

# Institutionalizing Beatmaking

## Challenges and Opportunities for Music Education

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**Abstract** *Emerging in noninstitutional contexts during the 1980s, beatmaking has since found its way into music education. However, a thorough and comprehensive understanding of beatmaking is still lacking in the field, which makes it difficult to institutionalize the practice in a way that would consider its unique aspects and cultural context. Based on the results of a qualitative-empirical study, this article aims to contribute to such an understanding by elucidating how beatmakers' artistic agency manifests itself; what forms of knowledge it relies upon; and how beatmakers acquire these forms of knowledge. Additionally, using music teacher education as an example, I illustrate how carefully and sensitively institutionalizing beatmaking into music education presents both a challenge to the status quo and an opportunity for reforming the field to better engage with musical diversity in the future.*

### Introduction

Beatmaking first appeared as a distinct practice in the early 1980s within Hip-Hop culture in the United States (Kattenbeck 2022b). Initially confined to noninstitutional contexts, as with the other musical practices in Hip-Hop (i.e., MCing and DJing), it later also found its way into music education. In Germany, this happened first in areas outside of schools, such as in youth social work (see, e.g., Grosse 2008). A few years later, the practice was also introduced into school music contexts (Viertel 2020: 228–229) and recently in music teacher education, so that it is finally—at least at some universities—possible for beatmakers to become music teachers (Kattenbeck 2023; for a comparable finding in the UK, see Burnard et al. 2023: 242).

From the point of view of diversity-sensitive music education, the integration of a musical practice that has not been considered so far is always to be welcomed. In the case of beatmaking, its popularity among children and young people means it is also an especially valuable contribution to student-centered or culturally responsive approaches (see Ladson-Billings 1995). However, institutionalizing a previously unconsidered musical practice always means being confronted with challenges that need to be addressed lest this effort fail, for example, by forcing it into preestablished values, forms, and structures, and thus gentrifying it—as has almost always been the case with the incorporation of popular music practices into music education (Dyndahl et al. 2021). To avoid this, institutionalization should always consider the unique aspects and cultural context of the practice, while also taking seriously any forms of resistance that may emerge (see also Green 2006; Hornberger 2017). However, this requires a thorough and comprehensive understanding of the practice—and this is precisely what is lacking in music education when it comes to beatmaking.

While some scholars advocate for beatmaking's integration into music education, in part offering suggestions on what this integration might look like (e.g., Kruse 2016; Exarchos 2018), there is little academic work that attempts a fundamental exploration and description of the practice. Existing studies (e.g., Thompson 2012; Snell/Söderman 2014: 177–196; Kruse 2018) offer only superficial analysis, focusing on isolated aspects and rarely referencing interdisciplinary scholarship on beatmaking (such as Schloss 2014 or D'Errico 2015). Music education consequently lacks a thorough and, above all, comprehensive understanding of beatmaking that would consider the specific qualities of this form of musicmaking together with the instruments its practitioners use and the aesthetic and ethical rules it entails, as well as the forms of knowledge it requires and the way they are learned.

This article aims to address this gap. It presents findings from a qualitative-empirical study that explores the manifestation, constitution, and development of beatmakers' artistic agency (Kattenbeck 2022a). Following Tasos Zembylas (2014), I understand artistic agency to mean the ability to act skillfully within the framework of a specific artistic practice, that is to say, in accordance with its rules. Specifically, my research was guided by the following questions:

- When, how, and where does the artistic agency of beatmaking manifest itself? What are its characteristics and what criteria are used to evaluate it? (manifestation)

- What forms of knowledge and what resources underlie or constitute beatmakers' artistic practice? (constitution)
- How are these forms of knowledge and these resources learned or acquired, and what factors play a role in this process? (development)

In examining artistic agency, I employed a qualitative-empirical research approach combining constructivist grounded theory methodology (Charmaz 2014) with situational analysis (Clarke et al. 2018). My empirical core material consisted of qualitative interviews with a total of eleven beatmakers.

