Chapter 4

Music: A Thing, An Event, or Data?

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Abstract

The digital streaming era is fundamentally transforming the traditional ontological understanding of music. Whether defined as an abstract type, a concrete event, or a purely mental experience, none of these traditional approaches can holistically explain how music exists in today's digital ecosystem. This article argues that streaming platforms deconstruct music as a fixed substance, transforming it into a hybrid entity that exists within a continuous network of processing and relational dynamics. This hybrid entity is shaped by three fundamental dimensions: the data-potential, where music exists as raw data in a state of constant transformation; the streaming-event, where each listening instance constitutes a singular digital performance; and the platform-dependent being, where music's very existence becomes contingent upon the economic, legal, and algorithmic structures of platforms. This new ontological condition leads to consequences such as the erosion of the original work concept, the threat of digital decay, and the reduction of music to a "content" meta-category, while simultaneously fundamentally altering the human-music relationship. This shift from a culture of ownership to one of access, from passive listening to active data production, and from shared musical experiences to personalized algorithmic universes raises broader questions about the meaning of being human in the digital age, extending beyond merely understanding the digital ontology of music.

1. Introduction

The nature of this data-potential lies in its non-fixed state and constant transformation (Born, 2011; Baym, 2018). The song a user listens to does not reside on the platform's servers as a single, immutable file. On the contrary, it is encoded dynamically in different bitrates, different encoding formats (e.g., AAC, OGG Vorbis), and streamed based on the user's internet

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speed, subscription plan, and device (Walsh, 2024; Sterne, 2012). This technical reality deepens the problem of music's ontological identity: Is a song streamed at 320 kbps the same entity as the same song streamed at 160 kbps (Kivy, 2006; Gracyk, 2007)? If part of the audio data is lost in lossy compression or data optimization processes, is the work itself somehow "lost" (Hosokawa, 1984; Taylor, 2021)?

Furthermore, this digital potential challenges the idea that music possesses a fixed "essence." Whereas a musical work in the traditional sense is seen as an ideal construct, manifested in the composer's mind and embodied through notation (Dodd, 2007), the digital data-potential shatters this idealization (Théberge, 1997; Prior, 2018). The data is a set that can be continuously improved, updated, and even differentiated regionally (due to licensing restrictions), producing what media anthropologists describe as "distributed musical objects" across global infrastructures (Born, 2011; Eisenberg, 2020). These questions show that conceptualizing music as a "data-potential" emphasizes not its immutable essence, but a state of continuous informational transformation shaped by technological mediation, cultural circulation, and platform capitalism (Beer, 2013).

Ultimately, music in the streaming age cannot exist independently of the digital platforms that host and distribute it. Platforms such as Spotify and Apple Music function not as neutral distribution channels, but as ontologically active infrastructures that determine both the accessibility and the permanence of musical works (Prey, 2018; Morris, 2015; Van Dijck, 2013). When licensing agreements expire or platform policies change, entire catalogues can instantly disappear from digital circulation, rendering music temporally unstable and structurally fragile (Taylor, 2021). This form of digital decay differs fundamentally from the gradual material deterioration of physical media, as it is sudden, total, and externally governed rather than the result of physical entropy (Van der Velden & Aalbers, 2022). As Mayer-Schönberger (2009) has shown, while forgetting has become structurally embedded in digital systems, platform-based deletion introduces a new form of culturally enforced amnesia (Hoskins, 2017). Moreover, as Sterne (2012) and Morris (2015) argue, streaming replaces ownership with conditional access, transforming music into a service dependent on contractual and algorithmic control (Beer, 2013; Gracyk, 2007). As a result, music no longer possesses stable cultural permanence but exists under conditions of continuous technological, economic, and juridical vulnerability (Van Dijck, 2013; Prior, 2018).

2. The Limits of the Traditional Framework and the Digital Paradigm Shift

2.1. The Tripartite Distinction of Traditional Music Ontology

Philosophical inquiry into the nature of music has fundamentally focused on its mode of existence in time and space. This inquiry has been shaped around three main, competing theoretical positions.

