at large, through a discussion of performable utterances that can be identified on the latter as an expression of traditional turntable practices.[80]

Starting from a more generic notion of magic, Oxford Dictionaries (2018) define it as "[t]he power of apparently influencing events by using mysterious or supernatural forces". Yet, from Houdini to Penn and Teller, performance magicians have dedicated much of their lives' efforts to exposing fraudulent claims towards the supernatural, and

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[80] For a complete account on the development of turntable practice—or 'turntablism'—as instrumental practice, see Katz (2012, pp. 43–69).

educating their audiences about the skill and effort required in delivering effective performance magic. Lamont and Wiseman (1999, p. xvi) claim that "magic, properly performed, is a complex and skillful art", while Vance (1985, cited in Wilcock, 2015, p. 40) describes magic as "a practical science, or more properly, a craft". Penn and Teller (cited in Zompetti and Miller, 2015, p. 11) go as far as to expose their methods on television because, according to them, "illusions are just illusions"; and Fitzkee (1945/2009, cited in Zompetti and Miller, 2015, p. 8) agrees that "what makes a magic trick great ... is *performance*" (original emphasis). Claims such as these are echoed throughout the world of performance magic, demonstrating that a reading of terms and ideas referring to magic through the lens of craftsmanship, mastery, and skill (rather than an acceptance of the supernatural) may render parallels that are more useful for the study of what is referred to as 'magical' in other performing arts.

Teller (cited in Leddington, 2016, p. 256) describes magic as "a very, very odd [art]form" and Leddington (2016, p. 254) agrees that "magic does not fit neatly into our usual aesthetic categories". This could also be said about the aesthetics of both record production more generally and sample-based record production more specifically, since the latter is borne out of the layering, manipulation, and juxtaposition of previously made phonographic constructs. In relation to hip-hop music, Schloss (2014, pp. 72–8) explains that "the idea of sampling as an aesthetic ideal may appear jarring to individuals trained in other musical traditions, but it absolutely exemplifies the approach of most hip-hop producers", adding that "this preference is not for the act of sampling, but for the sound of sampling: It is a matter of aesthetics".

In his critique of sample-based music as "seance fiction", "the musical art of ghost co-ordination and ghost arrangement", a process that "doubles [recording's] inherent supernaturalism", and the resulting "collage [as] a musical event that never

happened", Reynolds (2011, pp. 312–4) described the aesthetic conundrum quite acutely. Reynolds' critical stance towards sample-based music allows him a distanced analysis of the aesthetic phenomena on hand and, although rap practitioners may not share his disdain, he does, however, offer some helpful analogies between the two artforms: specifically, the manipulation of others' energies, the condition of distance, and the effect of unwillingness (on the side of subjects or audiences).

Lamont and Wiseman (1999)—assuming both practitioner and scholarly roles—provide a systematic account of the conditions necessary for effective performance magic, allowing us to draw more insightful parallels between the mechanics of the two artforms. Their findings appear surprisingly apt at describing the mechanics of music (both its performance and creation), especially if read with a focus on the interdependence between a performer's *method* and its *effect* on an audience (the listener). In their book, *Magic in theory*, they claim that "[s]uccess [in the performance of magic] requires that the spectator experience[s] the effect while being unaware of the method" (Lamont and Wiseman, 1999, p. 29), a dynamic that Zompetti and Miller (2015, p. 8) echo as the precedence of "the wonder of the occurrence" over the "mechanics of a trick". Indeed, Leddington (2016, p. 258) attests that "the magician has to ... "cancel" all the methods that might reasonably occur to you" and Hay (1972, p. 2, cited in Zompetti and Miller, 2015, p. 12) sums up that the "secret of conjuring is a manipulation of interest". What's noteworthy in *Magic in theory*, however, is Lamont and Wiseman's frequent discussion of rhythm and timing as crucial devices in interest manipulation, which resonates sympathetically with sample-based Hip Hop's preoccupation with rhythm and groove. The authors describe: novelty, "sudden sound(s)", "change of pace", (relative) movement, contrast (Lamont and Wiseman, 1999, pp. 40–41); as well as highlighting the "moment of effect" over "the moment of

method", and using rhythm, punctuation, and (on-)beat and "off-beat" moments as essential tools in physical misdirection and time-based attention control (Lamont and Wiseman, 1999, pp. 46–53).

The cyclic structure of sample-based Hip Hop similarly depends on interest manipulation through rhythmic and textural dynamics: cuts and stops of the beat, dynamic manipulation of found samples, use of sound effects, and spatial effect processing. If we take Gang Starr's 'Code of the Streets' (1994a) as a classic example, producer DJ Premier juxtaposes the exposed—and slightly sped up—introductory drum beat from 'Synthetic Substitution' (1973) by Melvin Bliss over the pitch-shifted instrumental introduction from 'Little Green Apples' (1968) by Monk Higgins. He then deploys Beside's 'Change the Beat' (1982) as a source for his turntable scratching and manipulation that constitutes the track's chorus. Throughout the track, Premier *cuts* the instrumental sample in time with the beat at key moments to create dynamic interest (e.g. at 0'18" before rapper Guru starts his first verse), while the end phrases of his scratching on later choruses are prolonged using a delay effect, their repeats fading out into subsequent verses. The track also features extraneous amounts of vinyl noise (underlining the connection to turntablism already evident in the scratching), while the 'Synthetic Substitution' beat sounds reinforced through the use of equalisation, potentially additional drum layers, and a prominent level placement in the mix. Premier's production here illustrates how the organisation and manipulation of full phonographic layers—rather than individual instrumental elements—results in striking dynamic, textural, and rhythmic effects, which he also deploys to provide the contextual materials behind Guru taking centre stage in the verses. On a later production, such as 'Deadly Habitz' (Gang Starr, 2003), his manipulation of Steve Gray's 'Beverly Hills' (Gray, 1979) demonstrates how a beat-maker can create

reimagined phrases out of found phonographic segments, creating rhythmical interactions between the (recorded) gestures and those included in the sampled content. As such, motion is perceptible on multiple levels while various layers can be brought to the listeners' attention though relative level balancing (mixing), timbral and spatial enhancements (equalisation, use of delay and reverb effects), or the performative manifestations of the producer's actions. The cyclical nature of sample-based Hip Hop follows Afrological priorities (Lewis, 2017), which Rose (1994, p. 83) acknowledges as a characteristic of "black cultural traditions and practices" expressed in manifestations of "openness, ruptures, breaks and forces in motion". The listener's attention is directed toward sonic, rhythmic, and lyrical invention expressed over a familiar loop; which is no different to the phenomenon of diverting spectators' foci to *effect* in performance magic, using the mechanisms of "naturalness", "consistency", "familiarisation", reinforcement, continuity, and subtlety—conditions Lamont and Wiseman (1999, pp. 60–74) identify as essential for psychological (mis)direction.

Structure, control, and subgenre

A further parallel that can be drawn between performance magic and sample-based record production relates to the structure of the artistic exposition and the use of 'raw materials' to construct it. Reinhart (2015, p. 26) cites the opening sequence of mystery thriller *The Prestige* to describe the typical "praxis of the commercial magical show":

> Every great magic trick consists of three parts or acts. The first part is called "The Pledge" in which the magician shows you something ordinary... The second act is called "The Turn". The magician takes the ordinary something and makes it do something extraordinary. Now you're looking for the secret... That's why every magic trick has a third act, the hardest part … the

118

Reinhart (2015, p. 26) explains that "in a great magic performance there are always two gaps - one between the "Ordinary Something" and the "Unexpected" and the second one between the "Unknown" and a magically restored order". If we listen to a number of sample-based hip-hop tracks, such as 'Lightworks' by J Dilla (2006), or 'Filthy (Untouched)' by Madlib (under his Beat Konductah alias) (2006), we can identify a very similar structural idea. The producers initially expose relatively unprocessed (albeit pitch-shifted and somewhat equalised) phonographic samples—segments from Raymond Scott's 'Lightworks' (2000) amongst others, and Vivien Goldman's 'Launderette' (2016), respectively—letting us *in on the trick* they are about to 'perform' so to speak, in order to then mesmerise us with their abilities to manipulate, truncate, loop, and re-order ('chop') their phonographic source. This is a process collectively known as 'flipping' in hip-hop practice. Skilful rap producers such as J Dilla and Madlib are capable of presenting reimagined sequences and sonic constructs substantially altered from their phonographic origins, therefore the introductory 'pledge' plays in their favour, demonstrating a notable 'gap' or 'turn' into the 'unexpected'. Note that the titles the producers choose for their resulting sample-based creations are consistent with their process—J Dilla keeps the name 'ordinary' (the same), while Madlib hints at the 'flipping' strategy by naming his track 'Filthy (Untouched)', rather than 'Launderette'. It could be argued that the 'restored' order comes in the form of establishing a new cyclic structure held together by the timbral and rhythmic coherency of the new main 'hook' (loop) that drives the rest of the production. The limitation of having to work with a small number of sampled phonographic instances (rather than unlimited instrumentation), necessitates the construction of narrative and the retention

119

of interest predominantly through the manipulation of an 'ordinary something'—a raw sonic source in the context of a sample-based hip-hop structure. Although this process becomes mediated on record, it owes much to the aural tradition of turntablism, being communicated to listeners via this developmental exposition of raw materials and subsequent sonic constructs. The parallel exposes a fundamental structural insight in the art of 'flipping' samples in Hip Hop, highlighting not only a surface characteristic, but identifying instead an essential mechanism in engaging and retaining listener interest, whilst authenticating the producer as 'performer' in control.

Demonstrating control, furthermore, appears as another fundamental condition before a performer can acquire 'magical' status within performance magic or beyond. Lamont and Wiseman (1999, p. 64) suggest that "[a]uthority brings control, and control of the situation can allow the magician to set the conditions"—an axiom that also applies to beat-makers and their demonstration of 'chopmanship' or 'wizzardy' over phonographic samples. Loshin (2007, cited in Zompetti and Miller, 2015, p. 10) confirms that "[t]he metanarrative of magic is tied up with the notion of control ... control of the natural world". The notion can be expanded to include scientists, as they can also discover, apply, and display methods of control over various forms of physical energy. For 18th century physics professor and stage magician Étienne-Gaspard Robert "the magical show was simply a lesson in applied physics, performed to amaze and educate his audience" (Reinhart, 2015, p. 32). In the case of Thomas Alva Edison, his 'power' over acoustic energy channelled via the invention of the phonograph earned him the nickname of the "Wizard of Menlo Park": through it, he was capable of "transforming life into abstract signals and playing them back ... [allowing] us to hear voices from people absent or long gone" (Reinhart, 2015, p. 27). In the case of beat-makers, too, the control over sonic materials, demonstrated through the art of flipping

samples, is a form of control over musical (rhythmical, textural, motivic) relationships, but also stylistic invariables. This is exemplified by beat-makers', DJs', and mashup remixers' aliases and characterisations, such as The Alchemist, DJ Cut Chemist of Jurassic 5, and Amerigo Gazaway: 'chemist' of the mashup, as previously described in press (Caldwell, 2015). In a more general sense, Kugelberg (2007, p. 31) sees all of hip-hop musicking as an artform comparable to alchemy or magic: "With hip hop, born in the Bronx, these guys created something out of nothing. That's amazing. That's alchemy. That's magic". For Reinhart (2015, p. 31), the ability to create 'something out of nothing' also characterises scientists, inventors and magicians—this is because they are "exponents of the same mind set [as they] have learned to deal with the phantasmatic space of the unknown in a creative way".[81] A quality that perhaps applies to all music-makers, but one that appears even more fitting for sample-based producers due to the materiality (rather than abstraction) inherent in the nature of control manifested over their sonic objects.

Control in this sense is understood as an intrinsic condition of both performance magic and sample-based music production describing the actions the performer exercises over the materials or objects deployed. The implication is that the audience (or listeners) are entertained by observing (or listening to)—and sometimes interacting with—the manifestations of control (effect), as exercised by the performers (method). Robert-Houdin (1906, cited in Reinhart, 2015, p. 31) categorises Modern Magic into classes according to such intrinsic characteristics (i.e. what subjects are used and what actions are performed). For example, one of the classes he identifies, "Experiments in Natural Magic", is described as "[e]xpedients derived from the

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[81] This is a notion that echoes Ihde's (2012, p. 108) "fantasy variations": "It is out of possibility that the undiscovered is found and created".

sciences and which are worked in combination with feats of dexterity, the combined result constituting conjuring tricks" (Reinhart, 2015, p. 31). The definition sounds analogous to how sample-based record production could be described as a (sub)genre: *exponential phonographic illusions derived from sonic phenomena (psychoacoustics) and the manifestation of producer (originally turntablist) dexterity over phonographic sound objects—the combined result constituting* 'supernatural sonic collages' (to echo Reynolds again).

As much as it is useful to classify artforms through the lens of practice and the materials used (i.e. intrinsically), the resulting effect(s) (appreciation, entertainment) cannot be fully comprehended without considering audience perception and the context surrounding recipients (culture and mediation). Landman (2013, p. 47) theorises on how different genres of theatrical or stage magic frame performance "on a different contract between the performer and the audience, the discourse used during performance and the effect on the audience both in terms of its perception of what has transpired and the personal meaning attached to the effect". He expands with a fitting analogy:

> Like the different strands in other performing arts (music, drama, comedy), these genres have distinctive communities and sub-cultures, as practitioners try to establish hegemony of one form of performance magic over others, or seek to construct separate identities around their stage persona and approaches to performance magic. (Landman, 2013, p. 48)

Similarly, the work of sample-based beat-makers, through its historical association to turntablism, is rooted in approaches to music production congruent with an evolving stylistic contract between producers and fans, requiring methods of control from the side of the makers, in order to create coherent sonic experiences for the recipients.

As with any evolving stylistic contract, the successful producers manage to challenge recipient interest by balancing adherence to aesthetic criteria (genre rules), whilst innovating; but the parallel force in action is the evolution of audience perception itself. As Cohen (1994, cited in Zompetti and Miller, 2015, p. 12) reports on Penn and Teller, they are performers "willing to acknowledge...that the culture is savvy to magic"; just as musical / hip-hop culture is savvy to sample-based utterances and sampling technology. Williams (2014b, p. 193) confirms: "hip-hop as a genre presupposes an un-concealed intertextuality which is part and parcel of its aesthetics. Much of this has to do with hip-hop communities' expectations (its 'generic contract')".

However, the adoption of developing mediation technologies into any performing art adds another crucial factor that negotiates how the artform is framed. The following section will widen the focus of the discussion to the totality of record production, in order to explore parallels between mediation effects upon phonography and performance magic. Sample-based record production will then be contextualised as a subgenre defined specifically by sampling technology affordances. The discussion hypothesises that if the art of record production evolved from documentarian capture *(as real)* to the construction of sonic illusions *(hyper-real)*, then sample-based Hip Hop introduces the notion of an exponential juxtaposition of multiple illusions *(meta-real)*. The phenomenon mirrors the evolution of audience perception in performance magic from: 'seeing is believing' *(magic as the occult)*; to illusionism *(suspended disbelief)*; to TV illusionism *(challenging the interaction between performance and production)*. The interaction of technology with both artforms has implications for their 'frame' in relation to liveness, authenticity, and defining aesthetic criteria, necessitating also a theorising of the 'meta-*effect*' that is possible through mediation. A schematic representation of the parallel streams of evolution for both

artforms and the respective audience perception can be seen in Figure 3.1 below, including associated technological variables, tools used in directing audience

Artform parallels
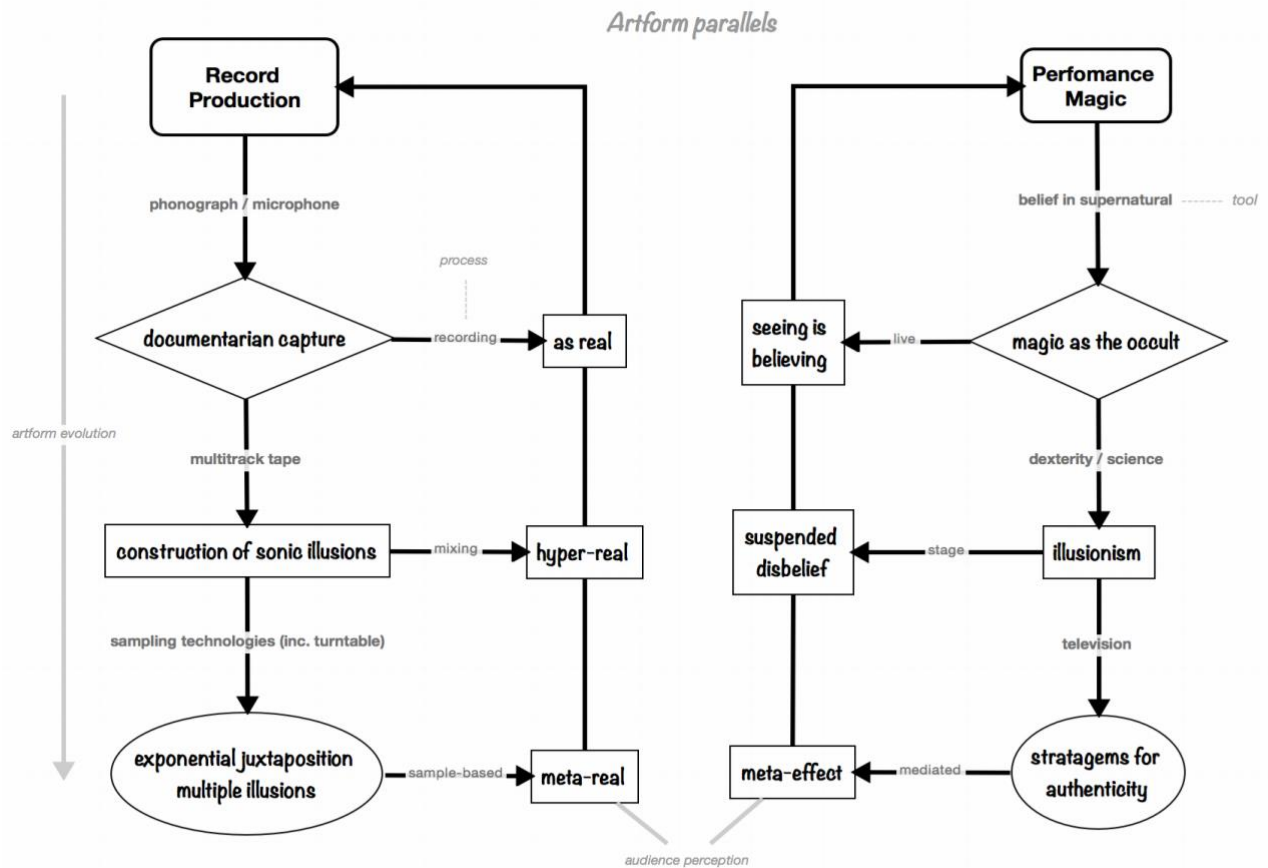
attention, and related processes.

Figure 3.1 A schematic representation of the parallel evolutionary streams for record production and performance magic.

Technology, mediation, and the alchemy of beat-making

Landman (2013, p. 52) proposes a convincing categorisation of genres and subgenres in performance magic according to the methods (materials), effects, and frame adopted, but also the contract, engagement, and discourse that can be observed between performer(s) and the audience. In the case of the overarching categories of "magic", "mentalis", and "mystery entertainment", he finds that the former two share a—contemporary—frame relating to the production of inexplicable effects

based on unknown methods, while in the latter there is an implicit claim towards the supernatural (Landman, 2013, p. 56). As we have seen above, however, the delineation away from supernatural claims characterises most *modern* magic, mirroring the growing 'savviness' of a contemporary audience. The evolved perception identifiable in audience culture is understandably the result of multiple forces;[82] but it is also a consequence of conditioning borne out of the ongoing discourse between performers and audiences. As Leddington (2017, p. 34) notes: "[t]hat the sign reads "Magic Show" allows us to feel a measure of safety and control in the face of what might otherwise be a frightening experience: encountering an apparent violation of natural law"; and he maps audience reaction to a behavioural mechanism he describes as an "activation of the "magic" genre script"—something Landman (2013) sees as the unspoken contract framed between performer and participants.

The obvious parallel with record production is a similar 'savviness' amongst listeners about recording technologies, creative possibilities, and resulting effects, which create a range of artistic expectations throughout the history of the artform and across different subgenres. Much has been written about the advent of multitracking and its effect on the aesthetics of record production. By enabling the manipulation of separate layers of instrumentation in post-production (see, for example: Katz, 2010; Horning, 2013; Jarrett, 2014) and—through that—the *staging* of balance, timbral, and spatial illusions (see: Lacasse, 2000; Zagorski-Thomas, 2010; Liu-Rosenbaum, 2012), it has transcended the pursuit of a purely documentarian approach to sonic representation. Jarrett (2014, p. 113) aptly describes:

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[82] It would be hard to imagine how, for example, the renaissance, a shift towards scientific thinking, technological awareness, and secularism in the West would not have affected audience trends in their engagement with magic.

> Around 1967, recordings changed. From that point on, they were almost never actual records of single musical events—they became instead, almost always, composites of many musical events–"virtual" records. The performances heard on records were more constructed than caught.

Nevertheless, the 'genre script' across eras and subgenres has continued its differentiation beyond the initial affordances of multitrack tape, in response to a plethora of consumption trends and developing media. Zagorski-Thomas (2010) has demonstrated the effect that the interplay between idealised and actual consumption spaces has had on the development of mixing strategies for rock and disco (and eventually dance music), while Thomas Vendryes (2015) has highlighted the socio-economic context within which King Tubby pioneered the notion of the 'remix' (and, simultaneously, the subgenre of Dub). It could be said, however, that, collectively, the art of record production, in all of these pursuits since the invention of multitrack tape and until the dawn of sampling technologies, had been freed from the limitation of the 'real' (performance representation) and was allowed to explore and build 'hyper-real' sonic constructs. Of course, representational or documentarian outputs have continued to be produced, with particular genres placing high value on the least amount of mediation over authentic performances.[83] Furthermore, even when attempting to represent a performance with minimum mediation, a certain amount of distortion of the acoustic representations is inevitable due to the recording and post-production techniques and tools employed (Zagorski-Thomas, 2018, pp. 13–24).