In the following, I first explain essential features of beatmaking by conceptualizing it as an asynchronous form of phonographic work. This provides a basis for a more detailed examination of the manifestation, constitution, and development of beatmakers' artistic agency.

In a second step, I show that efforts to carefully and sensitively institutionalize beatmaking as described above are obstructed not just by the dearth of a thorough and comprehensive understanding of the practice: beyond this, certain concepts, ideas, values, contents, and structures dominating music education—which can be traced back to the ongoing hegemony of Western art music (see, e.g., Buchborn et al. 2021)—prevent beatmaking from being understood and incorporated into music education in an appropriate manner (Kattenbeck 2023). I demonstrate this by examining music teacher education as a field in which these concepts, ideas, values, contents, and structures become particularly visible. Efforts to institutionalize beatmaking in this context that seek to preserve the integrity of the practice are therefore an enormous challenge and probably cannot be realized without fundamental reform. Yet as I will then show, such a reform also offers music teacher education an opportunity to reposition itself to more generally engage with musical diversity—which will indirectly have a positive effect on other music educational contexts, such as music lessons in schools.

I conclude by showing that such a reform is no easy task but requires, among other things, a self-reflexive attitude and an intensive dialogue with actors outside the university.

## **Beatmaking as an Asynchronous Form of Phonographic Work**

Beats are built with already existing sound material, which means that beatmaking can be understood as phonographic work in the sense defined by

Rolf Großmann (2016). Großmann describes phonography as a form of sound writing where sound events, rather than tones, are notated or materialized. Whereas phonography was initially used to store and reproduce music, over time various practices developed that comprehended phonographic material not only as the end of a production process, but (also) as its starting point. With reference to the “motivic-thematic work of the Haydnian tradition,”<sup>1</sup> Großmann calls this creative handling of phonographic material “phonographic work” (Großmann 2015: 208). Such work requires instruments that allow sounds to be recorded, stored, played back, and edited. In beatmaking, these instruments were at first mainly sampling drum machines, and from the mid-1990s increasingly digital audio workstations (DAWs) (Schloss 2014: 204–205).

Alongside beatmaking, DJing, which is the precursor to beatmaking and lends its key aesthetic principles and strategies, is also a form of phonographic work. What both practices have in common is that they are mostly carried out by individual artists. A fundamental difference, however, is that DJing is a performative musical practice primarily concerned with creating beats in live settings, that is to say, in situations characterized by the “irreversibility of the decision-making act” (Lessing 2019: 19). In such cases, the production and performance of a beat coincide; they are synchronous. Beatmaking, by contrast, is not a performative musical practice, but a form of composition. The primary goal is not to immediately perform beats, but to record them in phonographic artifacts that subsequently allow the beats to be (repeatedly) performed. Beatmakers thus don't create beats in live settings, which is why the production and performance of a beat do not coincide but are asynchronous.

The beats that are produced can be termed autographic works, meaning they have the ability to perform themselves. To elucidate this claim, I draw on the differentiation that Mark Butler makes between work, text, and performance. Butler understands a work as an abstract musical entity known by various terms (Butler 2014: 16): piece, song, track, or beat. Joseph Haydn's “Fantasia” is just as much a work as is the beat of a DJ or the beat “U-Love” by beatmaker J Dilla.

One key characteristic of a DJ's beat is that it usually exists only in the moment of its performance. The same applies in an ontological sense to Haydn's “Fantasia” or Dilla's “U-Love.” These latter works, however, are additionally fixed

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1 This and all other quotes in German were translated into English by Michael Thomas Taylor.

in texts in the sense defined by Butler. By this he means physically or digitally encoded objects that represent or convey a work (ibid.: 6). This can be a musical score, as in “Fantasia,” or a phonographic artifact, such as a digital file, as in “U-Love.” Importantly, the texts are not themselves the work, but only represent or convey it, thereby allowing it to be performed (ibid.).

