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Introduction

Hip-hop[1] production practice contains a rich matrix of creative methods within its paradigm, which have the potential to inform and inspire music production pedagogy in higher education. The techno-artistic trajectory of rap production consists of numerous phases that may involve live performance, recording, sampling, synthesis, programming, mixing and mastering. Furthermore, it is not rare for self-contained processes—such as *interpolation*[2] and the creation of content *for* sampling—to be actualized as developmental phases within the larger production trajectory. The well-documented issues affecting phonographic sampling have given rise to alternative practices, inviting live instrumental musicianship within hip-hop music-making, but also a dependence on synthesized sonics (often as signifiers of geographical and stylistic divergence). As a consequence, contemporary hip-hop production—arguably more than any other commercial music-making form—can provide a dynamic, applied context for the exploration, implementation, interplay and interaction of most phonographic stages conceived of and practiced within popular music production. This is not to say that other musics do not deploy multiple methods within their production processes, or that Hip-Hop exemplifies a sole case of multi-layered—or *bricolage*—production. After all, many popular musics have borrowed from hip-hop practices, and the rap production paradigm can be traced outside of strict stylistic barriers

[1] The terms 'Hip-Hop' and 'Rap' will be used interchangeably throughout the paper, referring to the musical genre, outputs and practices associated with hip-hop culture and art. To orientate the reader, the paper will use capitalization when referring to Hip-Hop and Rap as a musical genre (noun), and hip-hop and rap in lower case when the terms are used as adjectives describing activities related to and deriving from these.

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

(a fact that widens its appeal and potential as a driver for pedagogical design). But Hip-Hop offers a hybrid production vehicle par excellence, both acoustic and electronic, performed and programmed, modern and vintage.

This paper explores the space between these apparent polarities designating a field of creative opportunities, in order to fuel pedagogical design, explore creative problems (for academics and students alike) and locate potential synergies in complimentary fields of popular music curricula that may benefit from further integration. The theorizing and design extrapolations are inspired by my parallel careers as academic and rap practitioner. On the one hand, these reflect my contribution to numerous programme and module designs in the areas of music production, technology, composition, performance and synthesis; and on the other hand, they reflect my experiences as a self-producing hip-hop artist spanning a ten-year career, initially independently, for the most part signed to a major label, and currently deploying creative practice as professional context for doctoral research. The investigation aims at enriching curricula with aspects of scholarship acquired through these experiences, infusing music production teaching methods with knowledge gained from real-world hip-hop making practices, whilst exploring the creative and pedagogical potential in rap production curricula.

The questions, therefore, guiding the rest of this paper are as follows. What aspects of contemporary music production could be addressed which are now under-represented in higher education? What are some of the unique synergies that can be discovered converging live performance, the sample-based process, and various notions of ‘composition’ as encompassed within the hip-hop paradigm?

Sampling: facing the music

At the heart of hip-hop music production lies sampling, both as aesthetic ideal and problematic practice. Much has been written about sampling as composition (Demers 2003; Harkins 2008, 2010; Moorefield 2005; Morey and McIntyre 2014; Rodgers 2003; Swiboda 2014), the ethics and legality of sampling (Collins 2008; Goodwin 1988; McLeod 2004), and sampling as a driver of stylistic authenticity in Hip-Hop (Marshall 2006; Rose 1994; Schloss 2014; Williams 2010). In his extensive ethnographic study, *Making Beats: The Art of Sampled-Based Hip-Hop,* Schloss (2014: 72) states 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", and he later adds that "this preference is not for the act of sampling, but for the sound of sampling: It is a matter of aesthetics" (Schloss 2014: 78). Schloss here is referring to Hip-Hop's Golden Era (circa 1988-1998), which was largely exemplified by a sample-based aesthetic associated with New York (the East Coast) and a production style known as Boom-Bap[3]. Mike D'Errico defines "boombap" as a sound characteristic of Hip-Hop's "golden age" and provides a representative list of producers and creative approaches:

> As sampling technologies developed and became more affordable in the late 1980s and early 1990s, hip-hop entered what became known as it's "golden age", defined by a solid "boombap" sound that was shaped by the interactions between emerging sampling technologies and traditional turntable practice. Producers such as DJ Premier from Gang Starr, Prince Paul from De La Soul, and producer-auger DJ Shadow used turntables alongside popular samplers such as the Akai MPC and E-Mu SP-1200 to create instrumental mixtapes with gritty, lo-fi audio qualities (12-bit sample resolution, as

[3] Boom-Bap is a hip-hop production style referring onomatopoetically to the sound and rhythm of a prominent bass and snare drum typically programmed over sparse, sample-based instrumentation. Frequently, a sampled break-beat would be supported by additional kick and snare drum layers either sampled, or synthesized courtesy of a Roland TR-808 drum machine.