In performance magic, the shift from a perception of conjuring effects 'as real' (stemming from supernatural powers) to the adoption of *suspended disbelief* as a condition enabling 'illusory' entertainment, seems to have been brought about by a

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[83] Moore (2002, p. 213) discusses this form of authenticity as "primality".

philosophical set of conditions (rather than a particular set of technological affordances). Nevertheless, it is interesting to note the implications for magic once its performance becomes mediated through visual technologies (video, television, online). In one sense, it could be argued that performance magic, by its definition, has been leading the race when it comes to entertainment via illusion, while record production could only start partaking, after recorded sonic objects would become subjects to multitrack manipulation. But for both artforms, the handling of illusion reaches a 'meta' level with the adoption of, respectively, mediated technologies for magic and sampling technologies for record production; a comparison that uncovers important aesthetic issues in sample-based Hip Hop and explains some of the 'magical' analogies so frequently made about the artform.

One of the first problems affecting both artforms in terms of mediation is the issue of communicating performance authenticity, and the strategies that can ensure a convincing effect. Landman (2013, p. 60) asserts that conversely to televised magic, "live performance magic can develop experiences and feelings relating to trust and belief": participants in his magic workshops have reported feelings of increased trust due to the live nature of his performances, at the same time refusing to believe televised magic shows like the Derren Brown series. Leddington (2016, pp. 259–60) attributes the problem to an increase in physical distance between performer and audience, which becomes counter-productive to the experience of magic and constitutes an aesthetic issue that gets magnified with mediation: "The problem of distance is especially acute when showing magic on TV, where effective performance also requires ruling out the possibility of camera tricks and postproduction effects"— to that effect, TV magic shows like David Blaine's *Street Magic* deploy the portrayal of live audience reactions as stratagems "to certify the authenticity of the performance".

Videos of magic tricks currently populating social media also deploy similar techniques, frequently staging participants around the performer in order to convince viewers of a certain degree of transparency.

To return to Reinhart's (2015, p. 35) analysis of magic portrayed in motion pictures, his concluding observation about *The Prestige* is that after the narrative has run its structural course of "pledge-turn-prestige", the film "introduces another meta-level by turning the cinematic narration into a magic trick by itself"; as a result "[w]e, the meta-audience, are tricked as well". The significance of this observation for sample-based practices is that it mirrors the meta-effect of being allowed, as a listener, in to the phonographic dimension of the sampling producer, witnessing the manipulation of previously made phonographic constructs. We may not be tricked, but we are entertained, and our interest is directed toward perceiving at least two, if not multiple, temporalities of phonographic process—in other words, we are hearing *process upon process*.

For a musical artform so heavily dependent upon music technology since its very inception, the problem of authenticity becomes magnified because of this degree of exponential mediation. Williams (2011) explains how recorded Hip Hop was initially perceived as an inauthentic take on the aural tradition of rap, especially when compared to the way it was being performed live in the Bronx in the 1970s. This perception was not helped by the fact that the first crossover hits credited as Rap had little to do with the music of the streets, something we have seen Kulkarni (2015, p. 37) describe as "essentially R'n'B records with rapping [and scratching] on them", to which he adds: "The crucially exciting thing about hip hop, the music made by scratch DJs, only figured as an effect, a detail, not the root of where the grooves and sounds came from".

Kulkarni here points to what may seem like a reversed notion of authenticity in Rap when compared to other musical genres: turntable performance using phonographic sources resonates from the origins of the culture, while live musicianship does not. Because of that, "rap music production ... has aimed to create the sounds of the street", the strategy here consisting of the inclusion of "turntablistic codes on recordings" such as "vinyl scratching ... to signify authenticity" (Williams, 2011, pp. 151–154). By the time sampling technology had become affordable, many of these turntablistic utterances were first replicated and later on developed further by DJs-turned-sampling-producers (something exemplified by the DJ prefix in many of the early hip-hop producers' aliases)—resulting in Hip Hop's Golden Age boom-bap sound. As a result, the practice of sample-based Hip Hop developed its own intrinsic code of ethics regarding both sampling practices and what constitutes acceptable phonographic source material (Schloss, 2014). And while pop and rock record productions were creating 'supernatural' sonic constructs out of instrumental performances, sample-based hip-hop practice kept alluding to a performative tradition that represented the "alchemy" of creating "something out of nothing" (Kugelberg 2007, cited in Williams, 2011, p. 133); or, in other words, it alluded to exponential illusions conjured out of the flux of turntable-turned-sample-based manipulations over full phonographic sources. But let's look at the practice in more detail to investigate what constitutes beat-making 'alchemy' through a representative case study.

On track 'Musika' from KRS-One and Marley Marl's album *Hip Hop Lives* (2007), Marl samples the last few seconds of 'A Theme for L.A.'s Team', the opening track from motion picture soundtrack *The Fish that Saved Pittsburgh* (Thomas Bell Orchestra featuring Doc Severinsen, 1979). 'Musika' features reggaeton rapper *Magic*

Juan and, to complete the metaphysical serendipity, the mystical theme is also present in the lyrics:

> Use your real eyes to realize these real lies
>
> Yo Marley, let's hit 'em, word up...
>
> Marley Marl on the musika, KRS on dem lyrics da
>
> On the side I teach meta-ta-ta-physica... (KRS-One & Marley Marl, 2007)

The relevance of the example stems from Marl's celebrated status as an architect of the sample-based aesthetic in Hip Hop;[84] KRS-One's dedication to authentic hip-hop 'genre scripts' *and* the supernatural as a source of his inspiration;[85] but also because the track—and album—exemplify the practice of the Golden Age boom-bap aesthetic. In more detail, 'Musika' features about ten seconds from the 1979 recording, slightly sped up and looped into a cyclical structure, over which Marl builds a drum beat with sparse additions of sub-bass and a one-note repeated synthesiser bass figure taking place at the end of every four or eight bars. It is impossible to identify precisely the origin of the drum sounds contributing to the beat but, in the 'making-of' documentary included with the album release, KRS-One refers to Marl's pioneering practice of 'chopping' up individual drum hits from funk breaks (breakbeats). Additionally, the timbre and dynamic envelopes of the sounds are characteristic of Marl's (and by extension Boom Bap's) practices of layering individual funk drum hits with synthetic 'boom' sounds from classic drum machines (such as the Roland TR-808). The soundtrack sampled has been mostly recorded at Sigma Sound (and other studios) but, judging from the timbral and spatial qualities of 'A Theme for L.A.'s Team', an

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[84] Rose (1994, p. 79) informs us that: "A few years after rap's recording history began, pioneering rap producer DJ Marley Marl discovered that real drum sounds could be used in place of simulated drum sounds".

[85] KRS-One published a hip-hop 'commandments'-style/dogma book entitled *The gospel of Hip Hop: First instrument* (2009).

educated guess would place the specific track at the famous Philadelphia location too (Nelson-Strauss, 2017). Toby Seay (2012) provides an illuminating rationale for the timbral and spatial characteristics that came to be known collectively as the 'Philly sound', and the sampled track in question subscribes to these. What is particularly telling about the Sigma sound is its unique echo-chamber footprint upon recordings actualised at the Philadelphia location, but also the rich, layered strings texture the personnel acquired by overdubbing the string section whilst inadvertently capturing speaker 'bleed' (Seay, 2012).

As a result, the original recording (which features eight individual instrumentalists alongside a string and horn section) carries with it a number of sonic illusions: layered instruments so they sound like larger sections; superimposed acoustic spaces (echo chamber) upon the actual spaces captured due to reflections during recording; re-amplified instrumental sections (and their reflections) captured due to 'spill' during overdubbing; as well as all the sonic artefacts and timbral processing colouration caused by recording and mixing practices, and the respective equipment used.[86] We might agree with Reynolds (2011, p. 313) that "[r]ecording is pretty freaky then", but let's explore why "sampling doubles its inherent supernaturalism". The section Marl uses clearly features a high-register trumpet solo, over a string section ostinato, but we can also hear the trademark Sigma Sound ambience. The strings are very rich in texture as a result of the overdubbing approach, occupying a wide stereo image and implied depth (illusion), which is typical of the

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[86] Moore (2019, p. 210) defines audio colouration "as the subtle, and sometimes not so subtle, changes in program material that manifest perceptually as variations in timbre"; which "occurs when audio equipment alters features of the original program material, including (but not limited to) changes in the frequency response, dynamic envelope, and harmonic content, through the addition of harmonic components…"

Philly sound. Figure 3.2a below provides a schematic representation of the sonic 'space' occupied by the sampled section.
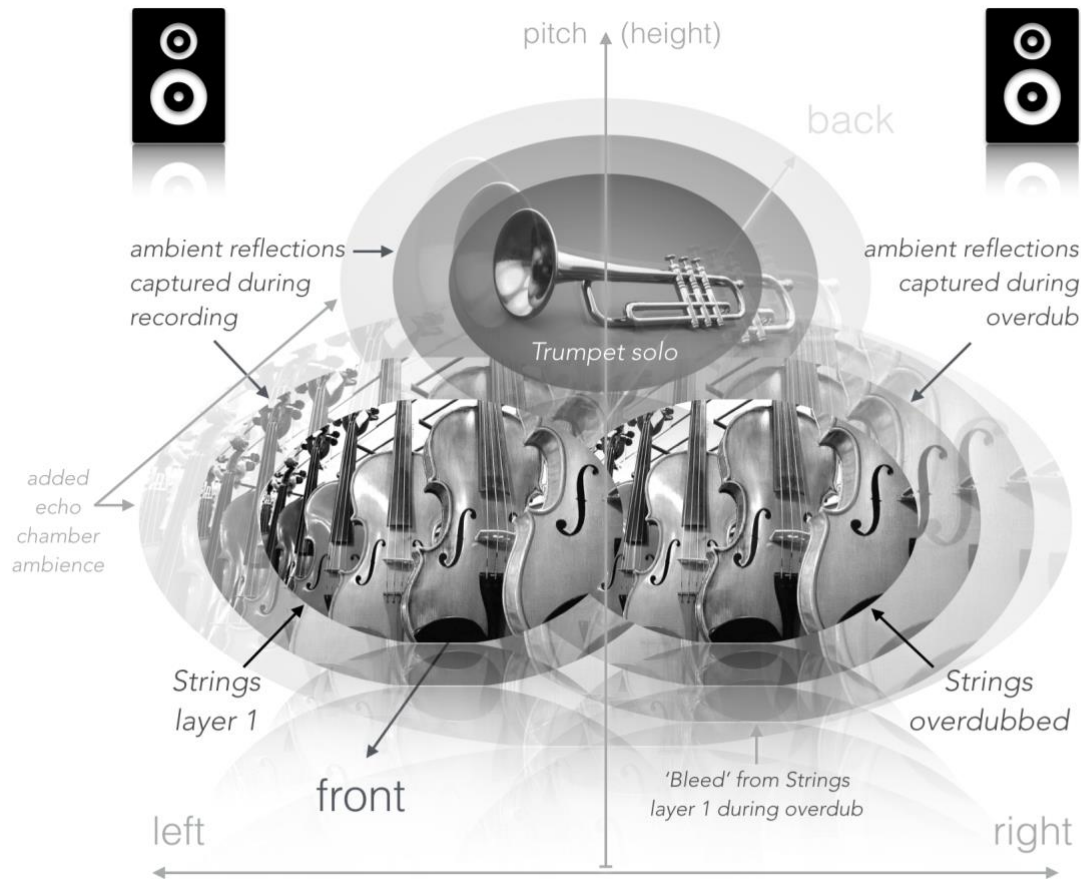
Figure 3.2a A schematic representation of the sonic 'space' occupied by the sample from 'A Theme for L.A.'s Team'. The visual representation of the sonic objects' pitch (frequency), stereo image, and depth in the mix is inspired by David Gibson's (2008) visual conceptualisation of mix layers, but also Moore and Dockwray's (2008) 'sound-box' illustrations.

Although Marl does not excessively manipulate or chop the original sample, the frequency content sounds higher than on the original track due to pitch-shifting (he could have achieved this by raising the cycles on a turntable prior to sampling the section or by tuning the sample higher within a sampler), but potentially also due to additional equalisation. Hip-hop producers will often manipulate the spectrum of a whole phonographic sample in order to make 'space' for the new elements they bring

to the mix (including the rapper's voice). It is difficult to discern whether Marl has added any further reverberation to the sample, therefore superimposing yet another space upon the 1979 spatial illusions, but this—again—is common beat-making practice aiming to 'glue' all the borrowed elements within a new implied 'stage'.[87] The low-frequency sounds (kick drum, sub-bass, and bass synthesiser) come across as completely 'dry' (i.e. not carrying any substantial ambience) in the hip-hop mix, which places them rather 'forward' in the staging illusion. The drum sounds (gathered from a multitude of sources) typically feature the characteristics of both 1970s drum sources and 1980-1990s hip-hop drum layers, but their truncation and any dynamic envelope-shaping pack the contained ambiences into unnaturally abrupt durations. Figure 3.2b below provides a schematic representation of the resulting staging illusions in 'Musika'.

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[87] In a study that focuses primarily on compression in mastering, Moore (2021, p. 58) provides a useful, if narrow, definition of 'glue' as a characteristic that "creates a cohesiveness to program material", and which "may impart subtle distortion, colouration and rhythmic movement". Citing Cousins and Hepworth-Sawyer (2013, p. 74), he also preempts it with a wider understanding, as "a by-product of gain control, making the track sound like a whole entity rather than its individual parts".
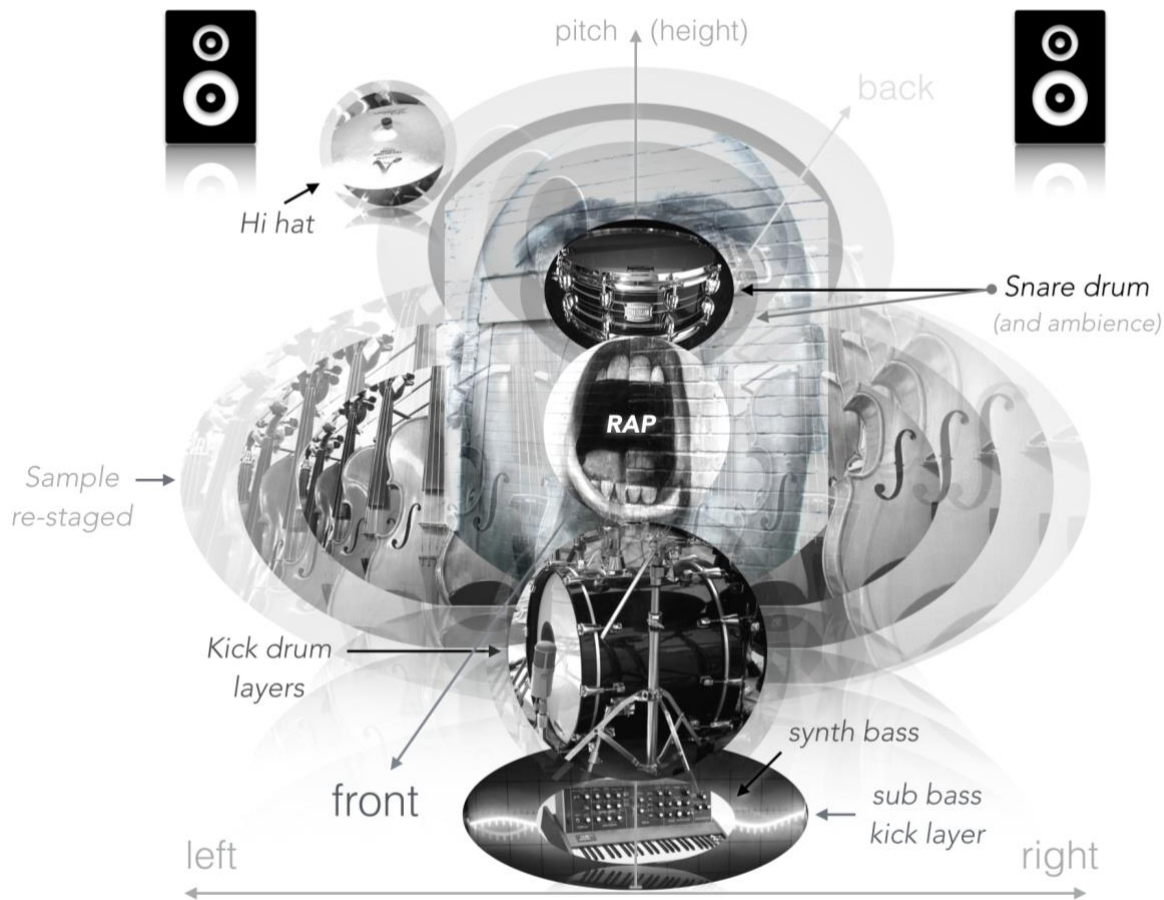
Figure 3.2b A schematic representation of the exponential staging illusions on track 'Musika'.

The example illustrates that what may sound motivically quite repetitive and simple on the surface, represents, in fact, a complex, multidimensional, and rich *sonic* construct. What is noteworthy here is that the juxtaposition of the plethora of timbral, dynamic, and spatial illusions creates an exponential one, which is, however, held together by the sample-based producer's craft (control). The sampling producer is drawn to the phonographic sources because of the rich sonic phenomena they contain, but also because the origins of the artform predispose the beat-maker to 'jamming' with the past. The "sample collage" as a "musical event that never happened" may indeed be "the musical art of ghost co-ordination and ghost

arrangement" (Reynolds, 2011, pp. 313–14), but unlike Reynolds' dissatisfaction with the artform, the listener of sample-based Hip Hop remains engaged and entertained; and this is due to a stylistic contract that presumes suspended disbelief conditioned by the evolution of record production. The 'alchemy' or command that the producer demonstrates over the multiple sonic dimensions may rightfully sound 'magical', but it is exercised through the craft of rhythmic, dynamic, and timbral organisation—Krims's (2000) "hip hop sublime"—having first tamed the tools of the trade: the relevant sampling technology.

Impossibility, motion, and the ecology of alief

In his article 'The experience of magic', Jason Leddington (2016, p. 254) sets out "to initiate a philosophical investigation of the experience of magic with a focus on its cognitive dimension" and sees his work as "a first step toward a general aesthetics of the impossible". His examples for "impossible music" include Risset rhythms and Shepard tones (Leddington, 2016, p. 254), which "can be constructed to give the perception of continuous acceleration" (Stowell, 2011, p. 1) or pitch oscillation, respectively. But this kind of "fractal self-similarity" (Stowell, 2011, p. 1)—entertaining and extreme as it is—is not the only kind of sonified 'impossibility' we may get exposed to as we have seen. Figure 3.2b above represents schematically, a sonic experience that is more comparable to Reutersvärd's 'Impossible Triangle' or Escher's 'Irrational Cube' (see Figure 3.3 below), to use two of Leddington's visual examples. We can clearly see these shapes on two-dimensional paper (and they would not be too difficult—and certainly not impossible—to recreate by drawing); but if we try to imagine them in 3D space, our perception reaches a moment of cognitive dissonance: the shapes can be drawn, but what they represent in three dimensions cannot exist in physical space.
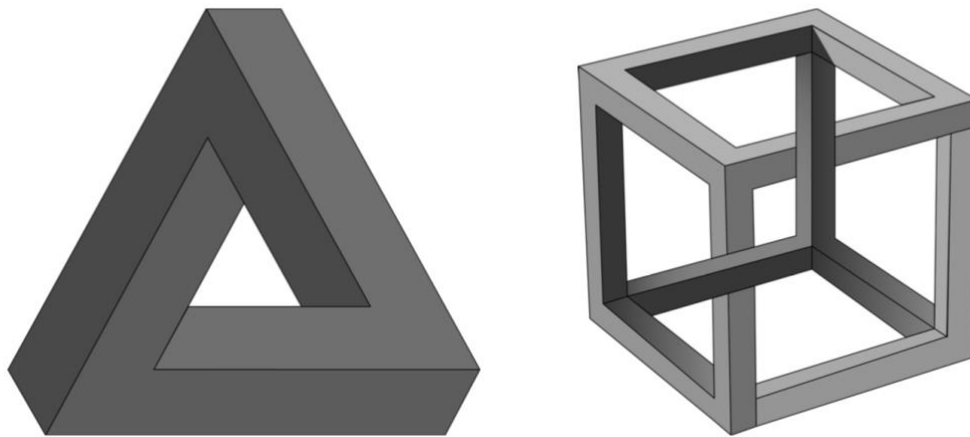
Figure 3.3 Reutersvärd's 'Impossible Triangle' and Escher's 'Irrational Cube'.

Similarly, the exponential supernaturalism of the sample-based music collage presents not only spatial but also temporal impossibilities—musicians and sonics from different eras co-existing on multiple spatial planes. Here, we perhaps reach an irrefutable analogy between recorded music and magic. "Magic is ... about creating ... the illusion of impossibility" (Ortiz 2006, cited in Leddington, 2016, p. 254), just as it is for the drawings above, for phonographic records following the advent of multitracking, and—exponentially so—for hip-hop productions making use of sample-based practices. There appears to be a universal magnetism drawing humanity toward experiences of awe that cannot be (easily) explained. On the surface, this seems like an oxymoron—being drawn to self-inflicted illusions of impossibility and moments of cognitive dissonance, or choosing to be entertained by the "bafflement of (our) intellect" (Leddington, 2016, p. 259). Could this be a form of acknowledgement of other modes of knowledge, or of the limits of the current state of affairs in rational and scientific thought? Leddington (2016, p. 264) reminds us that "Socrates's "human wisdom", which consists in his knowing only that he does not know, is a form of sustained *aporia*" (my emphasis); and "maintaining the belief that there is a correct

account of piety (or virtue, or justice, . . .) in the face of *aporia* is of paramount *ethical* importance" (original emphasis). This notion is echoed across the scientific world, but also in studies investigating the evolutionary purpose of music. In his investigation of the overlap between magic and science, Reinhart (2015, p. 34) draws our attention to the fact that "Einstein is aware that a pure positivist view can't possibly cover the full extent of what is comprehensible by the human mind". Perlovsky (2017, pp. 28–31), furthermore, traces this conflict down to the cognitive mechanisms of differentiation and synthesis, championed respectively by the development of language and music:

> Most of the knowledge that exists in culture and expressed in language is not connected emotionally to human instinctual needs ... While language splits psyche, music restores its unity. We come to understanding why music has such power over us: we live in the ocean of grief created by cognitive dissonances...; and music helps us alleviate this pain.