Texts can be further differentiated in terms of their ontological thickness or thinness, that is, the degree of detail with which they contain instructions for how to perform the work (ibid.: 36–37). The score of “Fantasia,” which cannot include all the parameters of its performance, is thus ontologically thinner than a recording of “U-Love,” which is “a notation not only of sound, but of everything that sounds” (Großmann 2013: 67). This distinction allows a differentiation between allographic and autographic works (Butler 2014: 34–35). Allographic works such as Haydn’s “Fantasia” are represented by ontologically thin texts that both allow and require others to perform and interpret them. Autographic works like “U-Love,” by contrast, are represented by ontologically thick texts and can therefore perform themselves.

In summary, beatmaking can be characterized as an asynchronous form of phonographic work aimed at creating autographic works.

## Manifestation and Constitution of Artistic Agency

The manifestation and constitution of artistic agency can be demonstrated in particular by examining an individual beatmaking process. In the following, I will thus describe the beginning of such a process using a semifictional vignette. By “semifictional,” I mean that the vignette is fictional, albeit anchored in the empirical material of my study. The beatmaking process, in other words, did not commence exactly as described but is comprised of elements from various beatmaking processes revealed in the empirical material. Even the protagonist of the vignette, the beatmaker Fine, is not a real person, but a composite character made up of several interviewees. The empirical material of my study thus provides me with the cornerstones for the vignette, meaning that the vignette does not represent an arbitrary narrative construction but is, despite my accentuation and embellishment of certain aspects, anchored in the evidence I collected (see also Willis 2019).

Starting with the vignette, which is in a certain sense a description of the manifestation of artistic agency, I then work out the forms of knowledge of which it is constituted. Following Zembylas, these forms can be broadly cat-

egorized into two types: on the one hand, an individually exercised, practical knowledge that is implicit in action and often eludes conscious reflection and precise articulation; and on the other, a formal propositional knowledge that can exist outside of action and be held to be true or false. Both types of knowledge are not strictly separable but rather interdependent and intertwined in concrete action (Zembylas/Niederauer 2018: 80–82).

Since it would be beyond the scope of this article, I cannot elaborate on the importance of objects such as the DAW or attitudes such as openness for the beatmakers' artistic agency (see Kattenbeck 2022a: 102–154, 182–184).

*Fine prefers making boom bap beats. For her next beat, she envisions a laid-back, jazzy saxophone melody, possibly paired with clattering drums à la Damu the Fudgemunk. Searching for samples, she walks over to her record shelf, runs her fingers over Alice Coltrane's Eternity, and then pulls out The Return of Art Pepper by Art Pepper—a recent acquisition she has yet to explore. She knows Pepper's playing style from Conte Candoli's Mucha Calor, though, and so she's confident that she'll find suitable samples on The Return of Art Pepper.*

*She puts the album on the record player and lets the needle sink into the first groove. Instantly, she likes the first song, but it doesn't offer much in the way of sample material. For that, it's too densely orchestrated. So rather than finish the song, she jumps right to the next, doing the same with the rest of the tracks: she listens briefly, gets a sense of the song, and moves on. Finally, a passage in "Patricia" piques her interest. The drums stop here briefly and the saxophone, accompanied only by the double bass, continues alone. She really likes the second and third bars of the melody improvised by Art Pepper, and she can hear in her imagination how a perfect loop results from the repetition of these two bars.*

*The double bass, however, is a bit in the way. Even though it can only be heard softly in the background, she would prefer a different base line. This makes her hesitate briefly, but then she concludes that she can probably filter out the double bass without any trouble. So she decides to sample the two bars, sets the designated track in her DAW, and records the excerpt from "Patricia."*

*Then she listens to the sample. She notices that her sample is too long and needs to be cut at the start and the end. No sooner said than done. Then she turns to the double bass. Since she knows which frequencies she has to attenuate to make room for a new bass, this turns out to be a quick task, as well. Happy with her work, she leans back and relistsens to the loop in peace. She was right: the two bars actually sound extremely good as a loop.*

*Still, the loop seems too smooth; it lacks the corners and edges that she likes so much. So she decides to chop it up and reassemble it. To do this, she zooms far into the waveform*