> opposed to 16-bit CD quality audio) and innovative performance practices that continue to define the sound of "underground," "old-school" hip-hop. (D'Errico 2015: 281)

The author here highlights a useful link between emerging sample-based production practices and the aural, performative tradition of Hip-Hop exemplified by DJing. He also points out that the sonics and utterances of this modus operandi continue resonating in current production outputs when an underground or retrospective aesthetic is being called for. At this point, it is important to make a distinction between sample-based Hip-Hop and other production styles, eras and practices in hip-hop music, in order to explain why this investigation focuses on the sample-based aesthetic as the basis for inspiring rap production pedagogies.

The sample-based aesthetic: a review

Hip-hop music production did not commence with a sampler, although—if we refer to Kvifte's (2007: 107) definition of sampling as "the process whereby a musician/ composer includes part of an earlier recording in his/her own music, as a more or less recognisable citation"—it could be said that Hip-Hop started with sampling as a process. Initially, however, the 'citation' would have taken place via turntable performance in the hands of pioneering Bronx DJs, who extended the drum breaks from Funk and Soul records to provide the instrumental foundation for MCs to rap over (Chang 2007; Toop 2000). Hip-Hop's original instrument was therefore the turntable (Katz 2012: 43-69) and the significance of the practice is that the music was built on the 'citation' of other recordings even if, phonographically, this potential remained idle until the availability of affordable sampling technology almost a decade into the art-form. Conversely, early hip-hop records featured live disco, funk and soul musicians to provide an instrumental backing, and the following—electro—phase was characterized predominantly by electronic productions courtesy of drum machines, synthesizers and sequencing technology (Howard 2004; Kulkarni 2015; Serrano 2015). The two contrasting aesthetics are respectively exemplified by the first successful rap record, *Rapper's Delight* (1979) by Sugarhill Gang, and

Arthur Baker's futuristic production for *Planet Rock* (1982) by Afrika Bambaataa. Between them lies a prime example of turntablism committed phonographically in the form of *The Adventures of Grandmaster Flash on the Wheels of Steel* (1981), while the New School era was kicked off with minimal drum-machine Electro, courtesy of Run-D.M.C.'s *Sucker M.C.'s* (1983). By 1984, pioneering producer Marley Marl had started experimenting with affordable samplers, manipulating drum breaks (Kajikawa 2015: 164-5) and kicking off a sample-based approach that would be adopted by The Bomb Squad (the production collective behind Public Enemy) and producers such as DJ Premier, Pete Rock, Q-tip (of A Tribe Called Quest), RZA (of the Wu-Tang Clan), Prince Paul, DJ Shadow, J Dilla and Madlib; producers who would become associated with the boom-bap style and would go on to define the sample-based aesthetic of Hip-Hop's Golden Era.

Sample-based rap production evolved into rich and complex multilayering, and the art-form arguably reached its zenith with albums such as *It Takes a Nation of Millions to Hold Us Back* (Public Enemy 1988), *Paul's Boutique* (Beastie Boys 1989) and *Fear of a Black Planet* (Public Enemy 1990), containing hundreds of juxtaposed phonographic samples akin to a rap *music concrète* (LeRoy 2006; Sewell 2013; Weingarten 2010). This maximal sample-based approach received a major blow in 1991 in the form of a lawsuit involving Biz Markie's *Alone Again,* which resulted in the banning of the record and resonated loudly with the hip-hop community. The ruling inadvertently affected producers' future practices and styles in response (Collins 2008; McLeod 1999; Sewell 2013), triggering a number of alternative production approaches. Such reactions included a reliance on more synthesized—rather than sample-based—instrumentation, the interpolation (reverse-engineering, mimicry) of phonographic samples, and the formation of live, performance-based hip-hop collectives. Dr. Dre's 1992 album, *The Chronic*, represents a commercially successful case-in-point for the new-found reliance on synthesizers and interpolation, assisted by the fact that his earlier success with N.W.A. afforded

him access to the original musicians and instruments of the P-funk era that he was referencing. The resulting G-funk sound represented a major stylistic divergence for the genre, becoming synonymous with the US West Coast. The Roots' 1993 album *Organix*, on the other hand, represented a distinctly live take on the genre, just as the album's title implies.

The next notable stylistic divergence came from the US South, referencing earlier dance-floor orientated local subgenres—such as Miami Bass and New Orleans Bounce—and fusing live performances with increasingly synthesized instrumentation (Grem 2006). From OutKast's 1994 album *Southernplayalisticadillacmuzik* to Lil' Jon & The East Side Boyz' *Get Crunk, Who U Wit: Da Album* (1997), the instrumentation became increasingly electronic, soon featuring little more than Roland TR-808 drum-machine programming, synthesizer layers and keyboard workstation presets (Twells 2016). Lil' Jon's production style signified the new subgenre of Crunk (Oldboyentertainment 2005), which gradually morphed into Trap by 2003 with T.I.'s album/single release *Trap Muzik*. Crunk and Trap remained largely sample-averse in their production methods and, to this day, Trap continues to be the prevalent style of hip-hop music in the mainstream.