Leddington's theorising leads him to a further powerful argument. The commonly used notion of (willing or unwilling) *suspended disbelief* cannot sufficiently explain the enjoyment we experience from engaging with illusions of impossibility. If it were so, how could we actually be amazed (entertained)? He believes, instead, that the necessary condition must be to experience—even to maximise—"cognitive dissonance that is not a matter of conflicting beliefs" (Leddington, 2016, p. 257). To explain the cognitive mechanism, Leddington borrows the notion of *alief* from Szabó Gendler (2008, cited in Leddington, 2016, p. 257), defined as follows:

> A paradigmatic alief is a mental state with associatively linked content that is representational, affective and behavioral, and that is activated— consciously or nonconsciously—by features of the subject's internal or ambient environment.

Gendler (cited in Leddington, 2016, p. 257) goes on to explain how a conflicting experience such as walking on the transparent Grand Canyon Skywalk bridge would involve a clash of an intellectual belief in presumed safety "and a more primitive, nondoxastic, representational mental state she calls *alief*" (original emphasis). Anyone with a fear of heights would have experienced a similar conflict between, on the one hand, the intellectual reassurance of a situation as safe and, conversely, an irrational fear about approaching a barrier or looking down. Ortiz (1955/2011, cited in Leddington, 2016, p. 258) pins down the recipe for successful magic in this very tension, expressed as the victory of emotional over intellectual belief. He offers a telling 19th century anecdote to illustrate their difference: "Madam De Duffand was asked whether she believed in ghosts. She responded, "No. But I am afraid of them"" (Ortiz, 1955/2011, cited in Leddington, 2016, p. 258). If we take a recent sample-based hip-hop record such as 'The Story of O.J.' (2017) by Jay-Z—produced by No I.D. and featuring samples of Nina Simone's 'Four Women' (1969)—the equivalent exchange between two fans might sound something like this:

Fan A—Do you believe Jay and Nina performed on this together?

Fan B—No. But their interactions *move* me.

In his theory of an ecological approach to the perception of musical meaning, Clarke (2005) echoes Gendler's notion of alief as a state activated by features of the environment. He suggests that "perception must be understood as a relationship between environmentally available information and the capacities, sensitivities and interests of a perceiver" (Clarke, 2005, p. 91):

An important component of that subjective engagement with music is its corporeal, proprioceptive, and motional quality, which may on occasion

> provide listeners with experiences of "impossible worlds" that have some of
>
> the same attractions as do other forms of virtual reality. (Clarke, 2005, p. 90)

Levitin (2006, p. 192), furthermore, supports a primordial rationale behind our instinctive, embodied response (motion) to strong rhythmical content present in a musical track, which is congruent with a notion of being coerced to move (dance, nod, tap our foot) by the (recorded) commands of a music producer, despite any intellectual identification of temporal or spatial sonic 'impossibilities':

> Our response to groove is largely pre– or unconscious because it goes
>
> through the cerebellum rather than the frontal lobes ... [Your brain] involves
>
> a precision choreography of neurochemical release and uptake between
>
> logical prediction systems and emotional reward systems.

No I.D.'s highly rhythmical chopping of Nina Simone's 'Four Women' against his programmed beats on 'The Story of O.J.' therefore *move* us (emotionally and arguably physically) despite the impossible (or non-natural) resulting vocal phrases; the juxtaposition of Nina Simone's and Jay-Z's voices; and their different but characteristic phonographic signatures (signifying both 1960s and 2010s recording aesthetics—themselves the result of different production practices and equipment/media used). Interestingly enough, the two characters are brought together in the song's music video through animation, concurring with Clarke's (2005, p. 86) "impossible world" analogies across different artforms.

Freud's (1975/2001, p. 90) position then that only in art and magic can mimetic action be thought to influence recipients and produce emotional effects "just as though it were something real" rings true; but it is not the result of blind confidence in the performer's power of control, but more so a transference of action upon artistic materials, themselves in turn communicating 'instructions' embedded in the work.

These can psychologically *move* the recipient, and in the case of rhythmical transference in music, *literally* move the listener. Hazrat Inayat Khan (cited in Godwin, 1987, pp. 261–2) makes a telling leap from the metaphysical to the physical effects of sound:

> [E]very sound made or word spoken before an object has charged that object with a certain magnetism ... The whole mechanism, the muscles, the blood circulation, the nerves, are all moved by the power of vibration. As there is resonance for every sound, so the human body is a living resonator for sound ... Sound has an effect on each atom of the body, for each atom resounds.

Zagorski-Thomas (2018, pp. 347–8) supports the notion with a more scientific perspective:

> A crucial piece of information from neuroscience is that we recognise human gesture by mentally "doing it" ourselves … If our interpretation of the world through firsthand experience is schematic in nature, the way we create meaningful, symbolic representations of aspects of our experience through language, gesture, and the manipulation of our environment takes this schematic nature to another level.

Because the performer/producer is attempting to create a finely balanced experience of conditions or, using Clarke's approach, an environment of engaging information echoing nature to present to a perceiver (which in Clarke's interpretation also includes culture), the achievement of such an architecture, sonic 'world', or effective illusion is referred to as magical. The inexplicable, the 'bafflement of the intellect', and the resulting awe are effects borne out of resonating with a humanly constructed 'sublime environment'. And the effect is not just a perceiver's gift; the

creator can also be mesmerised by their own achievement, because achieving control over the infinite variables is not a given, but a harmonious plateau reached when the performer's level of skill and the environmental variables meet. It is what externally appears as control, what artists experience as "flow" (Csikszentmihalyi, 1990), the results characterised as 'sublime'.

In sample-based music creation, the infinite network of sonic possibilities includes previous phonography. Although, practitioner mastery is a condition, "flow" is reached only when control and environmental challenge reach a balance (Csikszentmihalyi, 1990). The dynamic is perceivable by both makers and recipients, and this is why consistent practitioners acquire magical characterisations from their community (peers, fans); why the construction of 'sublime' sonic worlds is called magical; and why practitioners, at times, refer to their own process *as if by magic*. It can't be so but it is. Both real and unreal. Coercing the listener into sympathetic motion through constructed experiences that trigger the right kind of neural mirroring (Cook *et al.*, 2014), as Zagorski-Thomas demonstrates above.

When asked about his favourite creation on his debut mixtape *Grisela Ghost* (Westside Gunn x Conway, 2016), mysterious rap critic turned prolific sample-based producer Big Ghost Ltd. (who, incidentally, never reveals his true identity) attests: "My absolute favorite beat even before they recorded any vocals to 'em was Fendi Seats. They [rappers Westside Gunn & Conway] also happened to both snap on that shit. That one came together like magic, B" (Shabazz, 2015). This is a typical acknowledgement of musical factors external to the practitioner's control. The sample-based producer demonstrates a default humbleness due to their dependence on a field of previous phonography, but also a notion of self-effacement founded upon aporia. Zak (2001, pp. 195–6) tells us that "[b]oth the artist's expressive gesture and

the listener's interpretation are infused with an awareness of field that allows minimal, momentary, and inexplicable allusions, references, and rhetorical gambits to resonate in a frame far larger than themselves". This explanation highlights the forces of chaos involved in record production as a result of the plethora of sonic variables, technological options, and (sub)cultural associations available. And these become exponential in a form of sample-based phonography that itself interacts with *previous* phonography. The phonographic moments that succeed in aligning these 'inexplicable allusions' therefore feel magical to both makers and listeners, because they feel rare; because they feel sublime; because they feel *impossible*; because we find their illusions of impossibility not only entertaining, but also healing for our intellect; and because they provide *synthesis*.

But how is technology itself capable of leading to further magical manifestations? Likening the computerised and networked present to a magical world, Wilcock (2015, pp. 43–4) warns about the "ability to take control of someone's soul" with current technology, if soul is defined as "all the information about one's self, all the information that makes up one's online presence/self, or "the algorithm" that summarised all that you are". The analogy to a stored instance of someone's voice within a sample (e.g. Simone's presence in 'The Story of O.J.') is an easy leap to make. The mapping of vocal phrases on the drum pads of a sampling drum machine leads to rhythmical and textural manipulations enforced upon past voices/performers/sounds; and these can be seen as a form of 'phonographic conjuring' and, in turn, a kinaesthetic (embodied) coercing of the listener (based on the neural mirroring effects discussed above).

The temporal distance perceived between the percussive actions of the contemporary producer (No I.D.'s reimagined patterns triggering Simone's voice) and

the performer situated in the past (Simone's 1969 performance) becomes a further condition for a magical experience. Even though distance between performers and audiences is counterproductive to magic as Leddington (2016) has previously shown, distance between user and source is in fact a condition for successful magic to occur according to the "law of contagion" (Wilcock, 2015, p. 40): "things which have once been in contact with each other continue to act on each other at a distance after the physical contact has been severed" (Frazer cited in Wilcock, 2015, p. 49). Hearing the interaction of old and new musical or sonic utterances is contagion manifested on rap records. Figure 3.4 below illustrates the drum pads of an Akai MPC sampling drum machine 'loaded' with samples summarising the phonographic examples discussed in this chapter.
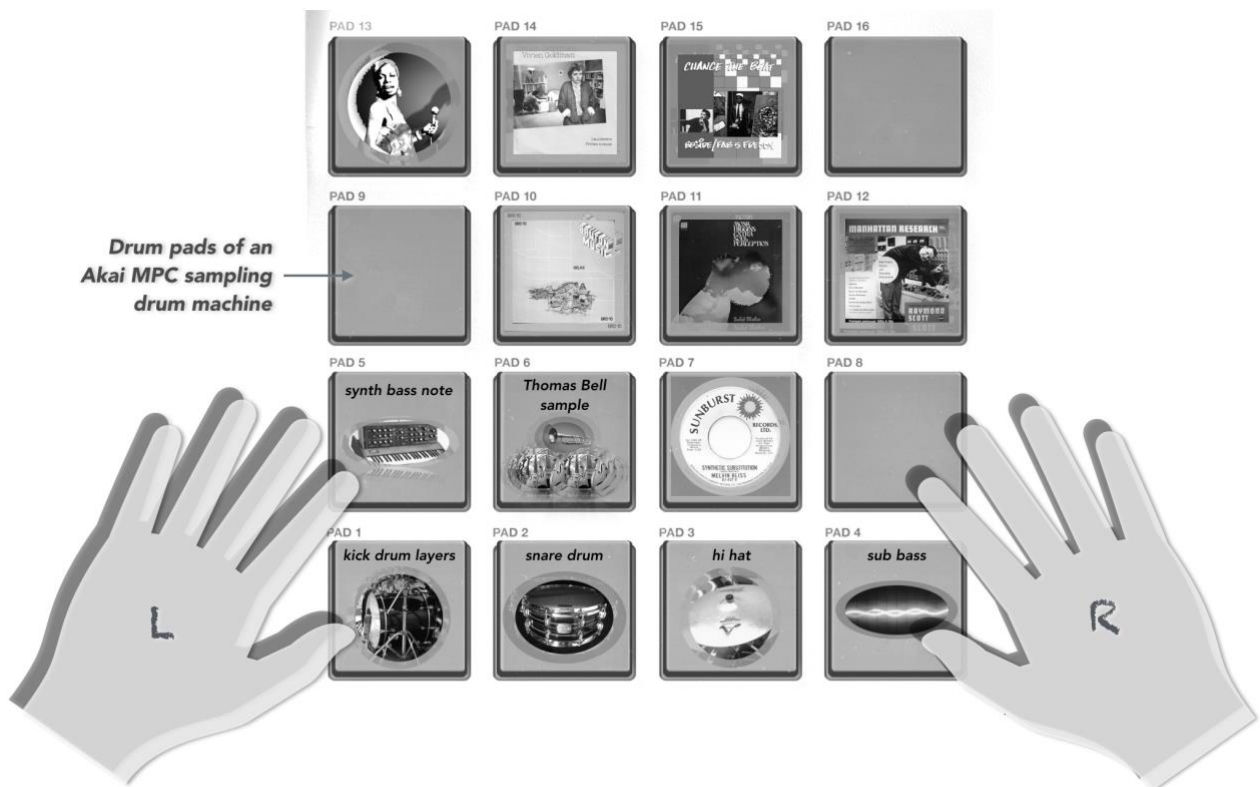
Figure 3.4 A schematic representation of the sampled examples discussed in this chapter on the drum pads of an Akai MPC sampling drum machine.

There are a number of beats in the associated album component that pursue and manifest aspects tied to the notion of 'sample magic': these include the design of source constructs fertile in sonic illusions that inspire a sense of performative mediation in the sample-based praxis; followed by a conjuring kind of gestural 'play' with their sonic manifestations through forms of control exercised in the beat-making process itself. Some of these illusions include stylistically informed 'aged' timbres, as well as consciously constructed poly-dimensional mix architectures, providing the 'magical' ingredients toward phonographic revenants that can then be animated in the sample-based 'theatre of play'. The following examples illustrate.

[Example 1:]

'Sub Conscious' features a source mix that was put together as a rather spontaneous jam by overdubbing parts on upright piano, electric Rhodes piano, and fretless bass—not dissimilar to the concept behind Bill Evans's *Conversations With Myself* (1963), in which he layers multiple piano parts reinterpreting jazz standards and original composition.[88] The catalyst, however, behind the spark of the recording session had been time-limited access to a stereo pair of prized microphones—modelled on vintage classics—available to me only for one short evening. Placing them on the far sides of the open upright piano, I 'made sound' by inventing a simple, soulful harmonic sequence and improvising around it in sync to a metronome track. I 'fed' the microphones a spectrum of notes and clusters in various registers (following the harmonic movement), testing the microphones' response and getting inspired by the foldback mix that was coming back to me via the headphones. After a few minutes of play, I moved to the Rhodes piano, 'responding' to the upright piano part already captured. The fretless bass layer provided a gentle foundation under the unfolding 'conversation', rooting the keyboard dialogue. I made sure the electric instruments were played through amplifiers, which I recorded with microphones to take advantage of a retrospective "symbiotic" relationship between them and the acoustic piano—a shared co-existence of their "harmonics in space" (Dorrough cited in Horning, 2013). I felt a sense of 'flow'—everything happening very fast, with minimal effort, time seemingly collapsing. I would normally allow for some distance between recording, mixing, and sampling sessions, but I was mesmerised, so I quickly dialled

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[88] Jazz critic Scott Yanow (no date) describes the album in the following words: "Aptly titled, the music on this LP has a surprising amount of spontaneity, with Evans constantly reacting to what he had just recorded, and the results are sometimes *haunting*" (my emphasis).

up emulations of vintage tape machines, pre-amplifiers, mixing desks, and spatial effects on the computer, and with minor adjustments, I enhanced the symbiotic 'glue' already captured via shared post-production decisions. The output of the computer mix had been permanently pre-wired to the inputs of two samplers connected in series for this project (a Roland SP-404 first, into an Akai MPC X second), to take advantage of their different sonic footprints, and—at times—to manipulate sound in one, before capturing 'chops' in the other. Late into the early hours, I found I had a series of chops looping around in what felt like a haunting sequence and—inspired by the more recent trends in New York sample-based Hip Hop—I proceeded to add some single boom-bap drum hits, but in a subtle, evolving way in the arrangement. I reinforced the kicks with long 808 sub bass notes that I tuned to the roots of the fretless bass, but left some spaces for the Rhodes to breathe, and then progressively distorted the 808s to create a dynamic variation through a more emphatic B-section. Samples of real vinyl crackle (from the end of LPs) were overlayed in a rhythmical sense over the stereo mix/master chops, giving them surface texture, and I reached out for short, ornamental vocal/lyric phrases from a series of prior, blues-inspired recording sessions to accentuate the mobilised sonic worlds/objects with narrative 'echoes from the past'. This was probably the fasted overall production journey of any track on this album.

The 'vignette' above illustrates the contextual factors that framed a phonographic occurrence, inspirational to the beat-making journey, through the sum of spatial and timbral factors captured in the recording and mixing processes. The sample-based composition manifests control over the inspiring sources both rhythmically (and harmonically), interacting with the chopped utterances through the initially subtle beat and sub-bass programming, but also in terms of the variety of congruent timbres selected and sculpted: the manipulation of the 808 textures is balanced against the fretless bass spectra, and the new drum hits are chosen in a cyclic jam against the rhythmical occurrences resulting from the interaction of chopping decisions and syncopation inherent within the tracked keyboard and bass dialogue(s).

The blues voice signatures, providing emphasis over the instrumental movement, are further distanced in time (and space) via additional filtering and spatial processing. Expressing the 'law of contagion' through timbral-spatial distancing is

particularly useful in this case, as the voice is my own, and turning it into a 'past' character helps mobilise it as yet an/other element of the unfolding sonic script. This kind of gestural control is exercised over numerous short vocal elements performed by me, stemming from various stylistically-infused source production phases; consequently, this offers a unifying narrative thread—a kind of timbral leitmotif—across the associated album. For example, aggressive vocal segments and shouts from the alt-rock, punk, and hardcore content provide emphasis and rhythmical interplay on beats such as 'Altcore', 'Become', 'Good Ole Betty', 'Oh Buxom Betty', 'Train Brain', and 'Covert Three' (mostly in Greek); while more of the blues-infused segments that acted as rhythmical ornamentation and emphasis on 'Sub Conscious', extend the 'blues narrator' function over beats such as 'Alderoots', 'Americanotha', 'Call', 'It Meters', 'King's Funk', 'Mo' Town', 'Reggae Rock', 'Studio A', and 'Tense Minor' (mostly in English—though in both cases lyrical intelligibility is a secondary function to surface ornamentation and rhythmic/emotive emphasis).

[Example 2:] Furthermore, the performative-layering and mixing approaches that shaped 'Sub Conscious' are echoed in constructs from all stylistic eras simulated in the source production process. The following journal entry provides an example from the reggae/dub phase, highlighting the interaction between tracking improvisation and post-production decisions that led to samplable moments:

'Nu Drub'

As I was looking for the right bars to sample from one of my dub experiments, I realised that beyond the effectiveness of the musical 'conversation' between my different overdubbed layers, the moments that really grabbed me were those when the interaction became sonic, not just notational or rhythmical. After about 120 bars of improvisation, perhaps the right brain kicked in, locking in to the less numerical or obvious aspects of the jam. There was space. There was textural complementarity, there were rhythmical, motivic, *and* sonic *'interactions'* in the overdubbed layers: tones drawn from the instruments; spatial, and tonal effects dialled in on the

Source constructs stylistically similar to these, rich in spatial depth and timbral character, have ignited a series of beat-making experiments leading to further sample-based productions such as 'Dragga Five', 'Old Steppers', 'Reggae Rock', and 'Steppers Dub'—the titles indicating their (inter-)stylistic referentiality to source objects used in their inception.

[Example 3:] From a recording perspective, the spatial illusions that enable the interplay with, gestural control over, and juxtaposition of, poly-dimensional sonic worlds in the beat-making stages extend to tracking decisions. Acting in an engineering capacity recording two songs for groups Sarabanda and Grupo Lokito, I was aiming at a sound that blended vintage and modern phonographic signatures in the respective traditions of Latin and Afro-Cuban record-making. The objective had been to capture their characteristic performative 'liveness' these bands are known for, whilst ensuring a level of control over individual instrumental sonics helpful to the post-production process. The approach is described in the following vignette, echoing the pursuit of 'symbiotic harmonics in space' as in the first example, but with a mixture of simultaneous and overdubbed tactics:

After discussing and playing a number of Latin and Afro-Cuban phonographic references with Sara [McGuinness]—the musical director,

147

pianist, and arranger of both bands—we formulated a recording plan. We wanted to record all members of the core rhythm section simultaneously (congas, drums, electric bass, and piano), ensuring visual and sonic communication for the members, but separating the percussive players from the bassist and pianist. This allowed a certain degree of control. I placed the conga player and drummer at two opposite corners of the live room, and directly connected the bassist and pianist (using a keyboard, initially, for the piano sound) in the control room where I was operating the mixing console. The distance between the percussionist and drummer minimised direct phase issues, but I also wanted to creatively utilise 'spill' between the two instruments on each other's microphones. I additionally wanted to 'print' the sound of the [live] room along with the sources to maximise the illusion of all members sharing a space in the mix. So, inspired by Stavrou's (2003, pp. 47–9) "Turn Spill into Ambience" technique, I close-miked the congas and elements of the drums, but also set up pairs of farther, overhead microphones over both instruments to capture them with added room reflections.[89] Using headphones in the control room set to mono playback, I made sure that the vintage overhead mics I positioned over the congas (set to a cardioid polar pattern), were in phase with each other, the close microphones on the congas, as well as the drum microphones behind them. This took some repositioning until all combinations of microphone perspectives sounded reinforced by each other [symbiotic and in phase]. After a successful performance of the rhythm quartet, the conga player overdubbed bongos and campana (cowbell) in the same position as before (and with the same microphone combination). We muted the guide keyboard part, and Sara reperformed it on the actual baby grand piano positioned in the live room. I redeployed the vintage microphones previously used as overheads on the congas and bongos to track the piano, aiming for a balance of direct and room sound, by positioning them at some distance from the piano's sound board. On a different date and in a different studio, we recorded additional percussion, guitar, keyboards, horns, and the vocalists using similar microphone setups. I mixed the songs on a large-format hardware console, taking advantage of the analogue summing, and using reverb processors to 'marry' elements from the two different recording environments into virtual shared spaces, emulating rooms with complimentary qualities and dimensions to the real ones captured. I printed both the complete mixes, as well as stereo stems of instrumental groups alongside their surrounding

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[89] Stavrou (2003, pp. 47–8) describes how he turned the compromise of 'spill' between double bass and horns—sharing a space on Vince Jones and Grace Knight's 'Come In Spinner' (1990)—into a complimentary ambient characteristic:

> Imagine a blaring brass section next to the gentle tones of an upright double bass. Whatever you do, you're going to get spill. This could be a nightmare. You could box the double bass player in with gobos, but you'll destroy the performance … [Instead] reverse engineer the bass sound. First, find a good spot for the brass ambience mic … Now find a piece of air that contains good brass ambience, hopefully near where the double bass player feels comfortable playing … Place the microphone such that the brass ambience enters it from the rear of the cardioid pattern … Because the brass ambience is entering the rear of the cardioid pattern, it will be dull. This provides you with a good excuse to add some treble to balance the ambience, which also helps the double bass sound nice and clear. To put it another way, the EQ you use to brighten up the double bass also enhances the brass ambience, rather than exaggerate brass spill. You've turned a liability into an asset!