The first position conceptualizes music's true reality as an abstract and timeless type. A reflection of Platonic ideals in music, this view holds that a musical work (for instance, Beethoven's 5th Symphony) is a universal type that exists independently of any of its physical performances, recordings, or conceptions in a listener's mind (Wolterstorff, 1980). The "work" here is an ideal construct, manifested in the composer's mind and embodied through notation. Consequently, even if different orchestras perform a symphony at different times, these constitute different concrete instances (tokens) of the same ideal type. This approach has the advantage of preserving the work's identity and authenticity as an immutable ideal (Dodd, 2007).

The second position, conversely, reduces music's existence to concrete particulars. According to this view, music is the physical sound events themselves, occurring at a specific place and time. This "event ontology" sees music as a concrete process (perdurance), comprised of audible sound waves that begin and end (Caplan & Matheson, 2006). An alternative materialist approach identifies music with a physical object, like a vinyl record or a CD. This perspective aligns with the experience of music as something tangible, collectible, and unchanging (Nanay, 2016).

The third, and more radical, position argues that music is neither an abstract type nor a concrete object, but rather an experience constructed in the listener's mind. This "experientialist" or "deconstructionist" approach claims that music's being cannot exist without a perceiving consciousness (Kivy, 2002). Music is not so much about the physical qualities of sounds, but rather an emotional and cognitive phenomenon that the listener interprets. This significantly opens up music's ontological status to subjectivity and interpretation.

2.2. Streaming's Fragmentation of the Ontological Triad

The rise of digital streaming platforms challenges and often renders inadequate each of the aforementioned traditional positions within their own internal logic.

Firstly, there is a profound incompatibility between the abstract type theory and the nature of digital data. While a symphony's score is fixed and unchanging, the digital file of the same work on a streaming service (e.g., an OGG Vorbis or AAC file) is not a fixed "ideal" but a data set that is continuously improved, updated, and can even be differentiated regionally (due to licensing restrictions) (Walsh, 2024). Furthermore, algorithmically generated "streaming playlists" or "infinite mixtapes" do not correspond to a pre-existing "type" in the Platonic sense; they are performative and one-time digital events (Born, 2022). This significantly erodes the concept of the work as ideal and immutable.

The theory of concrete particulars also collapses in the face of digital reality. In streaming, music is not an "event" consisting of fixed sound waves in a specific location. Rather, it is a dispersed data packet, flowing from a global network of servers to the listener's device, with an obscure origin and route. Music possesses the potential to be "everywhere and everywhen," rather than being strictly "here and now," but this potential is only actualized through network action (Nowak, 2022). The physical object theory is even more problematic; the user does not possess an object they can own, like a record, but only a temporary access right granted within the framework of the platform's licensing agreement (Morris, 2015; Sterne, 2012).

Finally, experientialism alone cannot provide a sufficient explanation. While music is ultimately experienced, the conditions of this experience in streaming are qualitatively different from traditional listening modes. The listener's experience is deeply shaped not only by personal psychology but also by a series of digital and economic determinants: the platform's interface, recommendation algorithms, user data collection practices, and internet bandwidth (Prey, 2018). Music becomes not merely a "mental event" but a "platform-mediated experience." This shifts the ontological analysis from pure subjectivity towards the objective structures of this mediating technological system.

3. A New Ontological Framework: Music as a Hybrid Entity

The limitations of traditional music ontology prove inadequate for explaining the complex nature of music in the digital streaming age. Approaches based on Platonic ideals, concrete particulars, or purely mental experiences hinder our ability to holistically grasp how music exists within today's digital ecosystem. In this section, we propose a new conceptual framework to make sense of music's hybrid existence within the digital streaming ecosystem. This framework considers music in three intertwined

and complementary categories: (1) a data-potential, (2) a streaming-event, and (3) a platform-dependent entity.

