The "Non-Human" Aesthetics and Posthuman Politics of Listening in Beethoven's Late String Quartets

Abstract

This article reexamines Beethoven's late string quartets through posthumanist theoretical frameworks, challenging traditional humanistic interpretations. By analyzing these works in relation to the early industrial revolution, the study reveals how Beethoven's compositional innovations—including fragmented structures, mechanized rhythms, and non-teleological forms—anticipate posthuman sensibilities. Drawing on Adorno's critical theory alongside contemporary posthumanist thought, the article demonstrates how elements typically associated with computational aesthetics and machine logic were already present in these canonical works. This reframing suggests that Beethoven's late quartets occupy a unique historical position, simultaneously representing the apotheosis of Enlightenment musical ideals and their dialectical negation. By recognizing these "non-human" elements, we gain new perspectives on both Beethoven's achievement and the deeper historical roots of contemporary experimental music practices.

Key words: posthuman aesthetics; late Beethoven; string quartets; industrial modernity; critical theory

1 Introduction

It is commonplace to view the late string quartets of Beethoven as the epitome of Western musical humanism, an ideology which regards music as the expression of deep, transcendent individuality resulting from the composer's solitude and deafness. Yet, this canonical understanding warrants critical reexamination through contemporary theoretical frameworks that problematize conventional notions of the human subject. This article proposes a counterintuitive reading of these works as harbingers of a posthuman musical aesthetic, one that challenges rather than reinforces humanist ideologies. Recent scholarship has begun to explore relationships between music and nonhuman entities, demonstrating how contemporary composition engages with "encounters between music and nature" through "productive and transversal" methodologies [1]. Building upon this foundation, I employ Adorno's critical theory alongside recent posthumanist thought to analyze how Beethoven's late quartets—particularly Op. 131—manifest an emergent crisis of human subjectivity coinciding with early industrialization.

The concept of "free listening" developed by Waltham-Smith [2] provides a valuable theoretical entry point, as it destabilizes anthropocentric modes of musical reception. Just as experimental composers like John Cage later deliberately incorporated nonhuman agencies and computing processes into composition [3], Beethoven's late works contain elements that resist humanist interpretation—fragmented melodic structures, mechanized rhythmic patterns, and alienating formal experiments that

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perform what might be termed "defamiliarization processes" [4]. These characteristics disrupt the presumed continuity between human expression and musical structure that underpins traditional hermeneutics.

Recent critical perspectives on musical meaning [5] have increasingly questioned the adequacy of humanist frameworks for understanding even canonical repertoire. As Berkowitz argues in relation to artificial intelligence and music-making, "the boundaries between human and nonhuman creativity become increasingly porous when subjected to philosophical scrutiny" [6]. This porosity is already evident in Beethoven's late style, where conventional narrative arcs and teleological structures face systematic disruption—a phenomenon parallel to what Claussen identifies in contemporary French literature as "tuning out" conventional subject positions [7].

The posthuman elements in Beethoven's quartets anticipate later artistic explorations of "cyber bodies as medium" [8], suggesting not merely historical coincidence but a deeper connection between musical form and emergent technological consciousness. Moreover, the internal tensions within these works—their simultaneous embodiment of enlightenment rationality and its critique—resonate with contemporary debates about "improvisation, democracy, and subjectivity" [9]. Like Smith's literary characters who "sing the dead present" [10], Beethoven's late quartets articulate a subject position already experiencing its own dissolution.

By analyzing these works through posthumanist and critical theoretical lenses, this article aims to demonstrate how Beethoven's late quartets not only represent the apotheosis of classical form but simultaneously articulate its crisis, offering prescient insights into our current posthuman condition.