*to set the markers for chopping the sample. Since she knows from experience which parts of the waveform roughly correspond to which parts of the saxophone melody, she can chop it up without having to listen to the loop again.*

*Ultimately, she divides the two bars into eight distinct segments, which she assigns to various keys on her MIDI keyboard. She then experiments with diverse combinations—making sure it holds a groove even without drums—and eventually settles on a version she likes much better than the simple repetition of the saxophone melody.*

The starting point of a beatmaking process is typically marked by the moment beatmakers begin to acquire their first building block. I take the term building block from the interview material and use it to refer to the sonic elements of a beat that are digitally available as phonographic material and visualized in the DAW as MIDI blocks or waveforms. Building blocks can be acquired in various ways. A rough distinction can be made between an acquisition in which the sound material is yet to be produced and one in which it is already available, as in Fine's case.

The already existing material can be found, for example, in the DAW library, on Spotify, or on Fine's record shelf. Given the vast array of available material, it's advantageous for a beatmaker to have an idea of their desired creation to narrow their search. This requires a specific kind of imagination based on a distinct kind of auditory knowledge, namely, an ability to not only process sonic events in a highly nuanced way, but also to create sonic ideas or images through a kind of inner hearing. Moreover, because ideas build on what already exists, this imagination requires a large and differentiated inner sound library, understood as the totality of sounds that a person has heard and mentally stored (see, for a discussion of a similar concept, Folkestad 2017: 36–37, and of the mental storage of sounds, Hargreaves et al. 2012: 158).

Fine's idea (a relaxed, jazzy saxophone melody) is quite vague, but it's enough to make her pull an Art Pepper album off the shelf instead of one by Alice Coltrane. Although she has not heard the album yet, she knows Art Pepper and his style because of her music-cultural knowledge of at least parts of the "gigantic cosmos," as one interview partner calls the totality of interrelated songs, genres, cultures, musicians, musical instruments, music-related discourses, etc. She therefore suspects she will find what she is looking for on *The Return of Art Pepper*.

And as she listens through each piece, more of her skills become apparent. For example, she only needs to listen briefly to a part of a song to be able to imagine how this part sounds when it is looped—a skill that I call reconstruc-

tive listening (following Fischer 2013: 124), and which I also identify as auditory knowledge.

That Fine finally decides to sample an excerpt from “Patricia” can be attributed to her being well-versed in the art of judgment, a skill that is of paramount importance—on the one hand, since beatmakers always build their own beats, even as beginners; and on the other hand, in view of the abundance of sound material and technical possibilities. Since numerous factors potentially play a role in forming such a judgment—which cannot be fully captured by the judging subject either at the moment the judgment is made or afterwards (Zembylas 2019)—the claims I can make about the judgment of the beatmakers in my study are limited. It should be noted, however, that judgments are rarely made by chance, but are based on various forms of knowledge that intertwine in complex ways (*ibid.*).

In beatmaking, technical knowledge is one of these forms of knowledge, understood as a knowledge about musical instruments—their design, conception, features, operational modes, and affordances—and technical processes in general (sampling, for example). Technical knowledge is largely formal, propositional, and more likely capable of being articulated and reflected upon. In Fine’s judgment, this knowledge plays a role inasmuch as she samples the excerpt despite the double bass because she is familiar with procedures that can be used to filter it out.

Technical knowledge does not include the ability to actually make use of the technical processes or objects. For this, technical-practical knowledge is required, particularly encompassing necessary physical-motor abilities. For the most part, this knowledge cannot be articulated and reflected upon. Instead, it is primarily recognizable in the proficient performance of an action—for example, in the fact that Fine can easily sample, cut up and then chop the excerpt she wants, record a new loop with the individual segments, and then also filter out the frequencies of the double bass.