Nevertheless, the sample-based aesthetic continued evolving in parallel to these divergences, as an East Coast production reference, a reaction to mainstream stylizations and a signifier of hip-hop authenticity (Kulkarni 2015; Marshall 2006; Serrano 2015). A number of mainstream artists tapped into the production style in order to support lyrical content that was more personal or conscious, or as a way to stand out from the over-populated Trap crowd. Artists working under the mainstream radar continued practising the form consistently, and the last few years have seen a resurgence of boom-bap outputs crossing over into the mainstream—a phenomenon described by *Pitchfork* as "a nostalgic sonic wave currently being surfed by NYC … rappers doing their best to embody the spirit of New York hip-hop without getting stuck in its past" (Ruiz 2017). A plethora of releases since 2015 have relied on boom-bap practices,

demonstrating the contemporary vibrancy and relevance of the sample-based aesthetic; artists releasing these recordings include Action Bronson (*Mr. Wonderful,* 2015), Apollo Brown & Planet Asia (*Anchovies,* 2017), De La Soul (*And the Anonymous Nobody,* 2016), Fokis (*Underground with Commercial Appeal,* 2017), Joey Bada$$ (*B4.DA.$$,* 2015), Kool Keith feat. MF Doom (*Super Hero,* 2016), MC Eiht (*Which Way Iz West,* 2017), Sam Brown (*Ode To Gang Starr,* 2017), Statik Selektah feat. The LOX & Mtume (*But You Don't Hear Me Tho,* 2017), The Alchemist & Budgie (*The Good Book,* 2017), Vic Spencer & Big Ghost Ltd (*The Ghost of Living,* 2016), Joell Ortiz (*That's Hip Hop,* 2016) and Your Old Droog (*Packs,* 2017). On the futuristic end of the retro-inspired spectrum, producers such as Prefuse 73 and Flying Lotus have been pushing the envelope of the sample-based approach pioneered by Madlib, DJ Shadow and J-Dilla, into new, predominantly experimental subgenres (D'Errico 2015; Hodgson 2011).

Sample-based Hip-Hop today: an unexamined opportunity

Practitioners have reacted to the legal landscape surrounding sampling through a number of alternative approaches, and it is important to consider current practices in this domain. From Dr. Dre's interpolation practices, via Southern (T)Rap's synthetic dependence, to The Roots' predominantly-live Hip-Hop and—most recently—to De La Soul's sampling of "more than 200 hours of the Rhythm Roots Allstars, a 10-piece funk and soul band" (Cohen 2016) for *And the Anonymous Nobody* album, rap practitioners have assumed a number of positions towards sampling: from denial and avoidance, to phonographic mimicry and reverse-engineering their own samples (explored below). Currently, hip-hop production collective J.U.S.T.I.C.E. League meticulously reverse-engineer samples to fuel a plethora of contemporary rap hits (Law 2016), while producer Frank Dukes records and mixes original music segments infused with vintage phonographic sonics to create source content that frees him from both mechanical and publishing restrictions, allowing him to push the boundaries of sample-based Hip-Hop (Whalen 2016).

It is at this crossroads between Hip-Hop's archetypal dependence on phonographic citation, and practitioners' innovative approaches to creating new source content fueling sample-based processes, where a need for study exists. The parameters that grant effective interaction between new source content and a sample-based aesthetic have not yet been investigated, and this is both an under-researched area in the evolution of hip-hop production and an opportunity for pedagogical design to address authentic contemporary practices. A further, important problem concerns the democratization of the sample-based art-form and the kind of source material that is available to future makers. Marshall sums up the issue accurately in his article 'Giving up Hip-Hop's Firstborn: A Quest for the Real after the Death of Sampling':

> [D]espite a rise in synthesizer-based production concomitant with the decline in sampling, many hip-hop producers have continued to make beats using samples. Some, such as Kanye West, Just Blaze, P. Diddy, and other producers working for large record labels, enjoy production budgets that permit them to license any sample they like, including the biggest pop hits of previous decades, hence affirming the legal status quo. Some producers and acts, especially independent and largely local artists, operate well enough under the radar to evade scrutiny or harassment and continue to sample with impunity. And some—in particular, 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? (Marshall 2006: 869)

Marshall here maps rap authenticity claims ("to be real or not") to the sample-based process and his paragraph reads like a call to action for investigating alternatives against "affirming the legal status quo". Indeed, the conundrum between stylistic authenticity (aesthetics) versus legal implications (pragmatics) raises important questions, and puts academics in an awkward place when advising students. In the following sections, a number of these questions will be addressed, such as: What processes and methodologies should be required or accepted for pedagogical design involving hip-hop production coursework as output? Should phonographic

content be acceptable as source material for sampling or not? What are the implications of either strategy? Are academics training student practitioners leading them head-on into legal battles, or are students being denied an industry paradigm? Can academia even begin to discuss hip-hop aesthetics if the raw materials of the art-form are not fully considered? And finally, how effective can students' portfolios be if they cannot become public-facing (due to copyright infringement embedded in the work)?