The two beats made out of these songs are 'Como Mi Ritmo' and 'La Noche (AMHB)', with the former illustrating a chopping process utilising the full stereo master, and the latter deploying a chopping approach over the instrumental stems. The end results are telling of the level of access to the source material, with 'Como Mi Ritmo' gesturally mobilising short, crystallised objects from the song's master, and 'La Noche (AMHB)' interweaving instrumental and vocal segments into a more complex tapestry resembling a remix. The horns from 'La Noche (AMHB)' also appear recontextualised—but incorporating their original timbral and spatial footprints—in 'Mo' Town'.

Conclusion

The mapping of parallels between two artforms can often appear as nothing more than an intellectual puzzle, entertaining the scholar with fanciful surface analogies but doing little to uncover any potent aesthetic insights. It is my hope that by investigating the frequent associations made by practitioners, fans, critics, and scholars between magic and sample-based music, this chapter has demonstrated the rationale behind such analogies and, furthermore, it has started to uncover a number of parallel mechanics lying under the surface of the two artforms. Specifically for Hip Hop, the invested interest lies in understanding the appeal of the sample-based aesthetic in a number of dimensions: the lure of phonographic samples for practitioners, but also the magic of the sample-based aesthetic for listeners. Furthermore, as the chapter has shown, the evolving nature (and exponential hybridisation) of subgenres promotes new questions about the practices and emerging aesthetic issues to the forefront, and the essence of 'magic' in sample-based

processes acquires increased urgency. By studying the dynamics of this interaction between raw sonic materials and sampling in the established practice of utilising phonographic sources, (we) practitioners will be able to infuse the 'magical' qualities necessary into both (new) sources and process, facilitating the future development of the genre. This becomes the extrapolation of the following two chapters, first examining the notion of infusing unique, magical *alterity* into newly constructed sonic objects, followed by investigating the mechanics of their juxtaposition in this alternative sample-based collage proposition.

Recommended chapter playlist
(in order of appearance in the text)
'Sub Conscious'
'Altcore'
'Become'
'Good Ole Betty'
'Oh Buxom Betty'
'Train Brain'
'Covert Three'
'Alderoots'
'Americanotha'
'Call'
'It Meters'
'King's Funk'
'Mo' Town'
'Reggae Rock'
'Studio A'
'Tense Minor'
'Nu Drub'
'Dragga Five'
'Old Steppers'
'Steppers Dub'
'Como Mi Ritmo'
'La Noche (AMHB)'

Chapter 4

Making records within records:

Manufacturing phonographic 'otherness' in sample-based Hip Hop[90]

Charles Mudede (2003) explains that in the context of Hip Hop "a turntable is forced to … make meta-music (music about music) instead of playing previously recorded music", and expands that the sampler is "repurposed to turn one DJ repurposing two turntables into a thousand mini DJs repurposing two thousand virtual, mini turntables". Looking at sample-based record production through such a lens highlights the theoretical complexities inherent in pursuing a comprehensive musicological understanding of the artform, as well as the material implications this poses for its practitioners—particularly those exploring alternatives to copyrighted samples as their source content. As demonstrated in chapter 2, alongside the numerous creative approaches that sprung out of legal and financial necessity in hip-hop practice since the early 1990s (interpolation, live performance, heavily synthetic subgenres), resorting to sample *construction* brings about its own set of poetic-aesthetic issues.

In reminiscing about his creative reaction to that shifting sample-licensing landscape, Hank Shocklee (2004) made a clear delineation between the sonics that can be acquired from recordings ("using different organic instruments"), as opposed to those that can be acquired "off a record". He also went on to associate the effect of the acquired/sampled sonics both with "the feeling you can get" and the resulting aesthetic ("the sound") of hip-hop outputs produced in an era inevitably defined by these changing practices (Shocklee, 2004). These two considerations will remain key

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[90] This chapter has been published in an earlier form as part of the edited collection *Innovation in music: Future opportunities* (see Exarchos, 2021a).

foci in this chapter. The first point highlights beat-makers' preoccupation with phonographic sound as an essential source variable that facilitates the sample-based aesthetic. It is not a stretch to suggest that the second point, with its inferred triangle of *sonics-feeling-output*, refers to the impact the qualities of the source material will have on the beat-maker's sample-based creative *process*. As such, Shocklee's delineation shows that even the descriptor 'sample-based', in the context of hip-hop music, requires further unpacking and, arguably, only tells half the story: that of process, not of the qualities of the source. Therefore, if the previous chapter focused on the performative (and mediated) aspects of beat-making to uncover its— mesmerising—effects, this chapter peels the (mixing) layers off phonographic ephemera to uncover their essence and, in turn, to inform (re)construction.

In their "quest for the real" (Marshall, 2006), the issues sample-*creating*-based practitioners now face become the comparisons their works will inevitably attract against an aesthetic bar set by almost four decades of phonographically-sourced sample-based Hip Hop.[91] In other words, the question becomes whether self-created source objects can suffice as effective triggers for sample-based production practices; and what qualities should be infused into these source objects, should they prove inspirational to—rather than simply functional for—the beat-making process. Arguably, there had been less need to discuss the phonographic qualities of a source when the source was *by default* phonographic. But the context framed by these alternative practices necessitates an investigation *into* the source's qualities, as well as the way these interact with sample-based processes.

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[91] This period extends from the mid-1980s to now, should we consider Marley Marl's experiments with affordable samplers around 1984 as the starting point (see, for example: Kajikawa, 2015, pp. 164–5).

Thus, a useful way to commence the investigation is through Sewell's (2013) typology of sampling, which systematically categorises sample-based layers in Hip Hop according to their source qualities and function. Although—as we have seen in the introduction—Sewell stops at a structural representation of sample-based layers (rather than an exploration of the mixing mechanics underlying their juxtaposition), her classification does enable an initial unpacking of Krims's (2000, pp. 41–54) "combination of incommensurable musical layers" that contribute to the "hip-hop sublime". Sewell (2013, pp. 26–67) classifies samples into "structural" (main groove), "surface", and "lyric" categories, and these into further subcategories according to their instrumental make-up and organisational function. With regard to structural function, Sewell (2013, pp. 26–67) provides the following classifications:

- "Percussion-only" structural types, which contain "sampled drums [that] are looped throughout the new track";

- "intact" structural types that include "every element from the source material, usually drums and at least one other instrumental line" (these have been referred to as 'foundational' samples earlier in the thesis);

- "non-percussion" structural types which are "very similar to an intact structural sample, except that [they do] not contain sampled drums"; and

- "aggregate" structural types which consist of component "layers … sampled from different sources" or "*different parts of the same source*" (my emphasis).

Conversely, "surface" and "lyric" sample types have a more intermittent or ornamental layering function and can be delineated from each other by their intended lyrical intelligibility; "surface" types can be subcategorised into "momentary", emphatic", and "constituent" types—the latter described as "only a beat or a second long", appearing

"only once every measure or two", and "layered against the groove" (Sewell, 2013, pp. 26–67). But how do these interact in the sonic domain?

David Goldberg (2004, p. 129) pinpoints where the missing link may lie; citing Wallace and Costello (1990, p. 85) in 'The scratch is Hip-Hop: Appropriating the phonographic medium', he offers a crucial insight: "Rap/hip-hop has been the first important American pop to use digital recording and mixing techniques in the music's *composition*, its *soul*" (original emphasis). He goes on to attribute the defining characteristic of rap music to "spatial modification" expressed via "exploding kicks", "echoing snares, and the sometimes terrifying sonic manipulations of DJ scratches", mapping the creation (composition) and essence (soul) of beat-making to the interaction of sampling and *mixing* processes (Goldberg, 2004, p. 130). Combined with Mudede's interpretation of sample-based Hip Hop as meta-music, this interaction assumes exponential dimensions for the sample-*creating*-based practitioner. Not only have the mixing practices of sample-based record production not received sufficient attention, but a reimagined approach that involves the construction of source content *first*, inevitably poses questions about the mixing and manipulation of source objects that themselves require prior recording, mixing, and production actualisation. The pursuit of the newly-constructed *'phonographic'* in a meta context, therefore, necessitates a bidimensional examination of mixing theory as it applies to sample-based Hip Hop from the perspective of both the 'source' and that of (its interaction with) the end output. The creative practice experiments that follow, alongside reflective insights drawn from the project's research journal, will illustrate some of these complex phenomena, the analysis drawing out what appears as essential in sample-based poetics via the use of autoethnographic strategies. One of the critical themes that will emerge from the autoethnographic approach, will be the notion of phonographic

'otherness'. Grappling with this concept, defining it, and examining its mechanics in the context of sample-based Hip Hop will provide the underlying thread to this chapter.

On 'phonographic otherness'

Hearing otherness

The following section is extracted from a journal entry entitled 'Songwriting for sound', and it illustrates the first of a progressive trajectory of insights that has led to coining the term 'phonographic otherness'. In it, I am reflecting on being immersed in the process of attempting to create *adequate* source material for subsequent sample-based composition:

> It hit me that what I have been doing is, creating music in order to *make sound*. The recent 'songs' made this clear … I have always felt that the issue was never one of borrowing motifs/phrases that gives sample-based Hip Hop its unique signature; or, I should say it is not solely a musical argument … This would not explain why beat-makers go for *records*, rather than *recordings*. My pursuit throughout this journey has been to understand the sonic variables that explain this differentiation. My process, it seems, has focused on creating musical *excuses*, so to speak, in order to be able to make mini records—phonographic moments, or ephemera. I have been coming up with riffs, jams, overdubs, even songs, as musical seeds that allow me to then create, capture, and manipulate the sound that carries these musical ideas … looking back at all the instruments laid down at the end of these long sessions, I see sonifying tools which needed musical ideas—musical context—in order to produce meaningful sounds that could then be captured and made phonographic … The full immersion into these moments has given the resulting objects … a musical, stylistic, and sonic coherency that makes them feel as separate entities even when they are/become part of a new beat (original emphasis).

To illustrate this *alterity* between a sampled 'object' and the new beat that uses it, it may be worth analysing, first, an example from discography: Westside Gunn's 'Stefflon Don' from *Supreme Blientele* (2018)—produced by SadhuGold and Hesh—provides a case of highly accentuated difference between new and sampled (previously recorded) elements. Westside Gunn's voice carries markers of

contemporary recording and production techniques (close-microphone recording, enhanced 'presence' and 'air' in the equalisation, and compression stability) all of which differentiate it clearly from the vocal samples included in the looped phonographic sample. Whether the latter is sampled from vinyl or another format resulting in a lo-fi characteristic (or processed with the intention of sounding old and otherworldly), the combination of tremolo/delayed guitar and haunting vocals that it consists of feel decidedly 'other' to the rap, drums, and sub bass that comprise the new elements. Furthermore, the source sample sounds slowed/pitched down, which adds to the less pronounced top end of its spectral content. The two 'streams' so to speak (old and new), become clear at 0'43", when the sample momentarily cuts out.

From a mix perspective—beyond the clear spectral differences perceptible between the new (present, defined) and sampled elements (featuring less clarity, presence, and high frequency content)—there are also differences on the *depth* axis of the sonic image (as well as the 'speed' of the sounds in terms of their transient/envelope characteristics): the sample feels rather three-dimensional and infused with notable spatial resonances (particularly on the modulated guitar, but also around the vocals). The whole sonic 'bubble' of the sample—to use a visualisation analogy from Gibson (2008)—is held together by its harmonic distortion, the colouration from the master medium, the recording/mixing signal paths deployed in its making, and any playback/recording devices used during sampling. Little effort seems spent on 'gluing' the samples with the new elements (this seems intentional, part of a lo-fi statement), apart from one heavy-handed but effective strategy: the notable compression applied to the whole beat (new and old elements combined) most likely courtesy of SadhuGold's Roland SP-404 sampler (Mlynar, 2018). This strategy makes the featured sample 'pump', expanding and contracting in terms of volume, reacting

to the sub bass and drums, at times drowning the kick drum and, at others, allowing the high-hat to jump out of the combined balance.[92] The effect feels extreme but intentional, paying dues to lo-fi influences (such as RZA's production style and contemporary lo-fi Hip Hop), but also rhythmically and dynamically 'marrying' the two streams together in the end production. The sample is indeed treated as a 'featured' entity within the full beat: dynamically pumped, cut twice, kept separate, kept 'other' whilst, at the same time, integrated through the heavy compression approach. The ambience surrounding the sample expands and contracts in tandem, creating a haunting dynamic-spatial effect. The following journal entry provides a personal reflection on the resulting sonic experience:

> This *belonging together* of the elements that comprise the sample, this retainment of the sonic world of the sample whilst featuring it within a new beat, and the simultaneous *celebration* (in terms of production choices) of its 'otherness' whilst integrating it into the new musical context (e.g. chopping, pumping with the beat) is a defining sonic characteristic of sample-based Hip Hop. Sample-based Hip Hop borrows, features, and manipulates not elements, but full masters, expanding and reshaping complete mix 'staging' that has already been committed to a master. As a form of not just music-making but also music mixing, sample-based Hip Hop is defined by the sound of the coming together of full mix 'stages' against manipulation possible through sample-based processes. We are actually hearing both new programming and new mixing interacting with previously committed mix stages—so, it is not just the sound of 're-imagined' sequences or phrases, but also the sound of creative ways of integrating phonographic sonic objects (whole 'mix architectures') into meta phonographic processes. (original emphasis)

Perhaps, SadhuGold's collaborator, rapper Estee Nack, summarises the effect most succinctly when describing the beat-maker's style as "some old outer space shit" (Mlynar, 2018). In this laconic—if somewhat street—characterisation, the MC zones in on two important conditions for the perception of sonic otherness, as will be

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[92] For a detailed discussion of "lateral dynamics processing" in hip-hop production, see Hodgson (2011).

examined next: manifestations of time (*old*) and space (*outer space*) featured within the sonic discourse of the sample-based composition.

Defining sonic otherness

I have been using the notion of phonographic 'otherness' to refer to sonic characteristics of source objects in the context of a form of music/making that has been described as meta-music (music about music) (Mudede, 2003). From an autoethnographic perspective, it is important to reflexively interpret my use of the term as a sample-*creating*-based practitioner, but also to define otherness more widely. Dictionaries range in their definitions of otherness, from "the quality or *fact* of being different" (Oxford Dictionary, 2019, my emphasis) through to "being or *feeling* different in appearance or character *from what is familiar, expected, or generally accepted*" (Cambridge English Dictionary, 2019, my emphasis). As may be extrapolated just from these two definitions, interpretations of otherness refer to some notion of alterity or difference, but there is no consensus on whether the inferred quality is regarded as absolute or relative. Furthermore, there are multiple understandings of the term in philosophy, psychology, sociology, and anthropology linking otherness to intersubjectivity and social identity, with implications that range from the construction of a self-image, through to attributing otherness "less to the difference of the Other than to the point of view and the discourse of the person who perceives the Other as such" (Staszak, 2009, p. 1). Applying characterisations of otherness to a group, thus, may also be driven by discrimination and so the term has assumed negative connotations in disciplines such as anthropogeography. Staszak (2009, p. 2) provides a helpful delineation, however, stating that "difference belongs to the realm of fact and otherness belongs to the realm of discourse". Ihde (2012, p. 41) adds "that what makes

any object "transcendent," having genuine otherness, is locatable in this play of presence and absence-in-presence in our perception of things".

For a musicological understanding of otherness, it is useful to turn to Weheliye (2005) who offers a fascinating link between the possibilities offered by the mechanical reproduction of sound (e.g. the phonograph) and notions of (inter)subjectivity as expressed by contemporary black artists. In *Phonographies: Grooves in sonic afro-modernity*, he demonstrates how fictional characters in modern film/literary narratives:

> … control and manage the contingencies of sonic otherness by locating it in the sounds of specific subjects … Music, and sound in general, roots subjects in their environment by making that environment audible, while the immersion that comes with the listening experience is always tied to a space from whence it originates, thereby spatially marking the sound. (Weheliye, 2005, pp. 111–2)

Weheliye here not only demonstrates how the process of mechanically capturing and reproducing human sounds (e.g. music) transfers the energy of a subject onto a localised source, but also illustrates the spatial implications of this sonification. Although Weheliye is primarily concerned with how the sonic reproduction of music expresses the representation of identities negotiating social spaces, it will be interesting to expand on the implications of this idea beyond music consumption/reception/playback and onto music *making*. According to Frith (1996, pp. 123–4), directly engaging with "music making and music listening … works *materially* to give people different identities … we're dealing not just with nostalgia for 'traditional sounds', not just with a commitment to 'different' songs, but also with experience of alternative modes of social interaction" (original emphasis).

In his exposition of the turntable as a repurposed or estranged object, Mudede (2003) helpfully explains that: "For Heidegger, a broken object exposes its thingness; for Marx, it exposes its source, the laborer, the one who has transferred his/her body's energy into the substance of the object". The estranged, broken, or repurposed object here is the turntable—Hip Hop's original instrument—transcending from playback tool to music-making instrument, and the source it exposes is the original labourer (the musician/s) whose energy has been materially and physically engraved onto the phonographic record being manipulated. Mudede (2003) illustrates the concept on his blog by depicting hip-hop producer Eric Sermon operating a mixing board, on top of the image of a DJ scratching a record, itself sitting above a picture of Marvin Gaye playing the piano. The illustration could easily be reimagined to feature a beat-maker operating a sampler (with mixing functionality), itself replacing multiple turntablists manipulating/scratching a number of records, which in turn contain recordings (*productions* to be accurate) of live performances (see Figure 4.1). This visualisation helps conceptualise the *meta* levels of sonification involved in sample-based Hip Hop, as well as an illustration of otherness as the sonic alterity of a/multiple subject/s whose essence has been transferred onto material form (the phonographic groove).

Figure 4.1 A schematic representation of a digital sampler (with mixing functionality), enabling the manipulation of multiple record segments, which in turn contain productions of live performances.

It is important to note that Weheliye (2005, pp. 111–112) ties the listening experience to a "space from whence it originates … spatially marking the sound" and that he refers to "contingencies of sonic otherness" in relation to *control*. It would not be a stretch then to reimagine a sample-based producer's (e.g. SadhuGold's) manipulation of a sonic object (for example, a previously released record), not only as an abstract/motivic manipulation of musical material, but as a form of "discourse" (Staszak, 2009, p. 2) or "social interaction" (Frith, 1996, p. 124); in the context of which, the beat-maker exercises control over the material manifestations of recorded subjects' labour. The leap from social spaces to sonic objects is made possible via Weheliye's idea of sound rooting subjects in particular environments (via phonographic playback). The notion of environment, though, can be expanded beyond

the spatial to all types of context 'marked' by the phonographic process (geographical location and/or hyperreal space, as well as the era, style, or time communicated by the record). The variables "marking the sound" (Weheliye, 2005, pp. 111–2) become indicators of sonic otherness, a phonographic 'territory' that may resonate both time *and* space (alongside further musicological signifiers). Pickering (2012, pp. 25–6) coins the term "elsewhen" to highlight "the temporal distance brought about by recorded music" noting that: "Musical repeatability means that we are able to hear music from various previous periods and identify them, even on a decade-by-decade basis, by their *characteristic musical sounds*" (my emphasis).[93] It follows, that the sample-*creating*-based practitioner is tasked with the dual objective of not only manipulating (discoursing with / exercising control over) sonic objects that carry identifiable phonographic context, but also with creating and infusing these objects with sufficient sonic 'identity' (character), so that they feature as 'other' against the meta (sample-based) process. But how does this infusion manifest in practice?