2 Historical and Theoretical Context

Beethoven's late period (1822-1826) represents a unique moment of convergence between artistic innovation and socio-technological transformation. During these years, as the composer retreated further into his deafness and social isolation, the early industrial revolution was reconfiguring European society with unprecedented mechanical rhythms and rationalized production processes. As illustrated in Figure 1, this historical conjuncture placed Beethoven's most experimental compositional phase in direct temporal alignment with pivotal developments in industrial technology, including the opening of the Stockton-Darlington Railway in 1825—just as he was completing Op. 131. This visualization helps us understand how the composer's biographical circumstances intersected with broader technological transformations, providing fertile ground for reexamining the late quartets through posthumanist lenses.

The string quartet, by the 1820s, had evolved from its origins in aristocratic entertainment to become a concentrated site of musical subjectivity.Beethoven's radical departures from pre-existing quartet norms must be situated within this tradition. The quartet form itself encapsulated the Enlightenment paradigm of rational discourse among distinct yet harmonised parts—a musical counterpart to middle-class democratic ideals. As such, Beethoven's alterations to this established form would

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have been deeply rooted in, and driven by, socio-political considerations far beyond simple musical evolution.

Adorno's philosophy of music provides important theoretical frameworks to make sense of the significance of these works. In his unfinished "Beethoven: The Philosophy of Music," he locates the late style as representing a 'fractured totality' in which individual articulation grapples with, and is rendered impossible due to, the alienated social circumstances in which they live. The 'paratactic' character of Beethoven's late works reveals the extreme juxtaposition of the components without transitions and the conflict starkly manifest between subjective articulation and objective structure. This characteristic captures the emerging industrial modernity's fragmentation of experience, as Figure 1 indicated captures the timeline where mechanical and artistic production began to intersect.

The othering of the human in contemporary posthumanism furthers this critique by exploring the fundamental contours of autonomy and expression. Even in processes that appear to be inherently 'human', non-human actors and technological mediations actively shape the process. When applied retrospectively to Beethoven, this approach illustrates how I argue his late works, especially through their mechanical repetitions and extreme dynamic contrasts, preemptively engage with a cyborgian aesthetic permeating the divide of human and machine sensibilities that coalesce into a single perception.

Through composition, the analytical tool of 'defamiliarization' aids in understanding the process of how Beethoven's late quartets alienate listeners from comfortable musical narratives. Op. 131 begins with a fugue containing what is widely regarded as an obscure theme rife with arbitrary thematic development. This performs a destruction of subjective musical comprehension. The "uncanny" strangeness usually assigned to such passages hints at a growing consciousness of technological alterity, which is already permeating human expression.

These works are noted to have possessed a disorienting effect for audiences during reception. Listeners described them as 'incomprehensible,' or 'bizarre,' showcasing resistance to compositions claiming politically neutral roles within frozen social structures. The quartets only began to be accepted late in the 19th century after imposing interpretative frameworks designed to rationalize the works' humanistic roots, whether or not such rootedness sought to embrace the works' most bewildering qualities. Even the attempt to rationalize the works demands scrutiny as an uncritical acceptance of a process which ignores the more sobering truths of the music.

Posthuman aesthetics only arise from the convergence of autobiographical context, musical change, and industrial evolution, as illustrated in Figure 1. Beethoven's late quartets thus occupy a unique historical position—composed at the threshold between Enlightenment humanist ideals and their technological displacement, they embody both the apotheosis of subjective expression and its incipient crisis. As the timeline illustrates, these works emerged precisely as Europe was experiencing the first wave of mechanization, with new technologies like the steam locomotive beginning to transform human perception of time, space, and labor.