In this context, another form of knowledge becomes evident, namely, music-theoretical knowledge. By this I mean knowing and understanding terms and concepts for musical or sonic phenomena. This includes knowledge about harmonic relationships, meters, and names for rhythm patterns, as well as acoustic laws, the terminology to name sound characteristics, and the ability to read and understand visual representations of sonic phenomena (such as Western musical notation or waveforms). This knowledge is evident, for example, in the fact that Fine knows which points in the waveform correspond to which sound events and can thus quickly identify the appropriate

edit points; or in the fact that she knows which frequencies must be reduced in order to filter out the double bass.

Speaking here of music-theoretical knowledge is not unproblematic, since the beatmakers I interviewed understand music theory mainly as knowledge of harmony and the ability to read and understand Western musical notation. This perspective equates music theory with the theory of mainly Western art music, and partly of jazz. As a consequence, many beatmakers I interviewed claim to have no music-theoretical knowledge. However, there is ample evidence in the empirical material that they, like Fine, can read and understand MIDI notes and waveforms, i.e., specific notations of sound, and that they have terms and concepts for thinking about and engaging with sonic phenomena—especially with regard to timbre and groove, two musical parameters central to beatmaking that have nevertheless so far been treated rather marginally in “classical” music theory (see, for instance, Adams 2015 and Lavengood 2021). Hence we can conclude that beatmakers, too, have music-theoretical knowledge. Yet this knowledge differs from that widely propagated in music education.

Finally, beatmakers possess knowledge about rules. Like any practice, beatmaking is structured by shared rules that must be adhered to in order for its practitioners to successfully act within their community of practice. These rules do not necessarily have to be reflexively accessible to the beatmakers; what is more important is that beatmakers are able to follow them. Among the most important rules within a musical practice are aesthetic conventions and criteria. For example, it’s important that beats groove, which is why beatmakers strive to ensure this quality—a focus I call the groove principle, which is also evident in Fine’s attempts to create a new loop from the chopped sample. The rules also include various ethical principles such as the obligation not to copy other beats, but always to create something of one’s own (see also Kruse 2018: 326).

With the acquisition of the first building block, the process of making a beat is far from complete. I have nevertheless been able to reveal—even at this first step of the process—central forms of knowledge that fundamentally constitute the artistic agency of beatmakers. These include, on the one hand, more practical forms of knowledge (knowledge of rules, technical-practical knowledge, auditory knowledge); and on the other, more formal propositional forms of knowledge (technical knowledge, music-theoretical knowledge, and music-cultural knowledge). Another asset to artistic agency is an extensive and diverse inner sound library.

After the first building block, many more are usually acquired. And after they are acquired, building blocks are often edited before they are arranged. A beat is then usually mixed and, if necessary, mastered before it is finally transformed into a digital format and thus brought to completion.<sup>2</sup> Beatmakers thus undertake—at least potentially—a broad spectrum of activities: they develop ideas; play and record instruments; dig for, gather, and sample sound material; edit and refine it; and arrange, mix, and master the final product. Thus they embody a specific type of musician who combines different roles which are usually separate in other genres, such as composer, instrumentalist, sound technician, etc. For this reason, they could be labeled “hyphenated musicians” (Théberge 1997: 221): musicians who must be competent in various areas.

## Development of Artistic Agency

Examining the development of artistic agency in beatmaking, my dissertation has shown that aspiring beatmakers often develop a deep passion for Hip-Hop or beatmaking before they even think about making beats. As a result, they listen to and collect a lot of Hip-Hop music, inform themselves about Hip-Hop-related phenomena, and exchange information with others about it. In this way, they acquire different forms of knowledge and resources, laying the groundwork for their future beatmaking activities. Important learning processes thus take place long before beatmaking begins. These processes are mainly self-directed, that is, the design, conduct, and evaluation of a learning effort are directed by the beatmakers (see Brookfield 2009: 2615).