Sample-based aesthetics and pedagogy

It is an academic responsibility to explore alternatives and—going further—to set in motion pedagogy that will continue to explore alternatives through future actualization and critical analysis. But these alternatives should reach beyond the existing polarities of live-versus-sampled, or sampled-versus-synthesized. Is there a way to merge the sample-based aesthetic with the production of copyright-free content? Can this content be sourced from within the student output (i.e. through collaboration between production and performance cohorts)? What are the synergies between different fields of popular music curricula that can feed into this interaction? And in that case, what differentiates a phonographic sample from the inclusion of—newly conceived and recorded—live musicianship? This set of important questions requires asking and subsequently theorizing about before any pedagogical design can be set in motion, as they have implications for the exercises set and the overall alignment of the curriculum.

The pedagogical design proposition in this paper is both a reaction to the under-researched contemporary practice of reverse-engineering original sample content to serve a sample-based aesthetic, and a response to Kruse's (2016b) proposed framework of potential applications for hip-hop pedagogies. Kruse (2016b: 248) builds on Hill's (2009) previously proposed categorizations of hip-hop pedagogy by methodically grouping existing literature under the descriptive labels of "*Hip-hop as a bridge*, *Hip-hop as a lens*, and *Hip-hop as practice*". In

Kruse's literature review of "hip-hop as practice" (2016b: 251-252), the majority of approaches noted utilize beat production and sampling practices as points of access into teaching literacy, writing, research skills, critical thinking and scholarly analysis (Irizarry 2009; Mahiri 2006; Petchauer 2011; Rice 2003; Rodríguez 2009; Wilson 2013). Snell and Söderman (2014: 167-170), furthermore, celebrate on the potential of Hip-Hop in a range of academic contexts by highlighting its effective illustration of critical pedagogy and democratic theory, its relationship to a multitude of other musical genres, and its fluidity demonstrated in the construction of identities, but little detail is spared on the inter-stylistic dynamics (and dangers) of how new cultural (music) production can be actualized. Kruse proposes that:

> A seemingly obvious suggestion (though still worth stating) is that students in a music classroom could actually compose and/or perform hip-hop music. This might include composing and/or performing vocally or instrumentally over prerecorded backing (accompaniment) tracks, composing original backing tracks, or both. As the technologies involved in hip-hop beat production and live audio recording continue to become more affordable and easier to use, the possibility of music classrooms functioning as legitimate hip-hop recording studios becomes more realistic. With no more than a single computer, the processes of composing an original backing track, sampling new or previously recorded material, and adding multiple layers of live instruments and/or vocal parts are entirely feasible in a classroom setting. (Kruse 2016b: 256)

The author's suggestion above is indeed welcome and Kruse goes some way to envision the specifics and mechanics of hip-hop production in a pedagogical setting. Kruse (2016a, p.15) expands on the technical detail by suggesting "using genre-appropriate hardware and/or software (e.g., FL Studio, Akai MPC, Native Instruments Maschine)" in classrooms specifically designed for teaching hip-hop music-making.

Overall, it would not be an exaggeration to suggest that the lion's share of education scholarship related to Hip-Hop deals with rap production practice either as a point of access for

impacting further learning experiences or simply as an area with welcome potential for future pedagogies. Kruse comes the closest to considering the applied context for hip-hop production as practice in a pedagogical environment, and this article responds by synthesizing the need for exploring this pedagogical gap, with that of examining the alternative contemporary practice of providing interim content for the sample-based method. By studying the specifics of the practice and investigating the techno-artistic phases that complete this alternative production approach, it will be possible to extrapolate a model of the phenomenon, which can then be mapped to opportunities available in an educational setting. For the purposes of this mapping the article will consider universities in UK Higher Education (HE) as a context.

Reverse-engineering: the practice

To analyze the practice of reverse-engineering samples, this paper considers the approaches of three contemporary acts—De La Soul, J.U.S.T.I.C.E. League and Frank Dukes. In the work of De La Soul and Frank Dukes the objective is not to interpolate (that is, not to mimic the musical motifs and sonics of previously released music), but to create original segments of music that could function effectively as source content in a sample-based context. The first point for consideration, then, is what the parameters of an effective interaction between source content and—not only sampling practices but also—the sample-based aesthetic are. Testimonies by De La Soul, J.U.S.T.I.C.E. League and Frank Dukes point our attention to two areas: the musical (motivic, rhythmic) and the sonic (textural, production) variables. On the one hand, De La Soul (2017) inform us that their "first album in 11 years was born of 300 hours of live material, converging bossa nova, soul and hip-hop to funk, disco and reggae". This short promotional statement from their *And the Anonymous Nobody* (2016) album campaign is important as it demonstrates that the artists have attempted to create a sizeable pool of musical content to serve as an interim phase, facilitating the album production proper. For the deluxe edition of the album,