3.1. Music as Data-Potential: Changing Essence and Identity

The nature of this data-potential lies in its non-fixed state and constant transformation. The song a user listens to does not reside on the platform's servers as a single, immutable file. On the contrary, it is encoded dynamically in different bitrates, different encoding formats (e.g., AAC, OGG Vorbis), and streamed based on the user's internet speed, subscription plan, and device (Walsh, 2024). This technical reality deepens the problem of music's ontological identity: Is a song streamed at 320 kbps the same entity as the same song streamed at 160 kbps? If part of the audio data is lost in lossy compression or data optimization processes, is the work itself somehow "lost"?

Furthermore, this digital potential challenges the idea that music possesses a fixed "essence." Whereas a musical work in the traditional sense is seen as an ideal construct, manifested in the composer's mind and embodied through notation (Dodd, 2007), the digital data-potential shatters this idealization. The data constitutes a set that can be continuously modified, updated, and regionally differentiated through licensing structures. These questions show that conceptualizing music as a "data-potential" emphasizes not its immutable essence, but a state of continuous informational transformation.

Ultimately, music in the streaming age cannot exist independently of the digital platforms that host and distribute it. Platforms such as Spotify and Apple Music function not as neutral distribution channels, but as ontologically active infrastructures that determine both the accessibility and the permanence of musical works (Prey, 2018; Morris, 2015). When licensing agreements expire or platform policies change, entire catalogues can instantly disappear from digital circulation, rendering music temporally unstable and structurally fragile. This form of digital decay differs fundamentally from the gradual material deterioration of physical media, as it is sudden, total, and externally governed rather than the result of physical entropy (Van der Velden & Aalbers, 2022). As Mayer-Schönberger (2009) has shown, while forgetting has become structurally embedded in digital systems, platform-based deletion introduces a new form of culturally enforced amnesia. Moreover, as Sterne (2012) and Morris (2015) argue, streaming replaces ownership with conditional access, transforming music into a service dependent on contractual and algorithmic control. As a result, music no

longer possesses stable cultural permanence but exists under conditions of continuous technological, economic, and juridical vulnerability.

3.2. Music as Streaming-Event: Process-Based Existence

Music's potential existence as data only materializes when a "streaming-event" is triggered. The user's click on a song not only initiates a listening act but also sets in motion a complex chain of digital events: license verification, requesting data packets from the server, transmitting these packets over the network, buffering them on the client side, and finally converting them into sound (Sterne, 2006). This process highlights the event-based nature of music.

From this perspective, each listening act is a singular performance, a *digital rendition* that can never be identically repeated (Yang, 2025). Just as a traditional live performance is unique to its moment and place, a streaming event is unique to the current network conditions, server load, and the device's processing capacity. An interruption (buffer), a skip, or network latency becomes an integral part of this singular digital performance. This demonstrates that music is not a pre-existing, completed object, but a process-based phenomenon that is produced and consumed in real-time.

The performative nature of the streaming event also transforms the temporal dimension of music. Whereas in traditional music ontology the work has a fixed timeframe, in stream-based listening, time becomes flexible. Users can skip songs, rewind, or replay specific sections of the music. This interactive temporal experience suggests that music is moving away from a linear understanding of time, evolving into a fragmented and personalized experience of time.

3.3. Music as Platform-Dependent Entity: Relational Ecosystem

Ultimately, these states of music as data potential and streaming events cannot be considered independently of the fact that they are "platform-dependent entities." The existence of a piece of music on Spotify, Apple Music, or YouTube Music is not merely a technical matter of access but also a matter of deep ontological dependency. Platforms are not neutral channels for distributing music; they are architectural structures that actively determine its conditions of existence.

First, the *accessibility and permanence* of music depend on the platform's economic and legal decisions. When licensing agreements expire or a platform decides to remove content, a song effectively "vanishes" from that platform's ecosystem. This digital decay is qualitatively different from the

wear and tear of a physical record; it is sudden, complete, and beyond the user's control (Van der Velden & Aalbers, 2022). As Mayer-Schönberger (2009) also emphasized, while forgetting becomes a virtue in the digital age, the arbitrary content removal decisions of platforms expose the fragility of cultural memory.