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The visual juxtaposition in Figure 1 between Beethoven's compositional timeline and the development of industrial technologies helps us conceptualize how the seemingly disparate realms of musical aesthetics and technological innovation might have shared underlying historical currents. This theoretical reframing allows us to hear in these works not just the familiar narrative of transcendent human spirit, but also the emergence of mechanical, algorithmic, and non-human musical elements that would later characterize modernity. The parallelism between Beethoven's compositional innovations and contemporaneous technological developments is not merely coincidental but suggests deeper structural resonances between artistic form and social transformation.
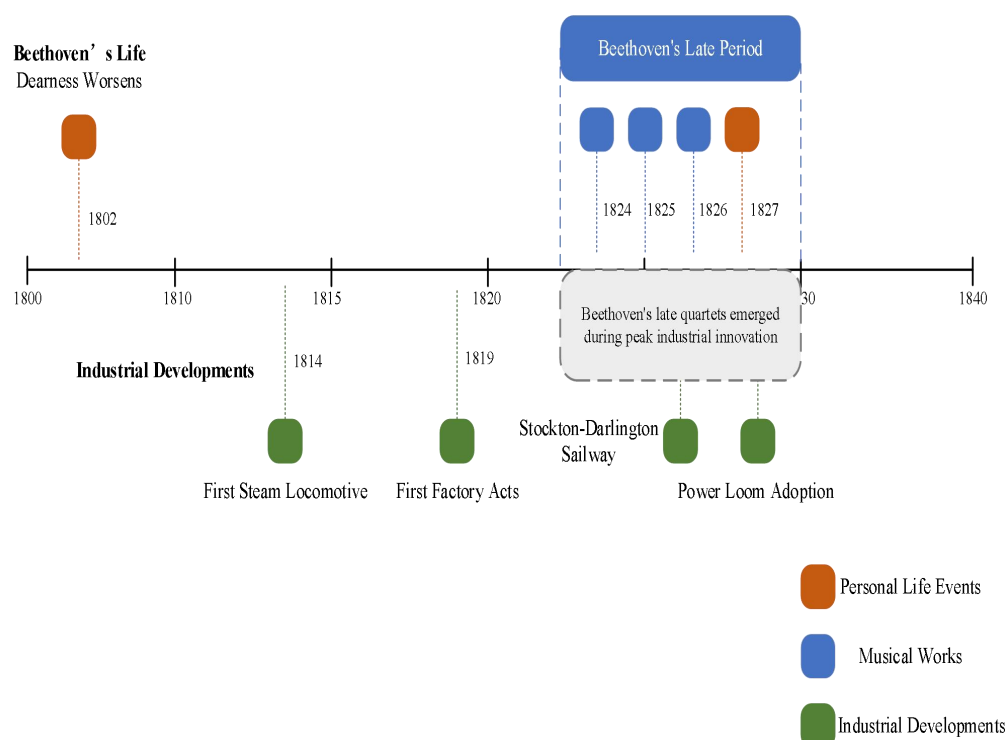

Figure 1: Beethoven's Late Period in Historical Context

3 Analysis of Posthuman Elements in the Late Quartets

In Beethoven's late string quartets, certain formal and aesthetic features are recognised as having posthuman elements long before the term was ever coined. Looking at Op. 131 in particular, we encounter a seven-movement structure that persistently subverts what is considered the habitual framework of musical storytelling and subjective articulation. The initial movement is a C-sharp minor fugue that starts with a subject whose contour serves as the basis for a fugue's melody; bizarre leaps and chromatic embellishments evoke strange alien expression where not even utterance is human. Even such a fugal texture carries a closed self-expression driven by the mathematics of time, melody, and mechanical reproduction, algorithmic self-propelling, internal-logical expressiveness—an impression of mechanical inexorable closure. Surrendering an illusion of earthly music, the first movement thrusts us into a universe where subjective expression recedes beneath a suffocating

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veil of calculated design and imposed logic; in this case, it anticipates the art of calculation far ahead.

The gaps between the movements of Op. 131 are even more disjointed from human listening expectations. In traditional quartet form, the emphasis was placed on organic transitions and movement development, reflecting rationalistic ideals of progress during the period of the Enlightenment. Beethoven, within what could be called "paratactic" structures, certainly placed the late quartets within what could be described as "paratactic" structures: movements placed side by side without means of any sort of transitions, often seemingly randomly to one another. Such gaps represent along the lines of modern fragmentation, a sense of industrial modernity where time disciplines rationalised and replaced organic flow with mechanised segmentation. The Fugue's first movement is overridden by complexities yielding to the second movement's softer round constructed from a dance-like interlude; this yields a perceptual fracture that resists all attempts at being integrated into any unified subjective experience. The encoder is only presented with a collection of discrete, "musical machines," each with their own set of rules.