they have additionally included "both the studio and instrumental tracks" (De La Soul 2017), and although the bonus content represents a very small 'sample' of the 300-hour pre-production process, it is worth noting that it evidences the construction of full musical ideas, not just short segments aimed at sampling. This differentiates the artists' approach from that of sample library companies in a number of fundamental aspects. The focus appears to be not on providing neat, user-friendly sample content for the end user (themselves) to consume, but rich, dynamic and varied musical material, requiring critical listening, selection and manipulation to fit into new appropriate contexts; a process akin to "digging in the crates" as mentioned by Schloss (2014: 82-91) in relation to Golden Era practices. The sheer volume of content created for this purpose implies that De La Soul want to allow for a certain distance from the source content, and perhaps be surprised or inspired by its variety and potential for interaction with sampling processes (once brought into a hip-hop context). Furthermore, the multitude of musical styles and rich instrumentation created for their interim phase are congruent with the sonic (tracking/mixing/engineering) signatures evident on the record and the bonus/instrumental material, revealing a carefully matched textural approach to the musical stylizations.

J.U.S.T.I.C.E. League—who are responsible for a plethora of contemporary rap hits for artists such as Rick Ross, Gucci Mane, Drake and Lil Wayne—provide further insight into the sonic aspects of the reverse-engineering approach; their process lies somewhere between interpolation and a convincing re-interpretation of referenced samples (Law 2016). In an interview with hotnewhiphop.com they shed light on their process:

> [It's] about deconstructing the sample, and deconstructing really what went into recording those original instruments (…) 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? (J.U.S.T.I.C.E. League, cited in Law 2016)

J.U.S.T.I.C.E. League's process reveals the importance of the sonic variables that lend a sample its particular 'aura'. A phonographic sample contains textural 'marks' of the layered processes and record-production phases that eventually gave birth to the sampled record, differentiating it from a new recording. Their meticulous re-engineering attempts to infuse convincing (vintage) sonics on their referential, yet newly recorded, source content.

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, but frees up the art-form from both mimicry and legal complications (or high clearance costs). Interviewed in Fader magazine, Adam Feeney a.k.a. Frank Dukes (cited in Whalen 2016) 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". Describing his production for Kanye West's "Real Friends" Whalen explains:

> Feeney and fellow Toronto producer Boi-1da contributed the song's "sample," 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 (…) By reverse-engineering the art of flipping samples, Feeney is looking at the past, present, and future simultaneously. (Whalen, 2016)

The process of creating and reverse-engineering new source content to enable a sample-based approach is therefore a complex but worthwhile practice, requiring research, multiple phases of actualization and an abundance of music production skills (acquired by an individual producer, or brought together by a collaborative team). The different phases of the practice are presented schematically in Figure 1 below:

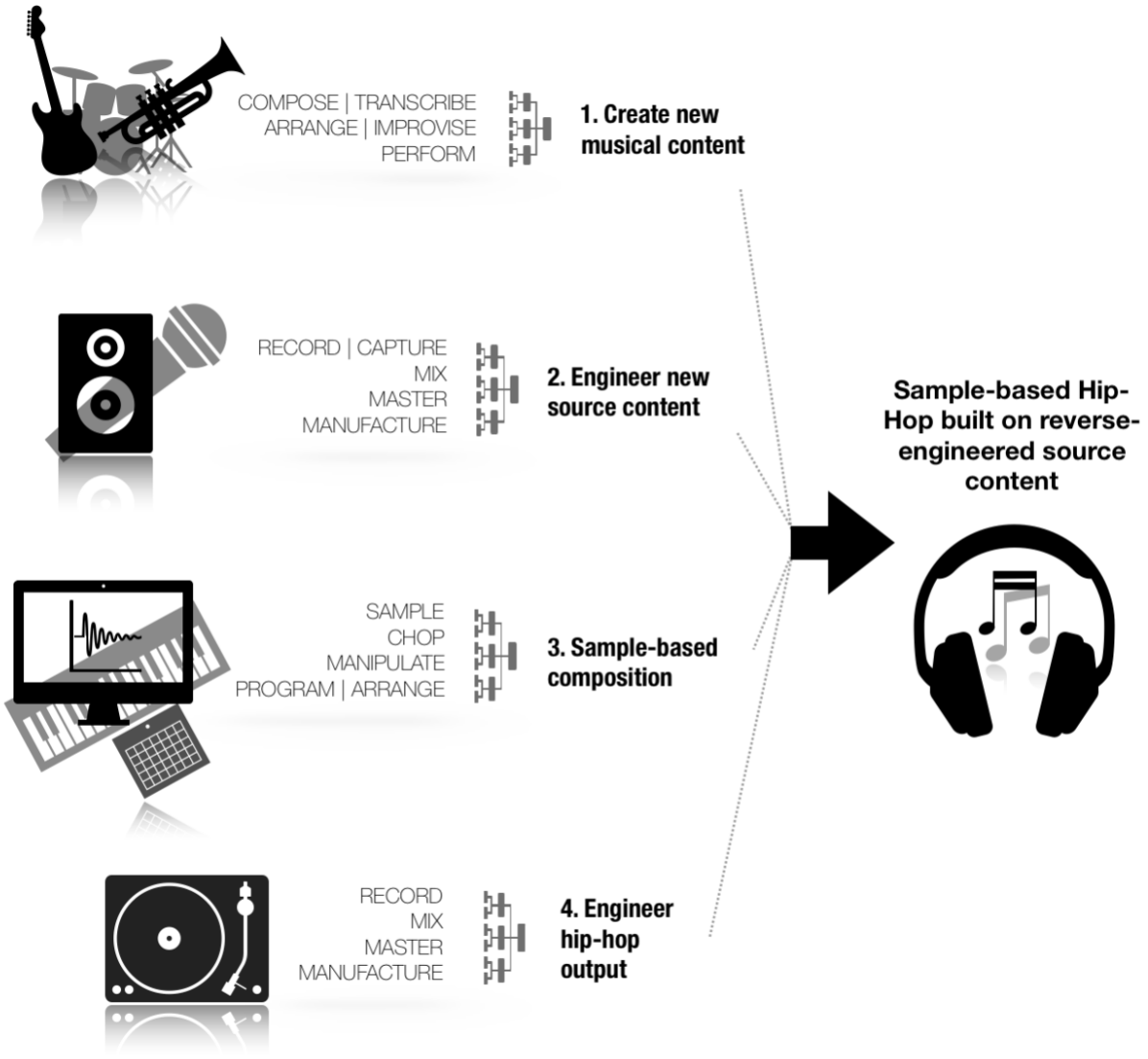

Figure 1: The different phases of a sample-based hip-hop process built on reverse-engineered sample content are presented schematically. Note that each of the four developmental phases requires a number of sub-processes in order to function. Manufacturing—which appears in phases 2 and 4—implies consideration of mechanical and media sonic artefacts at the end of respective engineering cycles.

The model in Figure 1 highlights the processes necessary for the practice to function. Sample-based Hip-Hop was traditionally built on the convergence of sampling affordances interacting with previously made phonographic content (records). Crucially, the aesthetic is defined by the digital, mechanistic re-organization and manipulation of previously recorded live performances functioning as source content. When the vintage sonic signifiers infused on records made in previous decades are not present in the process, the onus is on new practitioners to re-

invent a convincing phonographic aura for their source content. It seems that a crucial ingredient for the sample-based hip-hop aesthetic to function is this interaction between sampling processes and phonographic context. The practitioners in question achieve this by working tirelessly to ensure that suitable (vintage) sonics are embedded onto their new source content, and the musicality of the ideas is either referential to past styles or—stylistically, texturally, dynamically—varied enough to allow for new opportunities in sample selection, manipulation and re-contextualization.

Producers such as Frank Dukes and J.U.S.T.I.C.E. League have gradually acquired all the essential skills to be able to carry out the phases necessary for this large developmental production trajectory to be brought to completion. De La Soul, on the other hand, are employing a large collaborative network for the making of their latest magnum opus. For the practice to function, there are essentially three distinct areas of expertise that need to interact effectively: (a) live musicianship (creation, performance); (b) sound engineering; and (c) sample-based composition. By flipping the model into a pedagogical paradigm, a rich spectrum of educational opportunities comes to fruition, in line with Kruse's call for a pedagogy of Hip-Hop as practice. But as he warns, it is important to investigate whether the possibility is realistic, by ensuring the technical resources and academic affordances are all in place. I turn my attention next to the UK HE landscape, and specifically universities, in order to explore the feasibility of such a proposition.

Synergies: between live performance and the phonographic sample

A number of UK universities provide some flavour of a popular music programme with elements of both production and performance[4]. Composition or song-writing are either implemented in both of these areas, or treated as separate entities. Whichever the case, an obvious creative opportunity seems to be staring academia in the face with regard to the above hip-hop paradigm: a music/rap production curriculum informed by sample-based Hip-Hop can potentially interact with the creation, performance and recording of new music, which may—in turn—function as source material for further sampling. The integrated production of original content for the purposes of sampling in such a synchronous, or near-synchronous, context creates scope for further synergies. Given an interdisciplinary or collaborative coursework activity—where production and performance students work together towards a hip-hop output—the sample-based process presents the potential to shape the production of the source material with 'meta' considerations in mind, avoiding some of the limitations imposed by working with material from the past. The students may opt for tracking new content to a metronome, expanding the sampling pool with extended instrumental sections, and implementing exaggerated structural and dynamic variations for future exploitation (similar to the 300 hours of source content De La Soul have employed). Important considerations can be pursued as part of the pedagogical design and opened up for experimentation by the student body, such as the degree of 'self-consciousness' practiced when creating new source material.