Featuring otherness

For the practice-based part of this investigation another original hip-hop production has been conceived ('Call'), built upon two groups of constructed samples. The two-stage process has involved creating and producing the samples as fully committed productions (records) of specific and different stylistic foci (at different times), and without a preconception of what form the ensuing hip-hop production would take. The first of the samples has been sourced out of a multitrack production for a forthcoming release with rock band Fet47. The second sample is a segment taken from an original blues composition for which I have performed and overdubbed

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[93] Pickering's *characteristic musical sounds* here echo Zagorski-Thomas's (2014) "sonic signatures".

all the instrumental layers (drums, electric bass, electric guitar, piano, and harmonica), recorded, mixed, mastered, and produced with particular attention paid to achieving late-1950s Chicago Blues timbral and spatial signatures (in a similar vein to the exposition of chapter 1). The two source scenarios have been purposefully included, in the first case, to allow access to individual multitrack elements and, in the second, to limit access to the full blues stereo 'master' alone. The intention has been to create an applied context of sources being featured within a new phonographic construct, illustrating consciously featured phonographic contrast as a key aesthetic driver for the envisioned sample-based hip-hop output. Additionally, the different degrees of access (individual multitrack elements vs. full master), allow both the construction of "aggregate" and the use of "intact" structures if one was to deploy Sewell's (2013, pp. 26–67) typological descriptors. As there has been little analysis in literature so far that focuses on the sonic (mixing) aspects of the phenomenon, the creative practice experiment has provided an opportunity to study the mechanics of sample layering beyond their structural functionality (i.e. in terms of the mix architecture). Table 4.1 provides a summarised description of the sample layers, their types, as well as the creative processes (layering and manipulation) that have led to their mix placement in the final hip-hop production. Figures 4.2a and 4.2b offer a schematic representation of how the individual layers are 'staged' in the final production. Video 4.1 showcases the individual sample segments as well as the complete instrumental production.[94]

Sample/type	Description	Processing
1: Aggregate main (structural)	Aggregate structure functioning as the main groove (riff/hook) of the new production, constructed out of chopped and pitched-down Hammond C3 organ, acoustic drums, and electric bass performances from the Fet47	Organ sampled through Red Panda Tensor (tape effects emulator) pedal, processed through Akai MPC X amp distortion (emulation), and sent to backwards tape reverb on the sampler; drums sampled through Tensor pedal, processed through

	multitrack, plus added vinyl crackle. (The syncopated organ part in the verse is replaced by a legato variation for the chorus sections)	VCA-style compression, and sent to a drum room reverb on the sampler; electric bass sampled through Tensor pedal
2: Intact 1 (constituent, surface)	Intact sample taken from the blues production/master and used as a constituent surface sample. (The severe filtering focuses the spectrum on the piano part contained within the intact sample)	Late-1950s Chicago Blues (e.g. Chess Records) inspired recording, mixing, and production process, deploying real recording spaces, a tiled bathroom as echo chamber in post-production, and hardware/software emulations of vintage pre-amps, channels, and outboard processors in both the tracking and mixing phases; end output low- and high-pass filtered, then sent through drum room reverb on the sampler
3. Non-percussion live layer 1 (constituent, surface)	A directly recorded, then pitched up and reversed lead Telecaster guitar performance layer taken from another production; used as a constituent surface sample	Processed through MPC X amp distortion (emulation), and sent to backwards tape reverb and a triplet (dub) delay on the sampler
4. Voice (constituent, surface)	Vocal sample from MPC X onboard library	Sent to backwards tape reverb and a longer non-linear reverb on the sampler
5. Non-percussion live layer 2 (aggregate, structural)	A directly recorded, and then pitched up and reversed rhythm Telecaster guitar performance layer taken from the same production as sample 3 above; used as an additional layer to the main aggregate structure for variation	Processed through MPC X amp distortion (emulation), and sent to the longer non-linear reverb and the triplet (dub) delay on the sampler
6. Intact 2 (aggregate, structural)	Another intact sample taken from the blues production/master, this time used as an additional layer to the aggregate structure	Production master achieved as described in 2 above; then processed through amp distortion (emulation), equalised, and sent to the drum room reverb and triplet (dub) delay on the sampler
7. Intact 3 (aggregate, structural)	As above, equalised and filtered to accentuate the piano part, and used as an additional layer to the aggregate structure	As above, then processed through amp distortion (emulation), equalised, high-pass filtered, and sent to the drum room reverb and triplet (dub) delay on the sampler

Table 4.1 A summarised description of the sample layers, their types, as well as the creative processes (layering and manipulation) that have led to their mix placement in the final hip-hop production. Samples 1-4 feature in the main (verse) section of the end production, while the remainder samples (highlighted by shaded cells) are added layers brought in for structural variation and the differentiation of the chorus section.
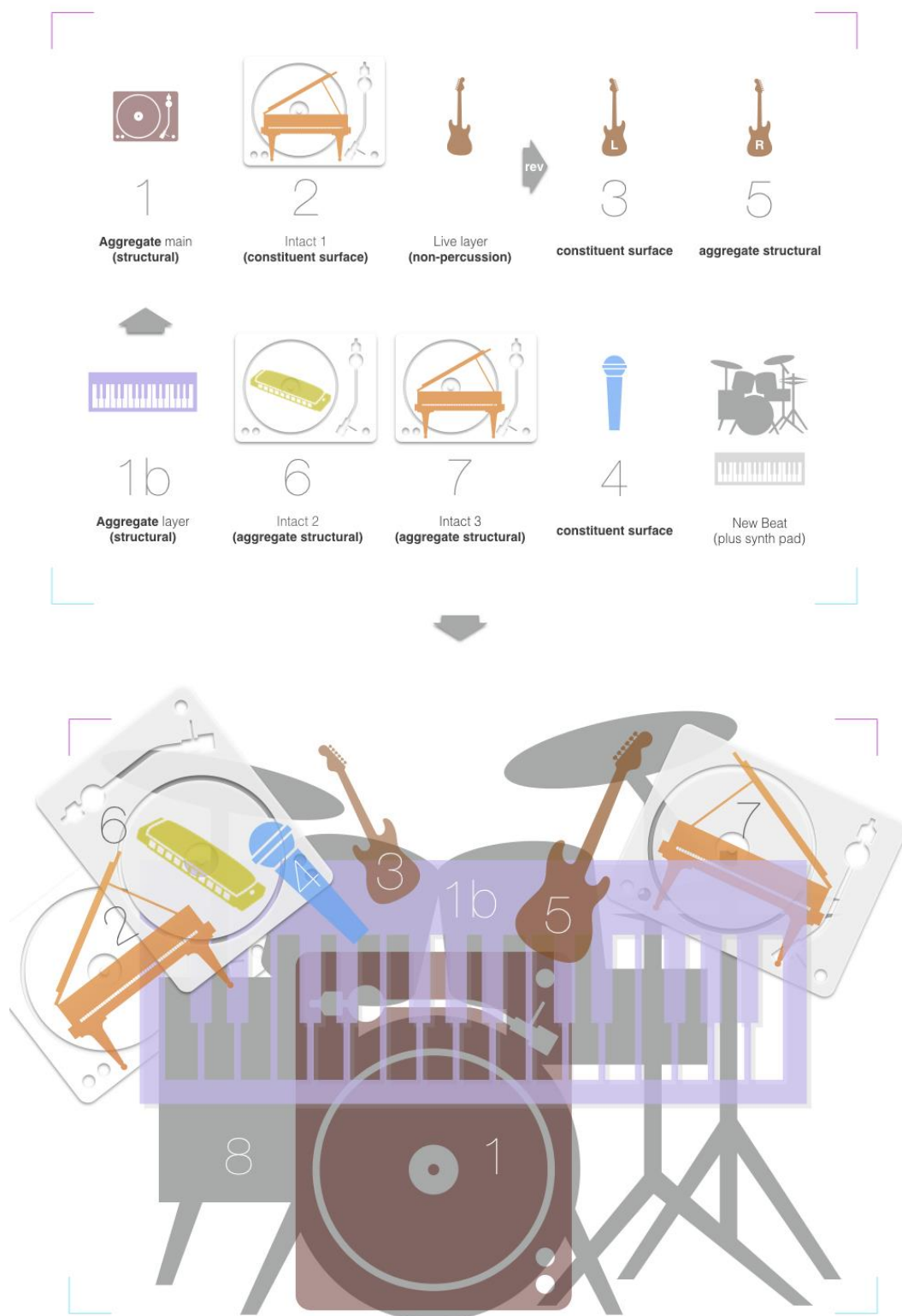
Figures 4.2a and 4.2b A schematic representation of the individual sample layers and their staging in the final sample-based production (the numbering of the sample representations corresponds to Table 4.1). Note that samples 2, 6, and 7 are represented by a turntable framing the instrument most accentuated by filtering, indicating *intact* structures (mini records within the record).

Table 4.1 provides a neat delineation between musical/abstract processes (surface phenomena) such as re-pitching, chopping, and layering noted in the 'description' column, and mixing/material processes (resulting in staging phenomena) such as the spatial and timbral manipulations detailed in the 'processing' column. It can be summarised that the processing choices associated with both the creation and manipulation of the samples have focused on two overarching strategies:

1. The *narrative/aesthetic*: infusing the samples with characteristic timbral and spatial qualities. For example, the blues 'master' has been created with considerable effort dedicated to reconstructing not just the spatial qualities of late-1950s Chicago blues recordings, but also timbral/tonal signatures reminiscent of the era and representative record-label aesthetics. This has been achieved through the choice of instruments, recording equipment, microphones, and spaces deployed, as well as the emulation of vintage processors (and workflows) used in post-production. On the other hand, the main aggregate (structural) sample made out of band multitrack elements has been sampled through a tape effects emulation pedal and layered with vinyl crackle to construct a non-specific, yet clearly *vintage* record illusion. By way of a tape machine implied as both recording and mixing medium, and vinyl as the final/master format, the recording space shared by the drums and organ, and the matching tracking equipment signatures imprinted on both the drums and electric bass (via Universal Audio hardware compressors), have been accentuated and 'glued' back into a unified sonic experience inferring a shared phonographic time and space.

2. The *pragmatic/architectural*: ensuring the samples work as part of a coherent mix balance and fit in its overall staging. Much of the filtering, equalisation, and spatial processing decisions have aimed at allowing the juxtaposed samples' full mix/master spectra, stereo images, and depth illusions to fit—in a coherent sense—over each other *and* in combination with the new beat elements (the electric guitar, drum hits, and synthesiser pads).

Returning to the notions of 'elsewhen' and 'elsewhere' as key characteristics of sonic otherness, it is clear to see that the first strategy is responsible for, initially, imbuing the source material with narrative signifiers that tie them to different eras and styles (specific or unidentified), as well as spaces/locations (whether geographical, actual, or hyperreal); followed by manipulating the sources to negotiate (amplify/intensify or control/limit) these sonifications in the context of sample-based production. The second strategy is concerned with integrating the ensuing sonic contrasts back into a phonographic *whole*, but the primary objective here is 'architectural'—the elements have to be mixed so that the actual frequency spectra, stereo width, and illusory depth of the 'collage' function in a sound-engineering sense.

Although the two strategies are not as clear-cut or always consciously deployed during creative practice, this theoretical delineation helps illustrate the rationale behind the mechanics that communicate aspects of sonic otherness as part of a phonographic context. The following table provides a typology of the perceivable sample characteristics that define this featured, phonographic otherness:

Sample characteristics defining featured 'otherness'	Examples
Limitations in the source's frequency range	vinyl resolution
Recording signal path colourations	microphones used, sound of mixing desk, recording media, outboard equipment

Mixing signal path colourations	sound of mixing desk, recording media used in playback mode, outboard equipment
End format/medium/master sound (colouration, distortion)	master tape, vinyl
Shared captured spaces over recorded elements	recording (live) rooms, echo chambers
Shared spaces applied in the mix/post-production	spatial processors, echo chambers
Playback devices/formats used to record samples	vinyl player, DJ mixer, YouTube/Spotify codecs
Sampling devices/formats used to record, manipulate, and play back samples	phono inputs on sampler, digital extraction codec, virtual software sampler algorithm, filtering, pitch shifting
Surface noise resulting from various mechanical/magnetic production phases	vinyl crackle
Staging architecture achieved as a result of mixing decisions in three dimensions	stereo width, frequency 'height', (spatial) depth illusion
Mix-buss processing, and colouration when hardware/emulation is used	shared equalisation, dynamic processing, stereo enhancement, sound of outboard
Mastering processing, and colouration when hardware/emulation is used.[95]	shared equalisation, dynamic processing, stereo enhancement, sound of outboard
Purposeful accentuation of source's lo-fi-qualities	quality/resolution reduction, increase/addition of surface noise

Table 4.2 A typology of sonic characteristics communicating featured 'otherness' in source samples.

Further practice-based illustrations

Thus, all of the source content mixed in preparation for the beat-making phase in this project, features—at the very minimum—recording, mixing, and mastering signal-path colourations, as well as staging manifestations, which communicate a temporal and spatial sense of 'belonging' to an/other phonographic context/s. But a number of beats sonically explore more extreme sonifications of otherness, distancing source material even further by means of explicitly stated timbral and spatial manipulations. 'Keim Intro', for example, features an intact sample from a previous academic work as its foundational layer (the intro to *The Diary of Keim Thomas*—a

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[95] Moore (2019, pp. 210–3), indeed, attributes a purposeful "coaxing" of colouration out of recording and mixing equipment by audio engineers he interviews—these devices include microphone preamplifiers, mixing consoles, dynamic range compressors, equalisers, and recording media such as magnetic tape.

Masters project), and a lyric layer from 'Neon Aeon' (from the aforementioned *Gutter Turtle Records* body of work). The former sample has been recorded to (physical) cassette, then played back via the Foldy Makes Sidecar—a modified Walkman with a playback speed-control dial—enabling 'varispeed' (simultaneous pitch and time) manipulation of the recorded audio content. Not only does this process result in striking performative 'warping' and detuning artefacts over the source audio, but it also infuses it with lo-fi tape media characteristics that further distance the source—the intention here being to imbue yet another layer of alterity upon past/own content. The latter (lyric) sample taken from 'Neon Aeon' is recontextualised out of its original mix (but retaining its original sonics/staging), by means of the—more radical—tape effects emulator Tensor pedal (as previously used on the organ sample indicated in table 4.1), to create an otherworldly, earie, glitch quality upon Jo Lord's vocals. Created out of blending extreme pitched-up manipulations over the pitched-down sample of her original performance, the related pitch and speed ratios 'play' with the thresholds of human psychoacoustics; these range from utterances pertaining to the pitch domain (detuning), to artefacts perceived as delays in the *spatial* domain. Combined with exaggerated manipulations audible at the extremes of the stereo field, the resulting effect contributes to a simultaneous time-, space-, and lateral image-based 'otherworldliness' that resonates with the (re-sequenced) lyrical content.

The cassette warping strategy is redeployed over the foundational content of beats such as 'Keim Outro' (made from the same album content as 'Keim Intro', albeit juxtaposed with vocals from the previously described slam/punk poetry jam in chapter 2); and 'Gimension', 'Contacts', 'Genitive', and '1998' (all with intact samples taken from old cassette recordings of original content—from 1998). Specifically, 'Contacts' uses a surface/lyric layer signifying the first experiment with the sidecar device—the

words "stop recording" becoming an ornamental feature over the beat. Conversely, the warped intact piano sample in 'Tense Minor' (made out of the previously discussed americana material) is an artefact produced through manipulation via the tape effects pedal, as is the case with the lyric layer on 'Wishbone', and the pitch-effect articulation of the Rhodes electric piano in 'Billinspired'. 'Balkan Blues' takes advantage of multiple, progressive layers of manipulation over intact samples from the reggae/dub source phase, both through time-based warping via the physical tape-effects pedal and aggressive software distortion within the MPC mixing environment. The foundational loop is layered with elements that are forced to blend in through shared processing characteristics: firstly, a similarly distorted melodica top-line layer (from the same reggae-dub content, but isolated); followed by a wide, stereo instance of a santouri patch performed on a Roli keyboard, with one side of the output manipulated differently to the other through tape effects pedal warping (simultaneously to the playing).[96] The latter strategy is redeployed for the bouzouki-style-patch stereo manipulation on 'Mediterror', over matching—but reverse in their image-processing—harp, strings, and percussion layers taken from a Mediæval Bæbes engineering session.[97] The 'Balkan Blues' santouri chops, including their stereo staging, are re-pitched and chopped again, before being incorporated into the final sections of the 'Mediterror' beat to provide dynamic and textural variation. In these cases, the aggregate structures evolving during the beats unfold a complimentary juggling of processed sonic utterances in the stereo domain, which are further taken advantage

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[96] Santouri is the Greek variant of the Persian santur or Indian Santoor (a kind of stringed dulcimer played with hammers), and here I am channelling tacit knowledge from my childhood exposure to the instrument to perform it expressively via the modulation possibilities enabled by Roli's tactile Seaboard interface—rubbery keys that respond to movement and pressure in multiple dimensions.

[97] The beat's name refers to all foundational elements: the Mediterranean bouzouki, as well as the Mediæval Bæbes' session layers. The engineering session contributed to *A Pocketful Of Posies* (Mediæval Bæbes, 2019), and as with work for Sarabanda and Grupo Lokito, I have offered engineering services in return for sampling permission.

of within the MPC's mix environment via the deployment of stereo widening techniques.

In the case of the old cassette recordings, the heavy-handed tape-warping strategies offer a means to impose temporal and spatial distance upon original content that was conceived before or outside the frame of this investigation. It is interesting to consider the implications of media-based staging and sonic manipulation as ways to creatively 'stamp' audio with temporal/timbral and spatial signifiers that transport them to an interim context other than their original one; the rationale of the transformation may be naïve (experimental) or cynical (planned)—its effect, a transportation of the material into a new state of sonic 'limbo', offering reimagined opportunity for the sample-based process.   The notion of manipulation as both distancing and transformative effect has been practically explored in a number of further creative scenarios. 'Oneother' and 'Outmosphere' are collaborations with Albin Zak, respectively chopping up his tracks, 'One Another' and 'Your Outer Atmosphere' (from *An Average Day* (Zak, 2002)), after processing them with a software emulation of a 1970s Soviet wire recorder. Described by the designers as a "*magical lofi-tool* and *ghostly echo machine*" (AudioThing, no date), the wire recorder timbral footprint and variable time features (echoes) have enabled an 'altering' of the sonics in Zak's digital masters, which proved fertile to the sample-based "fantasy variations", to re-cite Ihde (2012, p. 108). Furthermore, an old, lengthy cassette recording of free-jazz improvisation between a life-long musical colleague on electric guitar, and myself on electric piano—entitled *My Brain Is Bleeding On A Train* (circa early 2000s)—becomes the subject of severe, performative media- and effects-based manipulation. The resulting artefacts range from glitched, lo-fi revenants of electric piano and guitar—retaining some remnants of their harmonic and melodic figures—through to

synthesiser-like textures, and completely recontextualised, distorted noise. These become the foundational sample-based layers behind 'Brain Train', 'Train Brain', and 'Freight Train', respectively.

Conclusions

In closing, the characteristics outlined in table 4.2 are extracted from the aural analysis and creative practice stages of the earlier studies in an attempt to systematise the processes and ensuing signatures that infuse sources with a particular sonic identity. The resulting character differentiates them from new beat-making elements and fuels the sample-based sonic discourse by enabling the interaction of meta-process, and sources perceived as 'other'. This is the aesthetic condition that Schloss (2014, p. 159) refers to when pointing out that "to appreciate the music, a listener must hear both the original interactions and how they have been organized into new relationships with each other". Although each of these characteristics communicates some aspect of sonic otherness, it is important not to think of them as defining variables that explicitly or individually ensure its perception. Instead, collectively, they represent sonic manifestations of 'original interactions' that have taken place as part of a (mini) record-making process: it is the construction of the sources as part of a phonographic vision (a record-making context) that makes them stand out from mere 'recordings' (and, arguably, sample libraries, too), even if instrumental elements/layers end up being used in isolation by way of equalisation, filtering, or through access to multitracks. Zak (2018, p. 304) illustrates this quality best by providing the following disclaimer about record production after the post-war era: "Instead of simply *recording* performances, the idea was to *make records*, with the intent of imbuing the disc with a distinctive personality" (my emphasis).

Of course, the otherness that is communicated by these sonic characteristics works in tandem with musical (harmonic, melodic, rhythmic, stylistic) coherency and structural manifestations (cuts, looping/repetition) that further tie the source utterances together. Moreover, the difference can become accentuated by other bipolarities typically delineating contrast between sample sources and additional beat-making elements, such as: live feel versus programmed quantisation (rhythmic); acoustic and/or electromechanical versus synthesised textures; analogue versus digital colouration (timbral); and spatial decays shared over source elements versus the gated (abruptly and unnaturally truncated) ambient envelopes inherent in single drum hits typically deployed in beat construction (spatial). Finally, the majority of the variables listed in Table 4.2, as well as the signatures enforced by the sample-based production environment (sampler/DAW), may also describe the ways in which the final production of the sample-based artefact integrates the contrasts back into a cohesive end phonographic construct (when the respective techniques are reenlisted as part of the sample-based engineering process).

The sample-based hip-hop aesthetic is the sound of manipulating and recontextualising characteristics (sonic signatures) derived from phonographic ephemera. These characteristics include signal flow colourations and staging phenomena. But if otherness equates perspective rather than just difference, the *meta* process (sample-based composition/production) has got to sonically manifest 'perspective-ness': the sound of discursive workflow, manipulation, a meta-phonographic process interacting with manifestations of—past/other—phonographic processes. In other words, for recontextualisation to function, it has to assume an initial context and, therefore, source samples need to carry markers of having first belonged to a sonic 'elsewhen' and 'elsewhere'. Echoing Schloss, the sample-based artefact

sonifies the process of (re)contextualisation—as perspective, as meta-process—within the temporal confines of its structure. However, this sonification does not only manifest in the musical interactions between meta-organisation and original interactions, but also in the mixing (sonic) mechanics that carefully negotiate the dynamics of *contrast* and *integration* through the materiality of textural and spatial manipulation. The autoethnographic lens deployed here has exposed intrinsic aspects of a creative praxis that attempts to construct convincing phonographic 'others' in a sample-based context (making records within records). The examination potentially illustrates how simply making a record is conceptually different to making a record that will feel 'other' within another record, at the same time highlighting the opportunity—and need—to further study the rich sonic phenomena that lie under the surface of contemporary, technologically-interdependent musical forms.

Recommended chapter playlist
(in order of appearance in the text)
'Call'
'Keim Intro'
'Keim Outro'
'Gimension'
'Contacts'
'Genitive'
'1998'
'Tense Minor'
'Wishbone'
'Billinspired'
'Balkan Blues'
'Mediterror'
'Oneother'
'Outmosphere'
'Brain Train'
'Train Brain'
'Freight Train'

Chapter 5

'Past' masters, present beats:

Exponential sound staging as sample-based (re)mastering in contemporary hip-hop practice[98]

At the end of his chapter, 'Considering space in recorded music', Moylan (2012, p. 188) poses the following questions:

> [H]ow do we define the activities and states of spatial qualities as musical materials (concepts) or as ornamental embellishments within the musical texture? How do we calculate their impact on the music, their functions and significance?

His call for further "inquiry … of how space functions in recorded music" follows the proposition of a methodology and theoretical framework that consider the spatial qualities, perceived distance locations, and lateral imaging of both individual elements and the overall sound of records (Moylan, 2012, p. 187). In response, this chapter examines the implications of the spatial architectures that are constructed within records, in terms of their function as source material in sample-based hip-hop practice. The underlying hypothesis is that—unlike Moylan's pop/rock phonographic examples (e.g. The Beatles and Pink Floyd) that are founded on a track-based approach toward the creation of mix architectures—sample-based Hip Hop depends on the juxtaposition, interaction, and mixing of full *masters*. The approach leads to a form of *exponential sound staging* that sees beat-makers carefully negotiating and reshaping often multiple instances of layered master segments and, it will be argued that this

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[98] This chapter has been published in an earlier form as part of the edited collection *Mastering in music* (see Exarchos, 2021b).

phenomenon is a defining aspect of the sample-based sonic aesthetic. As an issue that has not yet received sufficient attention, it complicates existing discourse relating to the notion of staging, necessitating further inquiry. The questions this part of the study pursues, thus, are:

- How do sample-*creating*-based practitioners construct and merge spatial illusions contained within 'masters' used as source material in hip-hop production?