After some time, the enthusiasm for music is the driving force behind most aspiring beatmakers' decision to not only listen to Hip-Hop, but to start beatmaking themselves. Once this decision is made, the (aspiring) beatmakers instantly start making their own beats. The fact that beatmakers make beats to learn how to make beats is no surprise, because practical knowledge as a necessary condition for artistic agency is mainly acquired through hands-on experience. By making beats, beatmakers learn to adhere to the practice's rules,

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2 It should be noted that especially the acquisition, editing, and arranging of building blocks are not to be understood as successive phases. Rather, the practices continuously engage with each other, alternate, and refer to each other.

gain an understanding of the beatmaking process, and elaborate their technical-practical and auditory knowledge.

But what is remarkable is the fact that, from the very outset, they almost exclusively acquire this knowledge through the actual practice of beatmaking (see also Kruse 2018: 7; Hein 2022: 52). Conversely, this implies that the act of practicing or rehearsing has no place in the development of practical knowledge, despite scholars' repeated emphasis on the pivotal role of practice in musical learning (e.g., Dartsch 2018).

Beatmakers, however, do not practice or rehearse—at least if one understands these terms to mean the deliberate acquisition of knowledge separate from actual beatmaking processes, where predefined content is learned and consolidated in a practice or rehearsal setting to make it available for a later application in performance (see Lessing 2018; Mahlert 2018). For instance, one interviewee highlighted that a beatmaker can “get cracking” from the outset: “You can immediately start making beats, you can go for it all right away.” And even later, he added: “just making a beat is the best practice.”

Right from the start, then, making one's own beats is the preferred approach for acquiring vital forms of knowledge in beatmaking. Embracing the interviewee's phraseology, I define this approach as “going-for-it-all.” This phrase accentuates the holistic approach to beat construction, where all the elements and factors involved are considered in their intricate interplay. Additionally, it points to the beatmakers' willingness to embrace risk and to engage in an unpredictable process where their skills might be insufficient and it is not certain whether there will be an outcome in the end.

One of the reasons given by the beatmakers for this approach is that it is simply possible due to the asynchrony and the individualization of the beatmaking process. By the latter I mean the ability to tailor the entire beatmaking process individually—taking into account one's own goals and aspirations, one's knowledge, and the resulting possibilities for action, as well as those of objects and other human actors. For example, rather than searching for a sample, Fine could have opted to record something herself, use a preset beat, or even ask someone to record a building block for her. The key point here is that she does not delegate the acquisition completely, but is actively involved in the process in some way. Moreover, the beatmakers I interviewed indicated that going for it all makes sense because of the complex and open-ended nature of beatmaking processes. Finally, it makes little sense for the beatmakers to practice isolated tasks such as editing a building block, since these activities are context-sensitive, implying the necessity to consider the whole beat.

Borrowing from a comprehensive perspective on learning (Illeris 2007), we can say that learning potentially takes place at any time when a beatmaker goes for it all. However, certain moments, particularly when beatmakers grapple with a problem, are especially ripe for learning. Problems can thus be understood as the core impulses for learning, and intentional learning thereby as mostly problem-oriented. So, rather than adhering to an overriding framework, learning tends to be oriented towards acute problems and thereby unstructured.

My empirical study revealed that this learning is primarily self-directed and solitary, with trial and error being an essential component of the practice—particularly when beatmakers encounter problems for which guidance or instruction offers limited assistance. This, in turn, is related to the fact that beatmakers often do not (yet) have a clear solution to the problem at hand, or they have an idea but struggle to articulate it effectively.

Additionally, learning while going for it all is intimately tied to the process of making a beat, which leads to various consequences such as the fact that the learning contents are often not yet known, or evaluations of learning efforts are based on both aesthetic and pragmatic criteria.

Learning by making one's own beats allows beatmakers, in principle, to develop all forms of knowledge that constitute artistic agency. Still, the approach of going-for-it-all is especially pertinent for developing practical knowledge, as well as most technical and music-theoretical knowledge. By making their own beats, beatmakers also gain new practical experience and broaden their inner sound library.

In addition to making beats, beatmakers further develop their artistic agency by continuing to nurture their passion, thus acquiring potentially relevant knowledge. Moreover, the collection of certain resources is becoming increasingly important. These encompass immaterial resources such as impressions, experiences, or sounds, as well as (quasi-)material resources such as analog or digital sound materials. While accumulating resources is the primary aim of collecting, this process often involves learning, too.

