

Ignacio Garay

Harmonia in time

Pythagorean number, embodied rhythm and the aesthetics of classic rock

Abstract

This article examines how Pythagorean principles of number, proportion, and rhythm (rhythmos) are conceptually rearticulated in the aesthetic experience of classic rock music. Moving beyond the traditional intellectualist interpretation of harmonia as an abstract system, it emphasizes rhythm, repetition, and bodily engagement as central to musical perception. Drawing on classical sources such as Aristotle, Plato, and Cicero, alongside contemporary philosophy of music (Gracyk, Cox, Shusterman, Giovannelli), the paper argues that classic rock reactivates key ancient insights: music organizes time, bodies, and affect, rendering proportion perceptible and lived. Through an analysis of groove, repetition, and collective listening in artists such as Led Zeppelin, The Who, Black Sabbath and Iron Maiden, the article shows that the aesthetic power of rock resides in its capacity to structure embodied temporal experience, revealing a continuity between ancient musical thought and contemporary practice.

Keywords

Pythagorean aesthetics, Musical experience, Rock music

Received: 29/01/2026

Approved: 5 April, 2026

Editing by: Danilo Manca

© 2026 The Author. Open Access published under the terms of the CC-BY-4.0.
igaray@gmail.com (Universidad Austral, sede Pilar)

1. Introduction: why Pythagoras today?

The recovery of antiquity in contemporary aesthetics invites us to reconsider the foundational categories of musical thought and their relevance for modern artistic practices. Among the ancient figures often invoked in such discussions, Pythagoras occupies a singular place. Traditionally associated with the discovery of numerical ratios underlying musical consonance, he is frequently portrayed as the origin of a rationalist and abstract approach to music. Yet, this common image obscures a more nuanced understanding: Pythagorean thought offers a complex vision of music as a phenomenon that intertwines number, proportion, and bodily experience. The question guiding this article is therefore both historical and conceptual: how can Pythagorean principles illuminate contemporary aesthetic practices, particularly those involving embodied engagement with sound?

The choice to focus on music is motivated by its privileged status within both ancient and modern theories of aesthetics. Music, unlike other arts, manifests proportion and rhythm directly in time and through the body. The experience of sound, tempo, and repetition engages listeners not only intellectually but affectively and physically. In the classical world, this insight informed discussions of ethical formation, social harmony, and cosmology. Plato, in the *Republic* (402-403a), emphasized music's role in shaping character through habituation, while Aristotle, in the *Politics* (1340a-b), highlighted its capacity to regulate emotion and provide pleasure in accordance with civic norms. Even Cicero, in *De re publica* (VI), used the metaphor of the "music of the spheres" to link cosmic order to human experience. These sources collectively demonstrate that ancient conceptions of musical proportion were inseparable from temporal, bodily, and social dimensions. Recognizing this allows for a conceptual bridge between classical thought and contemporary musical practices.

Classic rock provides a particularly illuminating case of study for this bridge. Unlike the polyphonic or highly formalized structures of other Western art music, rock frequently organizes musical experience through repetition, groove and rhythmic patterns, often combining bodily engagement with harmonic complexity. Drum patterns, basslines, and electric guitar riffs produce entrainment, fostering both individual and collective movement. The aesthetic value of these temporal structures, as recent scholarship has emphasized (Gracyk 1996; Cox 2011; Shusterman 2008; Giovannelli 2025), lies in their capacity to orchestrate embodied and affective responses rather than to conform to abstract theoretical ratios. In

this sense, the dynamics that Plato, Aristotle, and the Pythagoreans described in ancient contexts – where rhythm organizes the body and proportion shapes affect – remain salient for contemporary musical analysis.

Contemporary aesthetic theory provides the conceptual vocabulary to articulate these continuities. Theodore Gracyk has shown that rock music derives part of its aesthetic power from temporal patterning and the creation of communal affective alignment, a modern instantiation of ancient ideas of rhythm and proportion (Gracyk 1996: 45-50). Christoph Cox emphasizes the materiality and temporal unfolding of sound, arguing that perception is inherently embodied and affectively structured (Cox 2011: 102-7). Richard Shusterman, through somaesthetics, foregrounds the role of the body in aesthetic experience, highlighting how music shapes and is shaped by corporeal awareness (Shusterman 2008: 1-15). Together, these approaches allow us to reinterpret Pythagorean and post-Pythagorean insights for modern contexts, demonstrating that the recovery of antiquity is not only historically informative but also conceptually generative.