- What are the dynamics of this interaction? In other words, how do beat-makers negotiate the dimensions of *depth*, *height,* and *width* imbued into masters as part of the creative sample-based process?

- And what is the meaning of these exponential staging strategies for the sonic narratives communicated by the end artefacts?

In order to answer these questions, the chapter resorts to the underlying bricolage methodology that combines literary and aural analysis with autoethnographic interpretations of creative practice. Echoing the strategies of previous chapters, the aim here is to allow for the study, respectively: of literature dealing with the notion of staging; previous hip-hop discography containing relevant case studies; and creative practice functioning as an applied context.

Staging literature and hip-hop sonics

The concept of staging was first introduced by Moylan (1992/2014) with a focus on the spatial implications of mediation possible within a mix. Serge Lacasse (2000) explored it further, investigating the effect of textural and dynamic manipulation specifically on the voice in rock production. Zagorski-Thomas extended the definition to include functional and media-based staging, respectively taking into account "the function to which the recorded output will be put" (Zagorski-Thomas, 2010) and the

effect of how "particular forms of mediation associated with audio reproduction media have been used to generate meaning within the production process" (Zagorski-Thomas, 2009). Michael Holland (2013) expanded the concept to include the use of acoustic spaces captured in tracking as a form of staging mediation; and Aaron Liu-Rosenbaum (2012) has been tracing musical and narrative meaning in recording studio aesthetics offering an "expanded notion of staging which applies not only to the voice, but also to instruments".

As staging heavily references a visual metaphor for the representation of sonic phenomena, a number of authors have developed intuitive graphical strategies to illustrate the placement, movement, and manipulation of sonic objects within contemporary music mixes. Popular examples include Gibson's (2008) conceptualisation of mix layers as sonic objects represented in three dimensions;[99] and Moore and Dockwray's (2008) 'sound-box' illustrations, which add "temporal continuity" to their conceptualisation of a four-dimensional virtual performance space. Moylan (2012, p. 167), however, clarifies that "aligning pitch/frequency with elevation … is not an element of the actual spatial locations and relationships of sounds, but rather a conceptualization of vertical placement of pitch". Cook (2009) goes beyond metaphor and considers the merits of data-driven visual representation for audio analysis, whilst warning against solely empirical or statistical readings of recordings. His position balances the promise of "a visualization based on objective measurement [that] can act as a prompt to further critical study" with a question of whether "empirical … approaches [can] really help us understand music as a cultural practice" (Cook, 2009, pp. 236–41). Visual analogy is, therefore, widely deployed to enrich literary

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[99] Gibson deploys a vertical/height axis for pitch/frequency, a horizontal/width axis for lateral position, and a depth axis for distance location.

theorising on the spatial aspects of recordings and the meaning of staging strategies, but the pursuit of thematic, narrative, or cultural implications favours metaphor over objective data representation (as a bridge between textual reification and sonic manifestations of mixing practice). As will be shown next, conceptual visualisation will form a key means of extending staging theory to cover sample-based phenomena. The strategy will focus on illustrating how the (multi)dimensional space of full masters is (re)staged within hip-hop constructs—a notion that will be referred to as 'sample-staging' in the remainder of this chapter.

The central motivation behind pursuing an extension of staging theory to cover sample-based phenomena is that existing discourse uses, as the basis for the development of analytical frameworks, a binary lens focusing predominantly on two levels: that of the overall sound of a record, and that of individual sources. Moylan (2009) asserts that "[t]hese two levels of perspective or detail are what separate the mastering … and the mix engineer". But when full phonographic master segments are utilised as building blocks in sample-based composition/production, this function has profound ramifications for the meaning(s) of the practice: the beat-maker additionally assumes a *mastering* perspective, working with the overall sound stages of full masters (record segments), yet *mixing* them as individual elements within the sample-based 'collage'. Beat-making practice, therefore, does not only blur the lines between production and mixing (see, for example: Shelvock, 2017, p. 170) but mastering as well, necessitating a rethinking of sample-based source elements as multidimensional sonic objects. This chapter will demonstrate the interrelationship between staging mechanics and the essence of the sample-based aesthetic. The following case studies drawn from discography illuminate such mixing/staging phenomena identified in masters used as samples in hip-hop production.

Width, height, and media-based staging

Starting from a sample-staging strategy dealing with a practical conundrum first, the following excerpt from a recent article on low-end stereo placement, illustrates how Melba Moore's 'The Flesh Failures (Let the Sunshine In)' (1970) has been (re)staged in Mos Def's 'Sunshine' (2004), produced by Kanye West:

> Hip Hop producers … often face the problem of adding a more powerful bass element to a historic loop containing a bass part … Kanye West solves this by applying mid/side processing to the sample, thus creating ultra wide stereo with a significant dip in low end frequencies in the middle of the image. Into this he places low bass, often only occupying the sub-bass spectrum … the careful application of the mid/side processing allows for acceptable mono reproduction. (Exarchos and Skinner, 2019, p. 89)

Following the textual analysis with a visual representation, Figures 5.1a and 5.1b respectively portray the sampled record's perceived stage, and the way it has been reshaped within the space of West's beat (and Superstar Dave Dar's mix):
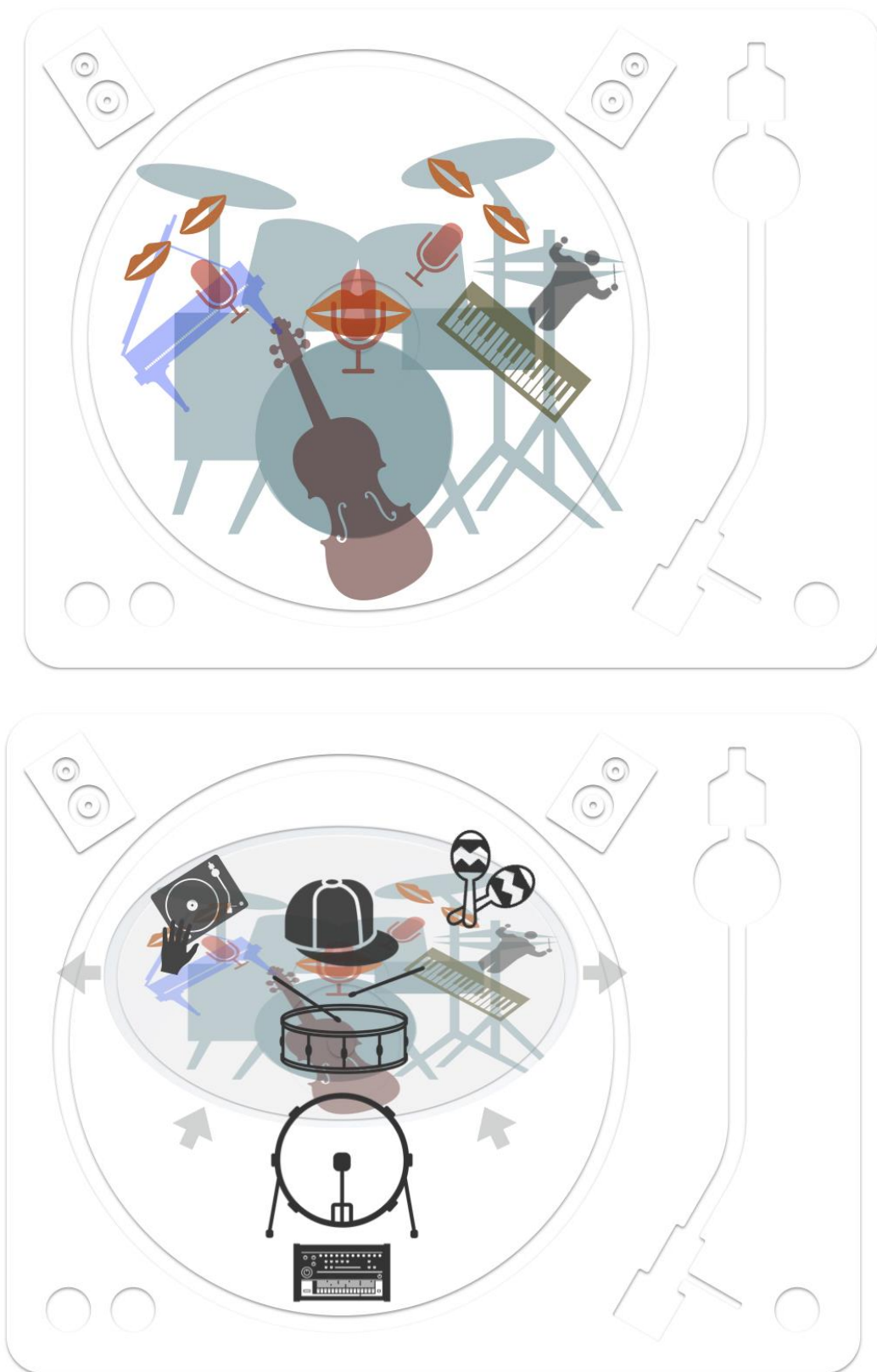
Figure 5.1a and 5.1b (a) A schematic representation of the perceived staging of the chorus in Melba Moore's 'The Flesh Failures (Let the Sunshine In)' and (b) its reshaping in Kanye West's production of Mos Def's 'Sunshine' (the new beat elements enter at the end of the chorus, while a different segment from the original is used for the verses).

Although already notably wide—featuring a "diagonal" (Moore and Dockwray, 2008) image with: piano on the left; organ and orchestral elements on the right; lead vocals, drums, and bass in the middle; and different registers of backing vocals spread both left (for low parts) and right (for high parts)—the 1970s master has been further widened on the lateral axis, but also pitched/sped up. The pitch adjustment results in a frequency shift, pushing the spectrum higher, whilst additional equalisation may have been deployed as part of the mid-side processing. Whether the processing has taken place in the beat-making stage by West, the mixing stage by Dar, or as a combination of both, the resulting sonification is equivalent to a series of (re)mastering artefacts: the weakened middle image and shifted frequency spectra may not have made sense as mastering decisions for a standalone release, but in the context of the new sonic environment they function both in terms of mix architecture and, as will be discussed next, in a narrative sense.

A notable amount of vinyl crackle can be heard on the resulting introductory section of the hip-hop production, which may be the result of a particular combination of record player, stylus, and vinyl record deployed, enhanced by the pitch/equalisation adjustments, or even added in post-production so as to accentuate the vintage qualities of the source. As argued in chapter 2, sample-based Hip Hop has been founded upon the use of past phonographic sources, and therefore featuring the sonic past—in an audible, exaggerated, or even artificial sense—within its contemporary artefacts has become part and parcel of its aesthetic. Going beyond the functional rationale, thus, it can be argued that the combination of lateral, vertical, and media-based staging for the sampled record has thematic and narrative implications, too. The layers of old elements (sample) and new additions (Mos Def's rap; Kanye West's drum hits and sub bass) are communicated as *distinct streams* via their vintage-

contemporary sonic-signature binaries. The striking spatial staging enhances the effect and although it may have been initially conceived of as a pragmatic strategy (creating mix 'space' for the new elements in a lateral and vertical sense), it remains congruent to the sonic interplay of 'past' and 'present'. Moylan (2012, p. 176) asks in relation to image width: "Does the size of the source establish a context or reference for other sources?". This example illustrates that, in a sample-based context, the phonographic object *does* indeed, and it does so in a stylistically-defining sense: its *poly*-dimensional (not just spatial, but also media-based) staging utterances establish both a functional (mix-architectural) and narrative (communicative of the sonic past) referential canvas, against which the new elements may be positioned.

The idea of 'sonic narrative' is used here in Liu-Rosenbaum's (2012) sense of the word "where changes in spatial or timbral qualities of an excerpt could conceivably convey a sense of goal-oriented movement". It is also worth noting that this particular version of the song sampled from the 1970 release is difficult to source beyond second-hand vinyl, and not readily accessible from streaming or download services. Therefore, it is safe to assume that what we are hearing on 'Sunshine' is a unique sampling occurrence of particular variables (equipment and vinyl record) that have taken place in West's process. As a result, the type of vinyl noise that is audible and the specific rhythm of its manifestation, become unique signifiers of the sampling ephemeron on hand—a processual 'footprint' of sorts. Mark Fisher (2013, pp. 48–49) explains in his article, 'The Metaphysics of crackle: Afrofuturism and hauntology':

> Crackle unsettles the very distinction between surface and depth, between
> background and foreground … The surface noise of the sample unsettles
> the illusion of presence in at least two ways: first, temporally, by alerting us
> to the fact that what we are listening to is a phonographic revenant; and

second, ontologically, by introducing the technical frame, the material pre-condition of the recording, on the level of content … we are witnessing a captured slice of the past irrupting into the present.

Depth / proximity

The above case study demonstrates how the lateral and vertical dimensions of width and height are restaged when a full phonographic master is manipulated in the context of a sample-based composition, and how media-based staging can further 'stamp' and accentuate the narrative ramifications. Of course, relative volume reduction, which often occurs as a result of the source's recontextualisation, presents implications also for the depth or distance perception of the sample's position in the new mix architecture. Alongside the control of ambience/reverberation and high frequency content, volume manipulation is one of the three essential mediation strategies that engineers deploy to communicate the proximity of a source.[100]

In chapter 3, Figures 3.2a and 3.2b illustrated the effect of perceived depth on the interaction of sampled ('A Theme for L.A.'s Team') and new beat-making elements (Marley Marl's 'Musika' featuring KRS-One). Perhaps the most striking effect in 'Musika' is how the rich construction of a multi-layered depth illusion on the original, becomes a discursive feature in Marl's sample-based juxtaposition.[101] Marl's discreet negotiation of the Philly sound's textural and spatial vintage signatures allows him to juxtapose his contemporary sounds (and KRS-One's rap) against a sonic object that feels like an 'echo' of a past perspective—painting, so to speak, his present (pun intended) boom-bap sonics against a three-dimensional canvas that communicates

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[100] Moore and Dockwray (2008, p. 219) often refer to this dimension as "prominence".
[101] Seay (2012) deciphers the contributing production practices that shape said depth in relation to the 'Philly sound' and the techniques deployed at Sigma Sound Studios.

the past. Of course, the perception of proximity, distance, or depth is a negotiation of sonic perspective on multiple levels—for example, between listener and source, and between source and other sources. "The listener … can be drawn into becoming part of the 'story' (music) or observing the 'story' (music) from some distance" (Moylan, 2012, p. 173). A sample-based composition, however, can additionally carry *a story within a story*, providing a meta-vantage point so to speak, as it presents the possibility of featuring *a record within a record*. But how does one go about constructing such staging interactions within newly created source material?

(Constructing) sample-staging in creative practice

The autonomous sonic object

Two practice-based scenarios will be reviewed next, where a sample-based composition has been created out of originally produced source/sampling content. Excerpts from the accompanying reflective journal of the process will be analysed as a means to reflexively build upon developing interpretations of the practice. The first practice-based case study concerns the manipulation of a single instrumental element, demonstrating how phonographic processes related to mix staging and mastering help transcend its perceived quality from a mere 'recording,' to a 'record,' in the context of a sample-based creative process:

> I came across a grand piano recording I had self-captured about a year ago. I used two Neumann U 87 [microphones] over the sound holes of the piano and a stereo ribbon AEA R88 Mk2 facing the piano lid from a distance, giving me both a solid, clear stereo image of the instrument, as well as a warmer, mellow room tone that I could blend in to change its staging. Reacting to the source, I quickly reached out for a vintage (spring) reverb emulation and applied it only to the close mics. I was aiming for a more distant tone and I also wanted to make the piano more three-dimensional on the Z [depth] axis … I guess I was making it feel *farther away,* both in terms of physical illusion but also conceptually. I was

> chasing that phonographic 'otherness', quite consciously attempting to make it feel more mysterious. (original emphasis)

In terms of creative intent for the piano source, the rationale and process relayed in the excerpt mirror Reynolds's characterisation of the sample-collage as 'ghostly,' and the sample in 'Musika' as a distinct, three-dimensional sonic object. It is clear that both the recording techniques and the spatial mixing decisions were aimed at creating a sonic object of notable depth and width. The following reflection demonstrates how the sample was 'distanced' even further through a series of mastering processes and conscious media-based staging choices:

> Synchronising the sampling drum machine to the DAW multitrack playing back the piano tracks, I loaded it up with banks of drum samples and sampled vinyl crackle … I wanted to distance the piano even further. So, I programmed a combination of vinyl noise samples that made the four-bar piano patterns running in parallel feel like they had been lifted off vinyl. I scanned the 35-minute recording of the piano improvisation for inspiring moments and decided to give the piano mix itself some 'colour' reminiscent of past recording eras … I applied multitrack tape machine emulation to the individual looping piano subgroups and then ran the full piano mix—including the reverb returns—through a mastering equaliser, a mix-bus compressor, and both master tape recorder and vinyl cutting lathe emulations.

Two essential strategies can be extracted from this process, which aim at infusing the source 'master' with a phonographic footprint and distancing it enough against new elements within the sample-based context: first, the selection and layering of convincing vinyl-crackle patterns and textures placed over the instrumental source—"there is … no myth without a recording surface which both refers to a (lost) presence and blocks us from attaining it", writes Fisher (2013, p. 49); second, the colouring of the 'master' via the simulation of a vintage-informed mixing and mastering signal flow, reminiscent of "a time when recording technology had developed sufficiently to achieve a kind of sepia effect…". Inevitably, the distancing effect pursued

is also related to ideas of perceived authenticity and authority tied to the sample-based aesthetic. Zagorski-Thomas (2009) elaborates: "Playing, sampling and pressing a performance to vinyl as part of the creative process were important statements of authenticity within the Bristol sound of artists"; while for British indie rock in the early to mid-1990s "the notion of authority stems from … the sound of analogue tape and valve or tube amplifiers … used to *distance* the sound of Oasis … from the sound of the 1980s" (my emphasis).

The first of the two tracks showcased in Video 5.1, corresponds to the end sample-based artefact ('Glitchando') built from the piano source production, and it sonifies the interaction between the 'constructed' sample and the new beat elements.[102] A noteworthy utterance created by the chopping process performed upon the source master highlights yet another important characteristic: at the fourth bar of every A-section four-bar loop repeat, a reverberant, 'ghostly' texture can be heard, rhythmically interrupting the main piano part on the off-beats. This is the result of a motif performed on the pads of the sampling drum machine, some of which have inadvertently been assigned with soundbites of just reverb decay, as opposed to actual piano notes or chords. The monophonic, legato-style mode enabled on the sampler (a staple of the boom-bap approach) means that moments of fully staged 'architectures' from the piano 'master' are played as if they were notes on a monophonic synthesiser, each new segment muting the previous one still playing. This performing mode—in combination with other unique programming and swing quantisation affordances facilitated by specific sampling drum machines—results in striking 'staging rhythms'.[103] These could be described as rhythmical shifts between momentary, or at least short,

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[102] The video is available at https://youtu.be/wZiy8FU0cko.
[103] In this case, an Akai MPC X has been deployed again.

staging architectures 'frozen in time' on the micro-structural level. Holland (2013) cites Lacasse to describe the effect in a macro-structural sense:

> In Lacasse's terms, the use of multiple reverberant signatures as the track's narrative develops … are directly related to the piece's structure … the changes in reverberant character function as an example of diachronic contrast, as the various levels of reverberation are experienced relative to others unfolding within the frame of the recording.

Moylan (2012, p. 177) applies the idea to shifts in lateral imaging, elaborating that "patterns of locations … and the repetitions and alterations of these patterns can create musical interest just as the patterns of changing pitches, timbres or harmonies". In this sense, *staging rhythms* become a unique musical utterance in sample-based styles, with a narrative-structural function; but the *diachronic contrasts* unfold on a micro scale and within the time domain of the 'loop'. Of course, the effect can take an exponential character when the juxtaposition of momentary 'stages' involves multiple sources, rather than multiple sections from the same source, as the next section will discuss.

The multitrack sonic object

The second practice-based case study illustrates the construction of an original multitrack source for subsequent sampling, highlighting a layered approach to the creation of a number of staging manifestations. The source production in this case has been built by overdubbing acoustic drums, electric bass and guitar, Nord organ, and Fender Rhodes electric piano, followed by the juxtaposition of vocals taken from another source production. A guide beat was also programmed on a sampling drum-machine in synchronisation with the developing multitrack, to enable an ongoing

evaluation of the evolving 'samples' within a sense of the end context. The following journal excerpt describes how the instrumental performances were recorded with a range of spatial enhancements and timbral shaping gradually committed. As an archiving strategy, the track/file names used during recording disclose the range of processing—serially—applied:

> A [track] name such as 'Tele Wah Stone 63 55 Neve Tape' indicates, for example, a Telecaster guitar, played through a Cry Baby Wah Wah pedal, into an Electro Harmonix Small Stone phaser, and finally a Boss Fender '63 spring reverb pedal. The remainder of the name relates to software emulations [also committed during tracking, such as]: a Fender '55 Tweed Deluxe amplifier, a Neve Preamp, and a Studer A800 multichannel tape recorder … [Performing through] both the pedal reverb being tracked and an AKG BX 20 spring reverb emulation [used only as foldback] inspired the performance, but I could also envision the staging of the guitar in the final mix architecture, whilst making complimentary timbral and musical adjustments … I then reached for my Lakland Jazz bass with the LaBella flats [strings] and played very close to the neck (emulating Aston 'Family Man' Barrett's reggae tone) (Johnson, 2014). To compliment the resulting tone, I run the signal 'hot' through a [real] tube preamp, boosted the low frequencies slightly, and hit an optical tube compressor [circuit] followed by a VCA [hardware compressor] shaving off the peaks … [The end result was] tracked through a Studer tape emulation, effectively mimicking a complete classic signal flow for the referenced era (Leggitt, 2016).