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

[4] At the time of writing, there are seven UK Universities offering first degrees with Popular Music *and* Production in their title, six offering first degrees with Music Production *and* Performance in their title, and three offering first degrees with Music Technology *and* Performance in their title (source: Unistats 2017). However—in relation to first degrees—, there are references to *Music Production* by 150 Universities, to *Music Technology* by 146, to *Music Performance* by 140, to *Commercial Music* by 122, to *Music Composition* by 113, and to *Popular Music* by 113, which indicates that while a smaller number of these institutions offer the discussed topics in combination, the subjects do take place on the same locations/campuses, likely also sharing the same studio/rehearsal facilities.

phonographic process (from a different era). 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 over-exposed through repetition and re-programming, chopping and truncating within the new context. This raises important questions about the amount of distance that should be practiced when creating source content for incorporation into a sample-based hip-hop approach. And this should be left open for the practical exploration to investigate, and for the critical reflection to evaluate, enabling pedagogical design that is open-ended and incubates further knowledge, both for academics and the student body.

From synergy to design

If it is in the space where sampling practices interact with phonographic sonic signatures that a sample-based hip-hop aesthetic is born, then—from an educational standpoint—it becomes essential to consider the exploration of such an aesthetic as central to the pedagogical design. A constructive alignment (Biggs and Tang 2007) of coursework can then take into account such aims for the pedagogical design as learning outcomes. These may include, for instance, the infusion of phonographic characteristics upon newly created work; the production of samples as phonographic segments; the exploration of vintage production techniques pertinent to a chosen era; investigating phonographic context; or the 'production' of live performances with stylized sonics and referential musicianship as objectives (see Learning Outcomes 1-5 in Table 1, below).

Upon completion of the module successful students will be able to:
1. *utilize a range of recording and mixing technologies effectively to produce authentic phonographic content that can inspire and function in a sampling context;*
2. *apply relevant vintage techniques to the production of live performances, infusing them with phonographic signatures that are referential to specific eras and styles;*
3. *create and produce original hip-hop content through creative programming, audio manipulation, synthesis and sampling techniques, evaluating the output in relation to market trends and stylistic references;*
4. *combine hybrid (post)production processes in pursuit of sub-genre specialization and unique producer identities;*
5. *critically evaluate the entire hip-hop production process from conception to commercial exploitation in relation to a range of contemporary styles;*
6. *research and critically review the historical, technical, stylistic and cultural contexts surrounding hip-hop production, applying progressive research skills including reflexivity, sourcing, assimilating, critiquing and referencing.*

Table 1: Learning outcomes.

The focus of these objectives is understandably practice-based given the phenomena inspiring the design, but also in response to Kruse's Hip-Hop-as-practice proposition. Yet the place of theory has to be carefully considered in such a predominantly practice-based design. The theoretical issue is two-fold, as it affects both the hypothesis and questions that drive the design, but also the place of theory within the design itself. There is undoubtedly a theoretical foundation at work here that enables a framework, facilitating the alignment of learning outcomes, coursework and activities that may shape the design. Yet, in line with a democratic and critical

vision, it would be a mistake to let the designer's theoretical (or practical) findings rigidly predetermine the shape of students' creative outputs. The role of the instructor in this context is envisioned as that of a mentor-practitioner who oversees balanced, informal learning—this may be the designer herself or a practitioner contributing to the teaching/delivery—in line with Söderman's (2011) recommendations for learning through Hip-Hop (master-apprentice and peer-to-peer/disciple learning models, learning through workshops/activities and acknowledging pedagogical lessons already embedded in hip-hop practices). Although it is important to guide the design with research and industry experience, it is also essential to allow students the opportunity to reach their own findings, which will in turn contribute to the communal knowledge and future development of the pedagogical design. This is where the second consideration of a theoretical underpinning becomes relevant: that of the place of theory *within* the design. This can take the form of historical, technical or musicological research set as coursework for the students, but also as theorizing borne out of reflexive analysis upon the practical experimentation carried out by students (these aspects are reflected in Learning Outcomes 5-6 in Table 1, above).