In principle, beatmakers do not develop their artistic agency in institutional contexts. Rather, they find their own path, learning mainly in ways that are self-directed and unstructured. Such learning comes with a high level of autonomy, but at the same time, it necessitates specific skills in learners that can be collectively understood as a form of metacompetence. For example, beatmakers must be able to assess their own artistic agency, set appropriate

goals, and both be familiar with and deploy appropriate learning strategies. They also must be capable of self-motivation.

## Beatmaking as a Challenge and Opportunity for Music Education

In the following, I illustrate the diverse challenges facing music teacher education in its attempt to institutionalize beatmaking when taking the practice seriously. However, I also show that the effort of overcoming these challenges is worthwhile because it allows music teacher education as a whole to better align itself with the breadth of musical diversity.

A first challenge concerns the manifestation of artistic agency in beatmaking, given that music teacher education has until now adhered to what is known as the “liveness norm” (Godau/Haenisch 2022: 39; see also Thibeault 2012: 528). This manifests itself, among other things, in the orientation of teaching and testing formats toward the live performance of pieces, which are furthermore mostly composed by others. The focus is thus on a form of musicmaking that can be understood as the synchronous (re)production of allographic works and that is diametrically opposed to the core activity in beatmaking, namely the asynchronous production of one’s own, autographic works. In producing their beats, beatmakers moreover follow distinct conceptions of authorship, originality, and creativity, as well as aesthetic criteria, that are difficult to reconcile with the ideas and criteria dominating music teacher education (see also Hein 2022: 78).

Another challenge is the constitution of artistic agency in beatmaking, as music teacher education is dominated by notions of musicmaking, musical instruments, music theory, etc. that hinder the recognition of certain capacities that beatmakers possess as being music-related. If, for instance, the ability to read and understand waveforms is not recognized as a component of music theory, then the corresponding skill of beatmakers cannot be appreciated (for a similar case in relation to musical instruments, see Watson 2015: 37; Bell 2016).

Finally, the development of artistic agency also poses a challenge for music teacher education. In beatmaking, the kinds of rehearsal or practice that are supposedly indispensable and ubiquitous in the field of music (see Dartsch 2018) play no role. Rather, key forms of knowledge are gained during the process of making one’s own beats. And this in turn challenges a basic premise of studies on expertise (Ericsson et al. 1993) and certain conceptions of musical

learning, such as that of Christian Harnischmacher (2012), which are founded on the idea that musical practice can serve as a blueprint for musical learning.

Beyond theoretical and conceptual considerations, a crucial pragmatic question also emerges: how can music education, typically centered on specialization (see Partti 2014: 8; Kardos 2018: 7), incorporate the beatmaker's holistic approach of going-for-it-all, which is integral to developing their artistic agency? This question becomes especially relevant when, like Lucy Green, one believes music education should prioritize "the authenticity of the musical learning practice," rather than "the authenticity of the musical product" (Green 2005: 34).

Considering the challenges discussed, it is evident that changes in music teacher education are necessary in order to institutionalize beatmaking in an appropriate manner. Among other things, the field needs new or at least expanded notions of musicmaking, musical instruments, music theory, and musical learning; it needs to develop new forms for teaching, learning, and testing; and it needs to rethink its understanding of originality, creativity, and aesthetics. The good news is that many scholars have already thought about these issues (and many others) and made proposals (e.g., Brown 2012; Hugill 2019; Johansen 2020); the bad news is that these proposals have not yet been taken up in any systematic or comprehensive way.

However, this must happen if beatmaking is to be carefully and sensitively institutionalized, because unlike the practices of jazz or rock, for instance, which have proven easy to translate to music education in a way that aligns with the concepts, practices, and ideas of the Western art music that dominate music teacher education (see Snell/Söderman 2014: 81; Kajikawa 2021), such musical gentrification (Dyndahl et al. 2021) is not readily possible with beatmaking. And it is precisely in this resistance to easy integration that the special potential of beatmaking lies.