The tracking of the guitar and bass highlight the conscious timbre-shaping decisions committed, on the one hand, ensuring a complimentary tone to sonics gradually being recorded (functional aesthetic) and, on the other, communicating stylistic/era signatures of a non-specific, yet vintage quality (narrative aesthetic). A similar approach was deployed when tracking the keyboards, while the vocal parts were captured with a Shure 520DX 'Green Bullet' microphone slightly saturated through guitar-amplifier and tape-recorder emulations (a typical blues harp recording signal flow). As Zagorski-Thomas (2009) explains: "The other common reason for using media based staging in record production is to evoke the sound of a particular (or more commonly just a vague) historical period". These creative strategies are

consistent with an aspect of Williams's (2014a, p. 201) intertextual understanding of musical borrowing in Hip Hop: he points out that we may be moving towards a focus on sampling *stylistic topics* instead, where "generic signifiers … become more important than the actual identity of the sample". This argument can extend beyond the musical and the abstract, however, to the materially sonic and concrete, as the following journal excerpt also illustrates:

> Once I found a one-bar [drums] phrase that was sitting well … I looped it around with all mics [channels] active and started mixing it. Auditioning it with and without the beat running in sync, I tried to decide which overheads [mics] I should use (I tracked multiple options, so that I could push the drum aesthetic toward different 'eras') … The drums had been recorded through my choice of hardware preamps with some compression and EQ already committed … [I] run a parallel send of the whole drum mix into a 'pumping' VCA compressor, followed by a passive vintage EQ [both emulations]. The highlighted recorded ambience, enhanced 'air', and tonal glue achieved by the New-York-style parallel layer gave the drums a 'phonographic' quality that was complimentary to the programmed drum hits, providing a sense of 'glue' and achieving that live/non-live fusion that felt stylistically relevant.[104] Taking the beat out, I was surprised by how few of the drum mics I actually needed for the drum-layering effect to work. I ended up with only the stereo overheads and a little kick support … The overall mix-bus was going through mastering equalisation, mix-bus compression, and master tape emulations, [so] I had been reviewing and working on the drum mix with the 'hindsight' of auditioning it in this more finalised (end-format) fashion.

The journal excerpt indicates that the drums had been recorded prior to the multitrack subscribing to a 'stylistic topic', using a strategy that deployed multiple microphone choices/techniques, which in turn allowed a degree of sonic-signature-shaping flexibility later in the process. The drum production approach demonstrates particular attention paid to expanding the captured ambient characteristics and testing the interaction between the acoustic sonic and the programmed beat. It can be argued

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[104] This is a reference to a technique characteristic, initially, of New York mix engineers, Owsinski (1999, p. 52) calls the "New York Compression Trick": it aims at enhancing the rhythm section in a mix, by blending a heavily compressed and additively equalised version of—typically—the drum elements, with a more conservatively processed version of the tracked original.

that whatever convincing phonographic sample qualities had been achieved, these were the result of the source operating as a blended, yet distinct sonic 'world' or mix architecture contained underneath the beat—courtesy of: complimentary staging decisions; shared colorations pertaining to deliberate signal flow choices; a conceptual 'inhabiting' of an aesthetic/era that drove both musical and tonal decisions; and the 'glue' achieved by both tracking and mix-bus processing choices. The mix-buss equalisation, compression, and tape emulation gave the underlying master of the recorded performances a tracked-to-a-particular-recording-medium coherence, which both unify it as a mix of performed elements *and* separate it as a phonographic entity from the—new—beat (elements). Figure 5.2 features a collage of photographs depicting the recording sessions responsible for the production of the constructed 'sample'. The following section will discuss its use for, and incorporation into, the second sample-based composition ('Reggae Rock') under examination.
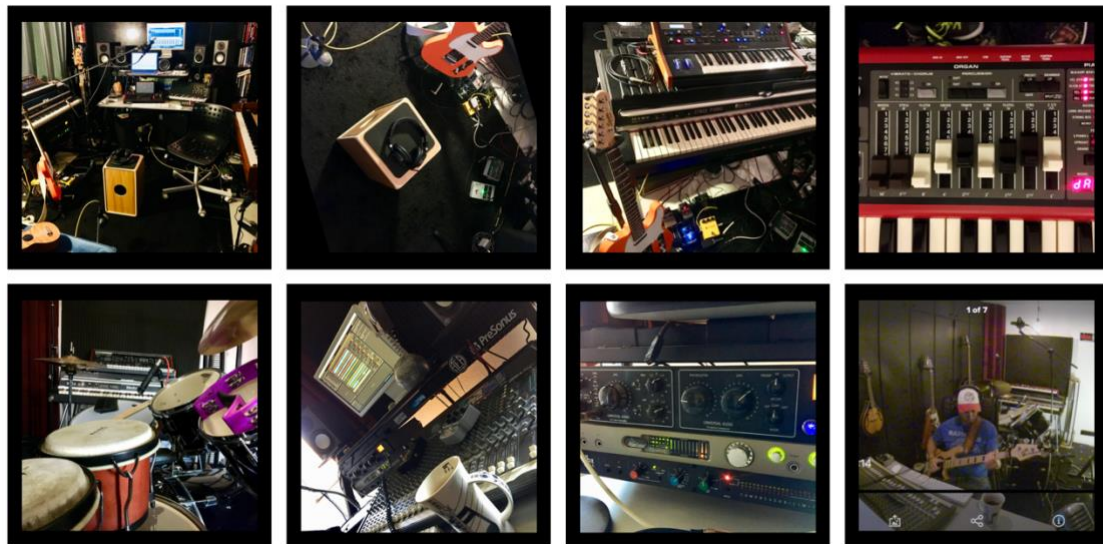
Figure 5.2 A collage of photographs from the recording sessions responsible for the production of the constructed multitrack 'sample'.

Exponential staging in sample-*creating*-based hip-hop practice

In a similar vein to the sampling and chopping processes described for the piano-based production, the beat built out of the multitrack has been constructed by isolating multiple 'staged' moments from the lengthy (approximately 25-minute) blues-funk 'jam' deconstructed above; pitching/slowing down the samples by -1.63 semitones (about 8.25 beats per minute); rhythmically performing various combinations of the resulting momentary 'masters' using the sampling drum-machine's pads; and further manipulating the segments using the sampler's internal mix functionality. To reenlist Sewell's typological descriptors, the final piece's main A, B, and C sections are created predominantly out of *percussion-only* and *non-percussion* layers, while the breakdown section uses an *aggregate* structure made out of layering multiple component elements sampled from the source multitrack;[105] the vocal samples could be described as functioning either as a *surface* or *lyric* type. Of course, access to the component layers is ensured by having created the multitrack production oneself, which differs from the possibilities presented by sampling previously-released phonographic material by other artists/producers. The rationale behind working with a range of structural types, here, is driven by the need to test the limitations of access to near-*intact* scenarios, the compositional freedom presented by access to *aggregate* components, but also—importantly—the sonic implications of either approach. As DJ Bobcat (cited in Sewell, 2013, p. 44) explains: "A lot of times when somebody samples a bass and a guitar riff or a horn from the same song, it's because sonically they're the same. They're taking it because they already sound the same". But could this sonic 'sameness' be further unpacked and is it the result of an underlying 'staging harmony' (i.e. a spatial architecture to which all the component

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[105] See Video 5.1, available online at https://youtu.be/wZiy8FU0cko.

layers adhere, even when isolated)? To illustrate the notion of an underlying architecture, Figure 5.3a schematically represents the staging of the multitrack used as the foundation for section A of the sample-based production. Figure 5.3b represents four component layers extracted from different sections of the source multitrack (but retaining their staging placements): a non-percussion layer that includes Rhodes piano, bass, lead and rhythm guitar (top left); and three percussion-only groupings of cajon-and-bongos (top right), shaker-and-tambourine (bottom left), and drums (bottom right). Note that under the representation of each layer there are opacities overlaid of the missing instruments' positions in the implied mix architecture (providing a kind of *blueprint* for the staging 'harmony').

In order to reinforce the bass part, a matching bass-only layer has also been chopped, equalised, and layered beneath the resulting structure. The perceived effect is of a louder and more prominent bass placement in the main non-percussion layer (the isolated bass layer enables separate equalisation and therefore a complimentary reinforcement of the otherwise harder to access bass sonic in the almost intact, non-percussion layer). During the last (eighth) bar of every A-section, two two-beat, non-percussion segments interrupt the main layer on beats one and three to provide a variation and climax (using the sampler's monophonic mode, as in the piano example).[106] Figure 5.3c represents the resulting aggregate structure, as well as the vocal sample juxtaposition, plus the new beat additions (kick drum, snare drum, and high-hat); note the sepia colour added representing the vinyl crackle that has been layered over the aggregate structure. Additionally, the cajon-and-bongos percussion-only layer has been shifted in terms of lateral imaging, while the arrow pointing down

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[106] The segments are equivalent to the main non-percussion layer in terms of elements included, but with added organ parts—the latter of which features a glissando.

from the new snare toward the sampled drums' snare represents side-chain compression dialled in to reduce the latter's volume on every new snare hit—the strategy aiming at both a balancing and rhythmic interaction between the percussive elements, thus creating complementarity between two initially unrelated samples/drum sonics. A more dynamic visual representation of the staging phenomena is showcased in Video 5.1.[107] Finally, the breakdown section is based on an aggregate structure made exclusively out of component layers, which also include individual Rhodes and lead guitar samples (pitched ten semitones up from the original, which results in an octave interval over the aggregate structure, and twice the tempo).
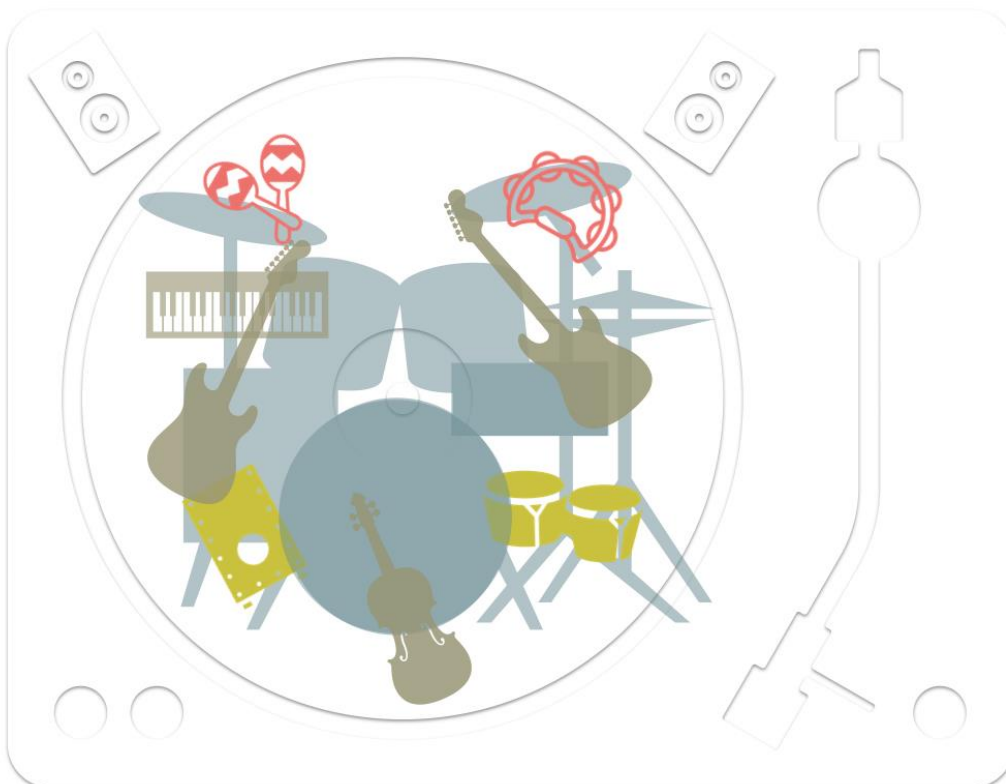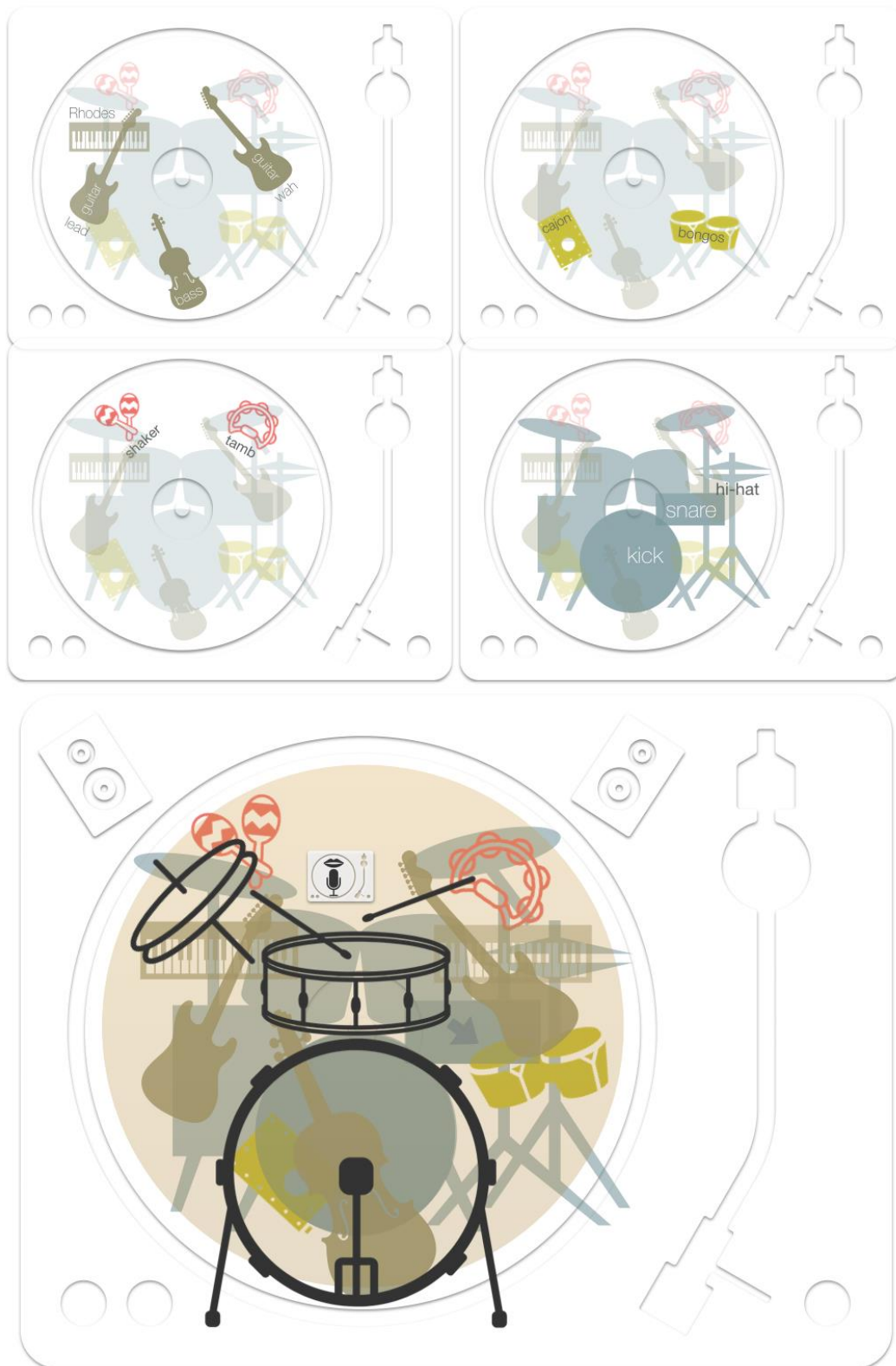
Figures 5.3a, 5.3b, and 5.3c (a) A schematic representation of the staging of the multitrack used as the foundation for section A of the sample-based production. (b) A schematic representation of the four component layers extracted from different sections of the source multitrack: a non-percussion layer that includes Rhodes piano, bass, lead and rhythm guitar (top left); and three percussion-only groupings of cajon-and-bongos (top right), shaker-and-tambourine (bottom left), and drums (bottom right). Note that under each layer's representation there are opacities overlaid of the missing instruments' positions in the

implied, original mix architecture. (c) A schematic representation of the resulting aggregate structure, plus the new beat additions: the sepia colour added represents the vinyl crackle that has been layered over the aggregate structure; the cajon-and-bongos percussion-only layer has been shifted to the right in terms of lateral imaging, while the arrow pointing down from the new snare and toward the sampled drums' snare represents side-chain compression applied upon the drum layer.

The aggregate way of working facilitates a refined (re)staging strategy for the component layers. In a sense, the already staged individual, non-percussion, or percussion-only layers are (re)mixed as elements within the sampler's mixing environment. For example, four send effects are deployed (short and long reverb, synced tape delay, and a parallel VCA compressor), which allow sharing/groupings of ambient spaces, mutual rhythmic effects, and common dynamic movement. A number of layers are also individually balanced, equalised/filtered, and compressed to negotiate the available 'space' more effectively in the resulting sample-based stage.

The intact structural approach—which is more representative of phonographic sampling as with West's and Marl's examples previously analysed—implies a *committed* stage that can only be renegotiated through a form of (re)mastering within the sample-based context. Most pragmatic sample-based creative scenarios fall somewhere between the intact and the aggregate extremes. The added layers (drum hits, etc.) have to interact in a congruent manner in terms of spectra, depth, and width against the three-dimensional frame(s) presented by intact, percussive, or near-intact samples. One of the methods for enhancing this interaction is by integrating side-chain and parallel dynamic processing between the samples, the overall mix, and additional beat elements.[108] Kulkarni (2015, p. 43) muses that "[t]he hip-hop sound always rests on a crucial ambiguity … that delicious dilemma, that tightrope between

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[108] This is a strategy indeed championed by this production: a compressor inserted on the overall sampler mix is triggered by the new kick drum sample, while multiple elements are routed to the sampler's parallel VCA-style compression bus.

looseness/'feel' and machine-like tightness". To echo and expand on Kulkarni—the artform's balance also hangs in the tightrope between contrast communicated by previously-constructed ('other') and new elements, and integration (synthesis) achieved through spatial, timbral, rhythmical, and dynamic re-contextualisation.

Further practice

In keeping with the cyclical nature of the project's methodological design, these new understandings drawn out of the interaction of staging theory and practice-based findings, have yet again been applied to further praxis. Tracks 'Arundel', 'Arun Dva', 'Covert Three', 'Spin Eet', and 'Respin'—included in the album component—exemplify evolving studies of a range of concepts spanning the autonomous-to-multitrack sonic object range discussed here. Specifically, the former three beats make use of cathedral organ recordings deploying multiple-microphone setups to capture the organs in spatially enhanced ways.[109] These recordings have taken place in Arundel and Coventry Cathedrals, as the names indicate in the phonetic references they contain.[110] Echoing the 'distancing' of the piano and drum sources discussed above, the end beats take advantage of a (dynamic) blend of close and farther microphone positions in the post-production of the organ multitracks. The following 'Beat memo' from the research journal demonstrates how these spatial statements lead to staging rhythms, and how new (synthetic) elements are integrated into the overall spatial illusion:

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[109] The recordings have been engineered in collaboration with Professor Justin Paterson.
[110] In a manner similar to the playful naming schemes we witnessed J Dilla and Madlib deploy in chapter 3: 'Dva' translates to 'two' in Croatian (one of my two native backgrounds), and it signifies the second study created out of the same Arundel Cathedral recordings; 'Covert Three' is a phonetic play on Coventry, particularly as the organ staging here assumes a background function in the staging architecture of the end beat, whilst also signifying the third study of multi-miked organ 'stages' integrated into the beat-making practice.

Furthermore, the sampled organ layers in 'Arundel' combine with a percussion-only drum loop—mixed, mastered, and sampled—from a Fet47 band multitrack, to provide the resulting aggregate structures of the beat. Pitched-down and effected speech from yet another (*Songs for Sampling*) source multitrack provides an intermittent lyric layer.[111]

'Arun Dva' starts with organ elements lifted (dug) from the first study, taking advantage of the staging decisions already committed, to explore new musical combinations within a stable (and pre-conceived) staging harmony. The 'play' with(in) this—sparser—stage, here, has led to incorporating further new elements (fretless bass, electric guitar, additional synthesiser pads) into the production, inspired by the sampled drum (indie rock/punk) sonics, and 'glued' via tracking colouration strategies similar to those exposed in the earlier examples (pursuing both complimentary/functional tones and congruent narrative/vintage signifiers). As such,

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[111] The narration is a recording of an article I wrote in response to Greek rapper Killah P's murder by a Golden Dawn member; it was published in Sonik magazine's special issue against fascism (Stereo Mike, 2013). As such, 'Arundel', with its spiritual undertones and spatial sense of awe, is imagined as a sonic dedication, and a requiem, for my late peer.

this beat ends up sonically integrating two stylistic streams—the church-organ music, plus the rock-band grouping—underneath the overarching hip-hop sensibility (a third *meta*-stylistic statement), itself communicated by the added drum hits, chopped utterances, and (808) sub bass.

'Spin Eet' and 'Respin' attempt an exposition of two contrasting scenarios. Both beats make use of a 9-minute spinet (small harpsichord) improvised performance, overlayed with mock-operatic vocals;[112] in the first case, sampling the spinet and voice separately (albeit from a combined stage / mix architecture), and in the second case chopping samples of the intact stereo master alongside the individual elements. The source elements have been recorded in the same space and deploying the same microphone, to create a sense of 'duet' interaction (the illusion of singer and accompaniment). The sonic 'gluing' strategies have been further maximised in the mix/master by emulating shared vintage preamplifiers, recording and mastering tape media, console summing, and dynamic and spatial effect processing. In 'Spin Eet', the spinet layer combines with another (rock) drum source to create an aggregate structure, while the vocal samples mostly assume a surface function. In 'Respin', the beat-making utilises the 'Spin Eet' staging architecture (and elements) as a starting point, but integrates chopping of the added intact (combined spinet and voice) sample as part of the multi-layered, reimagined sequences. As such, this beat/study blends notions of remixing (elements) and more classic beat-making (stereo/master-chopping) approaches, benefitting from the underlying staging harmony, timbral consonance, or implied architecture. In the journal's 'Beat memos' I remark:

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[112] The composition/improvisation very loosely channels references from Rammstein, Stockhausen, Mozart's *Don Giovanni*, and favourite Russian baritone Dmitri Hvorostovsky.