The rhythmic aspects of the late quartets also suggest some form of mechanised, automated repetitive activity. The well-known scherzo of Op. 131's third movement suggests the rhythmic pulsations of industrial machines as far as the insistent rhythmic repetitions and metronomic oscillation of their sequences is concerned. Here, at least, he moves away from the bounds of patterned, music-dance relations, venturing into archaic limb rhythm-sound worlds. The relentless repetitions and the abrupt changes to the flow of the movement are, in human terms, non-sensible, pointing instead to what was later termed minimalist—process rather than expression. The neglected presto variation movement adds to the development of mechanisation with swift triplet figures, producing denser textures that resemble the uniform surface of industrial production.

Timbral experimentation simultaneously undermines humanistic interpretations in these works. In every string quartet, Beethoven tries to extract sound beyond the edge of musical perception: extreme melodic ranges, grating consonances, and peculiar strummings and bowing which obliterate the voices of the instruments. For example, the sul ponticello passages in the finale of Op. 131 elide into the metallic region, depicting alienation with sound, long before it ever forebodes anything electronic. One of the violins soaring to striking altitudes during the coda of Op. 131 creates sound that is predominantly inaudible. This is a pre-posterior phenomenon with values far too numerous to be classified as simply expression. These are boundaries between the human voice and its technological antithesis. This suggests some form of a boundary-erasing expression, oscillating across the thresholds of perception and non-perception.

In relation to the impact, it is the compositions which undermine teleological development that have the impact of primacy: In Op. 131, the distressed statement interlaced with intermezzi in addition to exacerbating the tension also augmenting the distressed statement intertwines with intermezzi. Its coda containing an odd accelerando further augments what was previously woven, though now suggesting not

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deletion but transcendence. This alteration conceals the subject which weaves a myth of forces bound within control that are supremely tight and tense. In addressing a resolution to unfinished business confronts a scheme of civilisation which violently strives to impose closure confronts a grotesque regime of control wherein dominion absurdly and unintelligently human enables escape.

The last quartets exhibit what has been described as "algorithmic thinking"—systematic techniques based on logic as opposed to emotion in the case of Op. 131. In the fourth movement, thematic variation arises from a combination of systematic changes drawn from a set of combinatorial options. The logic used here evokes a form of computation that views themes as devoid of humanity's creative essence, instead, stripped down to themes awaiting processing. The other extreme of these works displays dense counterpoint which emphasises more fundamental relations beyond expressive gestures to deepen structure in ways that exceed human perception, evoking post-human artistic paradigms of co-composition with machine intelligence.

The outline of Op. 131 reveals woven posthuman qualities at a micro-detail level. The fifth movement of Andante contains an interlude that is overtly repetitive and simple: revealing genius a part of a much larger microcosm of what can be dubbed as iterative algorithmic processes. The repeating motif is melodic, yet within a mathematical paradigm, it is unexpressively, configurationally invariant. Each addition resembles a new layer of internal bounds, akin to modern computer art's procedural generation. AC, for instance, is particularly ostentatious in pursuit of breakaway equilibrium. Conclusively, the takedown portrays zero-calculus systems simultaneously abstracted from the interplay of the tune. Multi-dimensional disproportionate scalar fabrics pasted integer-less define un-jectively bursting into far too intricate fragments for the tactile to dissolve into a latent subjective dominion synthesis.