In other words, the opportunity I see in attempting to institutionalize beatmaking as described above is that it might force music teacher education to engage generally and more profoundly with the rich diversity of musical practices and artistic agencies (see also Burnard 2012; Partti 2014). Ideally, this would then lead to a fundamental reform of music teacher education that takes into account the issues being discussed here, and many others—a reform that might also contribute to a more appropriate institutionalization of other practices. Jazz, for example, like rock, has so far been mainly "welcomed as a performance art, rather than a studio art" (Hein 2022: 262). Changed or expanded understandings of artistic agency, musicmaking, musical instru-

ments, etc. might be able to contribute to considering and valuing jazz and rock not only as performance art (Moorefield 2010: 79), but also as studio music, that is to say, as asynchronous forms of phonographic work.

Such a differentiated view of musical practices might possibly even lead to a rethinking of the division that is often made between Western art music and popular music, which as I see it is not very productive for grasping the specific qualities and cultural embeddedness of musical practices (including those of Western art music). We should ask: What is gained with this distinction, for example, with regard to the development of artistic agency, when the learning of beatmakers has more in common with that of contemporary composers than with that of rock musicians (Kattenbeck 2022a: 222–224)? Or when the learning strategy of listening and copying that is proclaimed as essential for popular music (Green 2002) is also applied in areas of Western art music (Röbke 2009; Thibeault 2018)? A fundamental reform could instead give more weight to other differences and use them to develop more adequate formats for testing, teaching, and learning, such as asynchronous vs. synchronous, solitary vs. collective, productive vs. reproductive, autographic vs. allographic, or phonographic work vs. nonphonographic work, etc.

Considering the diversity of musical practices and artistic agencies, which, as I have shown, in some cases starkly contradict one another, the question could be raised as to what extent it is even possible to train a “universal” music teacher, or whether music teacher education should not rather actively encourage musical diversity and specialization.

## Conclusion

My article has aimed to enhance the understanding of beatmaking by outlining the manifestation, constitution, and development of beatmakers’ artistic agency. Such an understanding is necessary to institutionalize the practice in a way that would consider the unique aspects and cultural context of the practice, while also taking seriously any forms of resistance that may emerge. Finally, I have illustrated how such an institutionalization presents both challenges and opportunities for music teacher education, as it may drive a fundamental reform to better address musical diversity in the future.

Of course, such a reform is no easy task and it will not happen on its own. To truly seize the opportunity presented by a careful and sensitive institutionalization of beatmaking, the will to follow up rhetoric with politics, i.e., to take

concrete action, is needed (see also Attas/Walker 2019). In other words, merely discussing the distinctiveness of beatmaking isn't enough; we must actively work to bring about impactful change. At the University of Cologne, for example, we have incorporated findings about the practice into our revision of the aptitude test regulations, making it possible for beatmakers—and thus also for all other musicians who perform an asynchronous form of phonographic work—to become music teachers.

But of course, this hardly marks the end of what is needed to appropriately institutionalize beatmaking. For example, we are currently asking ourselves what artistic instruction for beatmakers might look like, or how music theory terms and concepts employed by beatmakers can be formalized and integrated into music theory courses. For institutionalization to succeed in these cases, more is needed. One prerequisite is an attitude that attempts to reflect on one's own (hegemonic) position and to always choose the concepts and values by means of which music-related phenomena are perceived, interpreted, and evaluated in a way that makes appropriate engagement possible.

Additionally, proactive outreach and dialogue with beatmakers outside the university should be pursued, as we endeavor to do at the Cologne Hip Hop Institute, for instance, via informal conversations, collaborative seminars, research projects, and so forth. It is only through such engagement—which should also take place with practitioners from other musical practices represented in music teacher education—that we can ensure that musical practices are institutionalized in an appropriate manner and that music teacher education (and consequently music education as a whole) remains agile and responsive to the ever-evolving music landscape of the 21<sup>st</sup> century.

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