Second, the *meaning and value* of music are actively shaped by the surrounding platform architecture. A song exists not only by itself but also as part of an algorithmic playlist, positioned in a "similar to" list, or presented as a recommendation based on user data (Prey, 2018). Metrics like likes, play counts, and playlist addition rates become an inseparable part of the work itself, determining its social and cultural status.

In this context, music is "contentified" by the platform, meaning it becomes a consumable unit that serves the platform's economic model and generates data (Riom, 2019). Platform-dependency also transforms music's social existence. A song's meaning is no longer determined solely by its musical qualities but by its position within the network of social interactions, shares, and algorithmic relationships inside the platform.

These three dimensions of data potential, streaming event, and platform dependency form an inseparable whole. Music emerges at the intersection of these three layers as a constantly transforming, relational, and contextual entity. This new ontological framework enables us to move beyond traditional categories and gain a deeper understanding of music's existence in the digital age, providing a better grasp of its complex nature today.

4. Conclusion

In this study, we have examined the ontological transformation of the music object in the digital streaming age. We have shown how the tripartite framework of traditional music ontology, abstract type, concrete event, and mental experience, proves inadequate in the face of digital reality. In response, we have proposed that music must be understood as a three-layered hybrid entity: a *data potential, a streaming event*, and a *platform-dependent being*.

This new ontological framework signifies, beyond merely an academic debate, a fundamental transformation of the relationship between humans and music. So, where is this transformation leading the human-music relationship?

Traditional music culture was built upon the idea of ownership and collection. Records, cassettes, and CDs were accumulated, stored, and transferred as physical objects. This material existence was also an extension

of our musical identity. Streaming, however, is moving us from a *culture of ownership to a culture of access*. We no longer "own" music; we have "access rights" to it. This transition weakens the idea of a personal music archive while placing personalized algorithmic streams at the center. Music is transforming from an "asset" into a "service experience."

As a platform-dependent entity, music turns the listener from a passive receiver into an active *data producer* within the platform ecosystem. Every listening act, every skip, every playlist creation is not only a personal experience but also a commodified data point that adds value to the platform. This situation transforms the music experience into a *quid pro quo transaction*: you listen to music, and in return, you produce data.

The fragmented nature of the streaming event and algorithmic curation is making the music experience increasingly personalized. Traditionally, music served as a social bond; listening to the same radio station and buying the same album created shared cultural references. Today, however, every user inhabits a *personalized music universe* shaped by their own listening habits, data profile, and the algorithmic selections the platform offers them. While this democratizes music discovery on one hand, it may contribute to the fragmentation of a shared music culture and the strengthening of "echo chambers" on the other.

The constant state of transformation of the data-potential and the nature of stream-based listening are also transforming the temporal dimension of the relationship with music. While the traditional album listening experience was based on patiently discovering a whole, stream culture is built on *instant gratification* and *constant stimulation*. Only the first 30 seconds of songs are listened to, playlists constantly change, and distracting elements increase. This challenges the traditional aesthetic understanding based on experiencing music in depth and digesting it slowly.

The Human Condition and the Future of Music: The ontological transformation of music, in fact, points to larger questions about the meaning of being human in the digital age: Where should the balance between ownership and access lie? How should the tension between individualization and common culture be managed? How should the relationship between data production and autonomy be established?

Throughout human history, music has played a central role not only as an aesthetic object but also in the construction of individual and social identity, emotional expression, and cultural transmission. The streaming age does not eliminate these fundamental functions but adapts them to new

conditions. Understanding the ontology of the hybrid music entity is vital, beyond being merely a philosophical matter, for understanding the future of humanity's relationship with itself, with others, and with culture.

The question of what music is can no longer be considered separately from the question of who humans are and who they want to be. Therefore, every discussion on the digital ontology of music carries the potential to offer valuable insights into the meaning of being human in the digital age.

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