> Consider the idea of progressive staging: jamming and developing from previous staging conceptions; the way I use a study to then build a tune, or an alternative or next tune. This is so important, that once a conducive stage is created, *riffing is a jam with the stage* … Sometimes the mix comes before the composition… (my emphasis)

'Covert Three' takes the notion of exponential staging to the cube, by blending pre-staged spinet and voice layers taken from the two previous studies, with the multi-miked Coventry organ recordings, as well as alt-rock elements such as the distorted drum loops and pitched-down spoken/lyric layer audible. The aggregate structure is accentuated by church bells recorded as Foley (and inspired by the cathedral narrative associations), and the beat is completed by single drum hits supported by 808 sub-bass notes.[113] The multiple elements are 'held' together by added, shared ambient illusions (spatial processing), and a timbral-dynamic gluing strategy that echoes the whole album endeavour: 'pushing' the MPC's converters to the edge (to benefit from second order harmonics via judicious clipping); summing on an analogue mixer, incorporating parallel harmonic and compression strategies; and carefully gain-staging through a number of analogue transformers in the master signal path, which includes a 'colourful' mix-buss compressor lightly 'pumping' the end program material.

Conclusions

This final chapter has illustrated staging mechanics in sample-based hip-hop phenomena across a spectrum of creative contexts: from phonographic sampling utilising full, previously-released master segments; through to sample-*creating*-based practices that—via extended access to multitrack elements—facilitate a multi-layered approach to the shaping, control, and manipulation of the source's staging

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[113] The church bells were recorded in Rijeka, my Croatian hometown.

dimensions. At the heart of the process, lies a sonic object that carries an extended mix architecture, with the potential to not only provide raw sonic content for this form of material composition (sample-based Hip Hop); but also a poly-dimensional referential canvas that can communicate narrative notions, such as representations of the past, diachronic contrasts, and striking genre-defining utterances such as syncopated *staging rhythms*. These perceptual effects depend on the construction of convincing spatial and media-based staging artefacts for the hip-hop practitioner creating their own source material; and these, in turn, translate to phonographic signatures contributing to an authentic sample-based footprint. It can be deduced that the essential aesthetic of sample-based music forms—and the key differentiation between a generic sonic element and an actual *sample* at the heart of their processes—can be traced in this interaction with staged sonic objects carrying *markers of phonographic process*. It is a manifestation of a phonographic poetics interacting with previously (even if very recently) committed phonographic poetics. This kind of layering can, therefore, become exponential, and sample-based music forms deal not with mixing elements, but with mixing and manipulating full 'masters'— with a playful 'polystagiality' residing at the heart (mechanics) of the creative phenomena.

Recommended chapter playlist
(in order of appearance in the text)
'Glitchando'
'Reggae Rock'
'Arundel'
'Arun Dva'
'Covert Three'
'Spin Eet'
'Respin'

Endtroducing (conclusion)

The previous five chapters have taken a gradual 'probing' approach to the theoretical/analytical deconstruction and, then, iterative/practical (re)construction of the sonic phenomena that characterise (useable) samples at the heart of the beat-making process. Progressively, the approach has revealed: i) the sonic/material dimensions behind the inter-stylistic dynamics of sample-based music making; ii) the importance and manifestation of the sonic past in Hip Hop via the conscious integration of vintage/phonographic signatures in its creative modus operandi; iii) the perceptual effects and creative potential the interaction between beat-making and multi-layered phonographic objects has on listeners and makers alike; iv) the spatio-temporal, narrative, and thematic implications the 'staging' placement and dynamic mediation of musical elements has for the end constructs/beats; and v) the poly-dimensional extent staging practices assume in sample-based hip-hop praxis, thus offering an extension of staging theory beyond multitracking practices in contemporary record production. By responding to a practical conundrum in current beat-making practice, the investigation has come face-to-face with what constitutes a source sample as 'phonographic' in its essence; and what the sonic dimensions of raw material are such that they, not only contribute to a sample-based aesthetic, but facilitate effective beat-making praxis.

Moreover, the project has contextualised the duality/oscillation between retrospective romanticism (analogue nostalgia) and forward-thinking creative intentionality (digital futurism); these forces are expressed in the consciously (re)constructed vintage sonics and exponential/playful sample-based 'poly-stagiality' as part of a metamodern state of creative affairs. The beat-making praxis materialises these evolving conceptualisations by presenting, in the album component, a spectrum

of end productions that range from contemporary Boom Bap (such as, for example, 'Como Mi Ritmo');[114] to more experimental sample-based stylisations, echoing what Hodgson (2011) describes as "experimental Hip Hop", or D'Errico (2015) refers to in 'Off the grid: Instrumental Hip-Hop and experimentation after the Golden Age' (for example, in beats like 'Take 3' or 'Train Brain'). Like Hodgson, who focuses on specific processing practices as contributing factors toward experimental hybridisation, the latter content here is a direct result not only of conceptual 'studies', but also of more extreme mediation practices and spatial processing enforced upon *isolated* multitrack elements—in a process akin to remixing. The bridging with sample-based hip-hop signatures, however, becomes possible (and audible), by ensuring these individual layers carry sonic manifestations of their underlying timbral and spatial staging blueprints in the new constructs, crafted as part of their original(ly imagined) 'phonographic' context.

As such, the project has deconstructed the elements of the sonic domain that constitute the 'mechanical' dimensions of borrowing in sample-based Hip Hop, supporting the initial hypothesis for its significance in beat-making poetics, and facilitating a modus operandi that empowers an aware p/re-construction of raw materials towards it. Additionally, the investigation has expanded upon the original premise, by revealing rich spatial dimensions negotiated in the interplay between beat-making practices and the perceived sound stage of source 'phonographic' objects, extending beyond vintage surface/textural signifiers. Thus, the notion of 'making records within records' assumes the power of a sonic manifesto that enables the 'exponential' in phonographic poetics, and allows a (re)imagining of what future

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[114] By contemporary Boom Bap I am referring to the resurgence of east-coast-style/sample-based Hip Hop referencing Golden Age practices.

meta(modern)-music may sound like. The project's contributions can therefore be summarised in the following statements:

- The expansion of staging theory to cater for sample-based music production practices;

- A phenomenological unpacking of the sonic/material dimensions in sample-based musicking (deploying mixing/engineering expertise);

- Providing a nuanced account of sample-*creating*-based hip-hop praxis;

- Extending the praxis via intentional poly-stagiality through expanded 'depth'/spatial sculpting and timbral mediation in the sonic domain; and

- The proposition of a multi-method framework synthesising a range of strategies that may be transferable to self-study in other arts-based contexts.

Future directions

The emergent focus on the spatial dimensions of staging in a sample-based context, and the practical implications of the concept for sample-*creating*-based beat-making, pave the way for promising future directions in both research and practice. In the current climate of spatial audio enthusiasm, experiments with 3D and/or binaural sonic objects make sense for a form of beat-making that explores not just the illusion of poly-dimensionality packed into mono or stereo 'images', but potentially creative 'play' with actual immersive 'stages' folded into easily managed file formats.[115] Collaborator Jo Lord's (2022) democratic approach to spatial audio developed in 'Redefining the spatial stage: Non-front-orientated approaches to periphonic sound staging for binaural reproduction' presents an attractive opportunity for beat-makers who may opt for access to immersive sonic/phonographic objects via drum machines

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[115] Apple Music and AirPods headphones, for example, already support spatial audio playback (with dynamic head tracking) for consumers, highlighting the format's creative potential for makers.

or software alternatives, and the notion of 'binaural Boom Bap' has already been envisioned as a collaborative future research proposition.[116]

From a practice-based, real-world perspective, the instrumental productions included here have been conceptualised as part of a dual function: as self-sufficient instrumentals, where the vocal 'chops' simply act as surface sounds and the full constructs are aimed at an international audience;[117] but also as beats with lyrical connotations that inspire future lyric-writing and rapping, targeting—specifically—the Greek market.[118] Finally, the pedagogical implications of the research have been explored in Exarchos (2018), extrapolating on the collaborative potential existing between performing, sound engineering, and electronic music production disciplines— a notion/model that is transferable beyond the academy.

However, it is important to acknowledge that an essential catalyst in this research (and its practical actualisation) has been the deployment of substantial, pre-existing sound-engineering knowledge, which may be an elusive factor for young beat-makers. Therefore, it will be fruitful to examine DIY routes toward the construction of 'phonographic' context in source content, which may be more readily applicable by the beat-making community.[119] On a related note, beats such as 'Arun Dva' (deconstructed in chapter 5), have demonstrated how new instrumental layers may be 'glued' to sampled source constructs via tracking colouration strategies that pursue

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[116] This research explores how existing beat-making practices and technologies may interact with emerging spatialisation opportunities. The respective paper, entitled 'Dynamic meta-spatialisation: Narrative and recontextualisation implications of spatial stage stacking', has been accepted for the forthcoming *Innovation in Music 2022* conference.

[117] The instrumental album is scheduled for release simultaneously to, and as accompanying material for, a forthcoming book publication founded upon this PhD thesis (signed to Routledge/Focal Press as part of the *Perspectives on Music Production* series, and scheduled for completion by September 2022).

[118] A smaller portion of the beats with rapping over them in Greek will form the basis of a fourth solo album as Stereo Mike, completing the album trilogy *XLI3H* (2007)—*ANELI3H* (2011)—*KATALH3H*.

[119] The concepts are being explored in a paper under redaction aimed at the Global Hip Hop Studies journal, entitled 'Space, bleed, blend and glue: (DIYing) The ghosts behind hip-hop sampling'.

congruent sonic signifiers. A promising future direction lies, too, in systematically examining staging intentionalities at the tracking (recording) stage of individual elements, providing a faster route toward 'phonographic' cohesiveness between sampled layers for the contemporary (and future) beat-maker.[120] In closing, a reflexive listening analysis of the whole body of work created via such self-sampling practices, may reveal a potent interrelationship between the producer's evolving sonic footprint and recurring source-crafting tendencies (hermeneutically revealing underlying expressive patterns).[121] Albeit benefitting from a certain amount of temporal distance, future analytical work could focus on such relationships, sonically interpreting the implications of self-sampling strategies on evolving stylisation (and examining— through a recording analysis prism—Sandywell and Beer's (2005, p. 119) claim that: "genre … is also a practitioner's term invoked in the recognition, consumption, and production of musical performances").

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[120] New beat-making experiments (extending beyond the practice-based body of work presented in this thesis) utilise multitrack console 'presets' informed by the strategies developed here, to imbue individually sampled instrumental layers with shared sonic signatures. These range from era-invoking signal-flow paths (for example, systematically applied pre-amplifiers of recognisable mixing desks at the input stage), to shared spatial resonances (carefully gauged ambient traces of recurring real acoustic spaces or spatial processors captured with every instrument). This developing approach contains the potential to engage the 'blueprint' of a *staging harmony*, before a multitrack object is even (needed to be) constructed: "Sometimes the mix comes before the composition" (preempted in the journal entry at p. 199).

[121] Beats such as 'Aldenham', for example, reveal a 'chanting' signature frequently recurring in the accompanying album: inadvertently, the result of depending on, and then distancing, my own voice as a source element. In discussion and analysis with the project's musical collaborators, a possible interpretation offered was that this signature may be the result of notable exposure to Byzantine chanting in Greek churches during childhood: perhaps a subconscious influence expressed via the amalgamation of sample-based manipulation and 'digging' for *otherness* in echoes of my own sonic past.

Recommended chapter playlist
(in order of appearance in the text)
'Como Mi Ritmo'
'Take 3'
'Train Brain'
'Arun Dva'
'Aldenham'

End credits

Beats (in alphabetical order)	Written by	Instruments sampled	Performed by
'1 by 2'	M. Exarchos, P. Thompson, R. Toulson	Electric bass, synthesisers (Korg MS20, Roli), upright piano Drums	M. Exarchos P. Thompson
'1960s 2'	M. Exarchos	Voice Drums, electric bass, Nord Farfisa organ, percussion	A. Caldecott M. Exarchos
'1998'	M. Exarchos	Yamaha W7 synthesiser	M. Exarchos
'Aldenham'	M. Exarchos	Drums, electric bass, Rhodes electric piano, voice	M. Exarchos
'Alderoots'	M. Exarchos	Drums, electric bass, Nord harpsichord, Rhodes electric piano, voice	M. Exarchos
'Altcore'	M. Exarchos	Drums, electric and acoustic guitars, electric bass, Korg MS20 synthesiser, voice	M. Exarchos
'Americanotha'	M. Exarchos	Electric bass, electric guitar, Nord Wurlitzer electric piano, percussion, upright piano, voice Drums	M. Exarchos P. Thompson
'Arun Dva'	M. Exarchos	Electric guitar, fretless electric bass, Pipe organ, synthesisers (Korg MS20, Make Noise 0-Coast, Roli), voice	M. Exarchos
'Arundel'	M. Exarchos	Pipe organ, synthesisers (Korg MS20, Make Noise 0-Coast, Roli), voice	M. Exarchos
'Balkan Blues'	M. Exarchos	Fretless electric bass, melodica, percussion, Roli synthesiser Drums	M. Exarchos P. Thompson
'Become'	M. Exarchos	Drums, electric bass, electric guitar, Korg MS20 synthesiser, upright piano, voice	M. Exarchos
'Billinspired'	M. Exarchos, A. Hector-Watkins	Electric bass, electric guitar, melodica, synthesisers (Moog, Roli), percussion, Rhodes electric piano Voice Drums	M. Exarchos A. Hector-Watkins P. Thompson

'Boxing'	A. Caldecott, M. Exarchos	Voice Electric bass, electric guitar, upright piano, Roli synthesiser	A. Caldecott M. Exarchos
'Brain Train'	M. Exarchos, A. Tsoukatos	Synthesisers (Moog, Roli), Yamaha electric piano Electric guitar	M. Exarchos A. Tsoukatos
'Call'	M. Exarchos, P. Thompson, R. Toulson	Electric bass, electric guitar, Hammond C3 organ, harmonica, upright piano Drums	M. Exarchos M. Exarchos, P. Thompson
'Como Mi Ritmo'	M. Exarchos	Electric bass, lead voice Congas, bongo, campana Timbales Grand piano Güiro Backing vocals	E. Caicedo Alegria B. Bland T. Butler S. McGuinness D. Pattman E. Solis
'Contacts'	M. Exarchos	Synthesisers (Make Noise 0-Coast, Korg MS20, Yamaha W7), voice	M. Exarchos
'Covert Three'	M. Exarchos	(Rijeka) Foley, harpsichord, pipe organ, voice Drums	M. Exarchos P. Thompson
'Dragga Five'	M. Exarchos	Drums, electric guitar, fretless electric bass, melodica, percussion	M. Exarchos
'Freight Train'	M. Exarchos, A. Tsoukatos	Yamaha electric piano Electric guitar	M. Exarchos A. Tsoukatos
'Genitive'	A. Caldecott, M. Exarchos	Voice Yamaha W7 synthesiser	A. Caldecott M. Exarchos
'Gimension'	M. Exarchos	Double bass, voice Yamaha W7 synthesiser	Anon. M. Exarchos
'Glitchando'	M. Exarchos	Grand piano, synthesisers (Korg MS20, Moog, Roli)	M. Exarchos
'Good Ole Betty'	M. Exarchos	Electric bass, electric guitars, upright piano Roli synthesiser, voice Drums	M. Exarchos P. Thompson
'It Meters'	M. Exarchos	Drums, electric bass, electric guitar, harmonica, percussion, Rhodes electric piano, voice	M. Exarchos
'Keim Intro'	M. Exarchos, J. Lord	Gamelan, grand piano, Rhodes electric piano, synthesiser (Roland JD800) Voice Drums	M. Exarchos J. Lord P. Thompson

'Keim Outro'	A. Caldecott, M. Exarchos, R. Harbron	Voice Gamelan, grand piano, Rhodes electric piano, synthesiser (Roland JD800), upright piano Concertina Drums	A. Caldecott M. Exarchos R. Harbron P. Thompson
'King's Funk'	M. Exarchos	Drums, electric bass, electric guitar, Rhodes electric piano, percussion, voice	M. Exarchos
'La Noche (AMHB)'	M. Exarchos, J. Martinez, S. McGuinness	Backing vocals, electric bass Congas, bongo, campana Timbales Roli synthesiser Tenor saxophone Electric guitar Lead vocals Grand piano Trombone Güiro Backing vocals Trumpet	E. Caicedo Alegria B. Bland T. Butler M. Exarchos C. Hirst K. 'Burkina Faso' Kasongo E. Makuta S. McGuinness V. Msimang D. Pattman E. Solis D. Wilhelm
'Left Right'	M. Exarchos	Drums, electric guitar, fretless electric bass, percussion, Rhodes electric piano, upright piano	M. Exarchos
'Mediterror'	M. Exarchos	Orchestral harp Violin Synthesisers (Moog, Roli) Drums Metallic percussion	C. Beer K. Blake M. Exarchos P. Thompson B. Woollacott
'Mo' Town'	M. Exarchos, J. Martinez, S. McGuinness	Drums, grand piano, percussion, Rhodes electric piano, Roli synthesiser, voice Tenor saxophone Trombone Trumpet	M. Exarchos C. Hirst V. Msimang D. Wilhelm
'Negrito Blues'	M. Exarchos	Electric bass, electric guitar, Rhodes electric piano	M. Exarchos
'New Orleans'	M. Exarchos	Acoustic guitar, fretless bass, (New Orleans) Foley, percussion, synthesisers (Korg MS20, Roli), ukulele, upright piano	M. Exarchos
'Nu Drub'	M. Exarchos	Electric bass, electric guitar, melodica, percussion, Roli synthesiser, upright piano	M. Exarchos

'Oh Buxom Betty'	M. Exarchos	Electric bass, electric guitar, synthesisers (Korg MS20, Make Noise 0-Coast, Roli), upright piano, voice Drums	M. Exarchos P. Thompson
'Old Steppers'	M. Exarchos	Electric bass, electric guitar, melodica, Nord organ, percussion, Roli synthesiser, upright piano	M. Exarchos
'Oneother'	M. Exarchos, A. Zak	Synthesisers (Korg MS20, Roli), upright piano Electric guitar Trumpet Electric bass Voice	M. Exarchos T. Jackson M. Kirschenmann E. Santos A. Zak
'Outmosphere'	M. Exarchos, A. Zak	Backing vocals Synthesisers (Make Noise 0-Coast, Moog) Trumpet Voice	N. André M. Exarchos M. Kirschenmann A. Zak
'Outta Sight'	M. Exarchos, P. Thompson	Electric bass, electric guitar, Roli synthesiser, upright piano Drums	M. Exarchos P. Thompson
'Padded'	M. Exarchos, P. Thompson, R. Toulson	Synthesisers (Korg MS20, Moog, Roli), upright piano Drums	M. Exarchos P. Thompson
'Psychodelic'	M. Exarchos	Drums, electric bass, electric guitar, Nord Vox Continental organ	M. Exarchos
'Ready to Chop'	M. Exarchos, P. Thompson, R. Toulson	Korg RK100S2 keytar synthesiser, upright piano Drums	M. Exarchos P. Thompson
'Reggae Rock'	M. Exarchos	Drums, electric bass, electric guitar, Nord Hammond organ, percussion, Rhodes electric piano, voice	M. Exarchos
'Respin'	M. Exarchos	Harpsichord, Roli synthesiser, voice Drums	M. Exarchos P. Thompson
'Spin Eet'	M. Exarchos	Harpsichord, upright piano, voice Drums	M. Exarchos P. Thompson
'Steppers Dub'	M. Exarchos	Electric bass, electric guitar, melodica, Nord clavinet, Nord Hammond organ, percussion, Rhodes electric piano, upright piano	M. Exarchos
'Studio A'	M. Exarchos	Drums, electric bass, grand piano, Nord harpsichord, Rhodes electric piano, voice	M. Exarchos

'Sub Conscious'	M. Exarchos	Voice Fretless electric bass, Rhodes electric piano, upright piano, voice	A. Caldecott M. Exarchos
'Take 3'	M. Exarchos	Drums, electric guitar, fretless electric bass, grand piano, Roli synthesiser	M. Exarchos
'Tense Minor'	M. Exarchos	Drums, electric bass, grand piano, Korg MS20 synthesiser, Nord Hammond organ, Rhodes electric piano, voice	M. Exarchos
'To Rhodes'	M. Exarchos, P. Thompson	Electric guitar, fretless electric bass, Nord Hammond organ, Rhodes electric piano Drums	M. Exarchos P. Thompson
'Toro'	M. Exarchos	Acoustic guitar, banjo, fretless electric bass, mandolin, percussion, ukulele, upright piano	M. Exarchos
'Touch'	M. Exarchos	Drums, electric bass, electric guitar, Hammond C3 organ, voice Drums	M. Exarchos P. Thompson
'Train Brain'	M. Exarchos, A. Tsoukatos	Roli synthesiser, voice, Yamaha electric piano Electric guitar	M. Exarchos A. Tsoukatos
'Until'	M. Exarchos, P. Thompson	Electric bass, electric guitar, Rhodes electric piano, synthesisers (Korg MS20, Moog) Drums	M. Exarchos P. Thompson
'Whatever'	M. Exarchos, P. Thompson	Electric bass, electric guitar, Nord Vox Continental organ, Rhodes electric piano, synthesisers (Korg MS20, Moog) Drums	M. Exarchos P. Thompson
'Wishbone'	M. Exarchos, J. Lord, M. Lord	Electric bass, electric guitars, synthesisers (Korg MS20, Roli) Voice Barkin' vocals Drums	M. Exarchos J. Lord M. Lord P. Thompson

Produced by Stereo Mike.

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