The various asymmetrical focal points of balance depicting a degree of static equilibrium social order within the quartets portray a primitive anthropocentric perspective. In what can be regarded as the final phase of his life, Beethoven apparently emancipated individuals from frameworks and constructs which had ossified over time and become accepted reality. Relatively certain key disparate shifts in movements induce perceptual breaks akin to subsurgical dislocation processes that parallel pre-'deconstructed' industrial life underpin dislocational ruptures. Likewise in the drastic changes observed between fourth and fifth movement, expression set order defeats bound set expression relations. Boundary-less expression stochastic processes yield predetermined results which Xenakis defied with partitioned governed three outcomes by free-formed boundaries.

Later life works indisputably command attention owing to their complex, vividly chaotic intricacies. "Distributed agency," best captures these creations within what is described as a collective, namely ensemble wherein one instrument or voice wields disproportionate power and influence. Rather, part material is organised and apportioned into four voices; thus, forming a stratified horizontally organised lattice for sound production that evokes the principles of distributed cognition. Inverts the conventional hierarchy of musical voices (dominant melody and subservient

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accompaniment) where melody predominates to a non-hegemonic system where interaction, not expression, gives rise to meaning. These structurally posthuman configurations of music are deeply transformational.

In addition, the silence present throughout these works does add to the humanist interpretation which assumes continuous expositions of expression. Strategic rests and caesuras placed in the sixth movement of Op. 131 serve to create a fragmented sense of time that foreshadows the type of temporal disjunction commonly associated with digital media. These silences serve no purpose within expressivity; they are systematically indexical interruptions – algorithmic negations of uninterrupted musical time, or what we could describe as glitch aesthetics—to borrow a contemporary term is crushed before the time of the birth.

4 Discussion and Conclusion

The explanation given above has shown the historical gap of Beethoven's late string quartets where they lie on the boundary of humanist aesthetics and posthuman sensibilities. These works create a deep paradox, being both the zenith of Enlightenment musical ideals as well as their dialectical negation. Looking at the non-human constituents which are already part of these treasured pieces gives a fresh look at Beethoven's efforts and the reality of contemporary music.

The posthuman aspects already discussed such as fractal, algorithmic, mechanical, and non-teleological repetition forms defy traditional approaches to biography-based or ahistorical human-centred interpretive frameworks. Rather, it posits that the late Beethoven's style was anticipating the crisis of the bourgeois subject which came in modernist aesthetics. Perhaps it was the composer's isolation by virtue of deafness which generated such conditions that music could transcend the bounds of human execution or perception, enabling a perception of potential that would only be fully attainable centuries later.

Structural listening reframes how we perceive the politics of listening. The conventional reception of Beethoven's music tends to focus on the heroic individualism and transcendent humanism depicted in the works. Acknowledging more posthuman aspects requires different modes of engagement; those attending to processes instead of emotions and structure over feelings. This form of listening could qualify as "free listening," as described in contemporary scholarship, where listeners focus on musical elements outside constructed narratives. Such listening recognises nonhuman forces that intervene, even in the most human artworks.

Our timeline visualises the historical overlap between industrialisation's onset and Beethoven's later works, shedding light on the intricate relationship aesthetic and technological change had on music history. Instead of autonomously developing musical techniques, innovation was a response to unprecedented social and technological changes. During this period, rhythm mechanisation, form fragmentation, and extreme timbre exploration paralleled new industrial production methods that radically transformed human life.

For today's musical practice, this posthuman interpretation of Beethoven indicates continuities along a classical heritage and experimental practices that are often

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thought to be antagonistic to one another. The computation, algorithms, and even the sonic experiments of today's electronic music may be far more historically precedented than is usually assumed. Contemporary posthuman musical practices are far from rejecting tradition; rather, they may be understood as embracing what was conventionally embedded within dominant musical works. This viewpoint blurs the conventional history that electronic and computational music emerged as radical departures from classical music.

In conclusion, examining the constructs of Beethoven's late quartets demonstrates that the posthuman was already intuited under what many consider the zenith of humanist musical expression. Engaging with these elements not only enriches the attribution but also sheds light on the enduring relation the contemporary condition of music bears to the classical canon rather than being in opposition with it.

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