In either case, the time-mapping of the curriculum has to portray an effective interplay between theory and practice, respectful of the potential for emerging knowledge and the contribution of students towards it. The alignment of coursework tasks in the design thus becomes essential not only in balancing practice-based work with theory, but also in providing creative freedom that is nevertheless structured with guided activities. Specifically for music supervision, Madsen (2003: 79) underlines the benefit of breaking down larger phases into manageable components, asserting that, "if actual learning is to culminate in a substantive product the entire process needs to be completed by successive approximations from beginning to end". Furthermore, Hamilton, Carson and Ellison (2013: 9) point out the "importance of a student-tailored approach that combines a sense of routine and regularity but also allows students

who prefer to work independently to be able to do so". Lebler and Weston advocate for an assessment of creative work where:

> Students are required to submit recordings of their original work as a substantial component of their major study (…) along with a clear statement as to their intentions for the recording, details about the contributions of others who were possibly involved, and their observations on the outcome. (Lebler and Weston 2015: 126-127)

Table 2, below, proposes how this interplay between practice-based work on the one hand, and research and analysis on the other, could be effectively aligned. Further aims portrayed in the coursework alignment are to provide structure in the form of milestones (whilst allowing a high degree of independence in the creative practice), and to enable and inspire collaboration (whilst safe-guarding individual contribution and ensuring progression). The suggested timeline highlights blended activities mapped against the practice-based alignment, in support of the parallel theoretical/critical underpinning discussed above.

Assessment Methods	**COURSEWORK 1** (week 5)	**COURSEWORK 2** (week 11)	**COURSEWORK 3** (week 12)
Method {summative}	Live performance recording and production **(Sample Content)**	Hip-hop production in chosen sub-genre **(Rap Master)**	Reflexive analysis **(Online Blog)**
Requirement	> meets specific era production signature	> includes sampling techniques utilizing CW1 content	> reflects on process and outputs of CW1 and CW2
	> considers 'meta' production	> involves additional production techniques relevant to sub-genre (e.g. synthesis, additional programming and/or overdub or vocal recording)	> regularity (weekly*)
Weight	30%	50%	20%
Learning Outcomes assessed	1, 2	3, 4	5, 6
***Reflexive alignment (milestones for online blog)** **{formative}**	*Historical research into vintage engineering techniques* **[week 4]**	*Historical and technical research into sampling (software and/or hardware tools)* **[week 7]** *Case-study analysis (e.g. artist, artwork, label, style) in chosen sub-genre* **[week 9]**	*Blog representing weekly reflection and analysis on processes leading to—and outputs from—CW1 and CW2* **[week 12]**

Table 2: Assessment methods.

Outroduction

Hill and Petchauer point out limitations in existing Hip-Hop pedagogy scholarship and suggest that:

> HHBE [Hip-Hop Based Education] scholars must (…) understand the ways in which hip-hop culture functions at more complex aesthetic and epistemological levels. For example, HHBE scholars must consider the ways practices like sampling, battling, and freestyling reflect unique sensibilities and worldviews (…) Such insights are critical for reimagining educational spaces in ways that take seriously the cultural orientation and lived realities of students. (Hill and Petchauer 2013: 3)

This investigation is inspired by the contemporary hip-hop practice of reverse-engineering source content in service of an evolving sample-based aesthetic. The paper examines the practice and explores the pedagogical potential of its application in an educational setting. This examination locates the creative challenges faced by practitioners in attempting to replace phonographic samples (traditionally functioning as source content for hip-hop composition) with newly constructed material. The process reveals a matrix of complex developmental phases and unique interactions between composition, live performance, sample-based creation and engineering. The importance of the practice is that it enables an evolutionary mechanism for the survival and morphing of a historical aesthetic (sample-based/Boom-Bap), which also represents an innovative and creative re-negotiation of the legal landscape surrounding sampling. The revival of the style—and the perseverance of practitioners to pioneer alternative, if time-consuming, solutions for its function—indicate a reaction to the mainstream reign of synthesized Hip-Hop, which may predict further inter-stylistic experiments and hybrid future production, merging live performance with electronic music-making. Admittedly, this way of working represents, for the time being, a small percentage of hip-hop outputs, but the stature of the practitioners attempting it and the impact of their results indicates promising potential.

From a pedagogical perspective, this may be an overly specialized response to the call by Kruse, Hill and Petchauer toward hip-hop pedagogies as practice—especially as there is a gap in educational scholarship dealing with more introductory aspects of rap production and sampling—but the potential lies in mapping the multi-faceted aspects of the practice to institutional contexts that already tackle the component parts (in curricula and technical resources). The mapping of practitioners' aesthetic pursuits to learning objectives, and the mirroring of the developmental phases of the practice to coursework alignment are only initial steps toward potential pedagogies of Hip-Hop as production practice and, of course, the notion could be applied to other rap subgenres, styles and production methods. Prescribing learning outcomes at this early stage also

stands as a challenge for the otherwise critical and democratic vision of the exercise. Considering learning outcomes in order to shape the design is therefore acknowledged simply as a starting point—stemming from the analytical and aesthetic pursuits of the practice—but one which should be subsequently shaped by student feedback, practitioner/mentor participation, and "staying in sync" (Lebler and Weston 2015) with the evolution of hip-hop practice. A practice that adopts a multitude of contemporary approaches to ensure its future cultural production and one that can offer meaningful pedagogical paradigms for academia; amongst them, the process of reverse-engineering the sample-based aesthetic.

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