This article pursues a dual aim. First, it re-examines ancient musical thought, highlighting how number, rhythm, and proportion were understood not as abstract principles divorced from experience, but as relational structures realized in time and through the body. Second, it shows how these ancient insights illuminate contemporary musical practices, particularly in classic rock, where embodied rhythm, repetition, and communal listening enact aesthetic principles analogous to those recognized by the Pythagoreans. The discussion is organized into six sections: the following section (2) analyzes Pythagorean number beyond abstraction, emphasizing its experiential and proportional aspects; section 3 explores rhythm, proportion, and the body in ancient thought, foregrounding temporal and affective dimensions; section 4 applies these insights to classic rock, illustrating the ways in which rock music reactivates ancient concerns; section 5 situates these observations within contemporary aesthetic theory, showing how Gracyk, Cox, and Shusterman provide conceptual tools for interpretation; and section 6 concludes by synthesizing the argument and reflecting on the broader implications of recovering antiquity for aesthetics today.

In pursuing this structure, the article aims to demonstrate that ancient musical theories continue to offer resources for contemporary aesthetics. Recovery is understood not as simple historical reconstruction, but as conceptual engagement: rediscovering ideas, reinterpreting principles, and assessing their relevance for present-day practices. By foregrounding the temporal and embodied dimensions of music, we can move beyond

purely formalist frameworks and recognize the enduring significance of proportion and rhythm in shaping aesthetic experience. Classic rock, far from being an anomaly, exemplifies how these ancient insights illuminate modern artistic practices, bridging millennia of reflection on the relation between number, rhythm, and embodied life.

2. *Pythagorean number beyond abstraction*

The figure of Pythagoras occupies a peculiar position in the history of aesthetics. Frequently invoked as the emblem of a rationalist and intellectualist conception of music (Burkert 1972: 1-10; Huffman 1993: 3-12; Barker 1984: 1-5), Pythagorean thought is often reduced to the discovery of numerical ratios governing consonance and harmony. From this perspective, number appears as an abstract principle imposed upon sound, and music itself becomes a merely intelligible structure detached from bodily experience and affective response. Such a reading, however widespread, obscures important aspects of the Pythagorean tradition and risks projecting modern oppositions – between intellect and body, form and sensation – onto ancient theories that did not articulate them in the same way.

A preliminary difficulty lies in the absence of direct writings by Pythagoras himself. What is commonly referred to as “Pythagorean aesthetics” is in fact a heterogeneous body of testimonies, reconstructions, and later philosophical appropriations. Aristotle’s accounts in *Metaphysics* (985b23-986a2) and *De anima* (412a15-20), Plato’s engagements with harmony and number in the *Republic* (402-403a), and subsequent interpretations by authors such as Cicero in the *De re publica* (VI) form the core of this tradition. As Walter Burkert famously emphasized, Pythagoreanism should be understood not merely as a constellation of practices, cosmological views, and ethical commitments, but as a framework in which number functions as a principle of order rather than as a purely formal abstraction (Burkert 1972: 20-30).

In *Metaphysics* A 5, Aristotle attributes to the Pythagoreans the claim that things themselves are numbers or are constituted according to numerical principles (Aristotle, *Metaphysics* 985b23-986a2). This formulation has often been read as the earliest articulation of a mathematical ontology anticipating later rationalist conceptions of nature. Yet Aristotle also stresses that number, for the Pythagoreans, is not an empty formal structure but something encountered in the sensible order of the world,

particularly in musical phenomena. The discovery that consonant intervals correspond to simple numerical ratios is not presented as a purely theoretical insight but as an experiential revelation of order within sound itself.

This experiential dimension becomes clearer when one considers the concrete nature of these ratios. The octave (2:1), the fifth (3:2), and the fourth (4:3) are not merely abstract relations but audible differences in pitch that can be immediately perceived and recognized. As later reconstructions of Greek music emphasize, these proportions were encountered through practices such as tuning the lyre or dividing a string, where numerical relations correspond directly to sensible transformations of sound (West 1992: 18-26; Joost-Gaugier 2006: 23-35). The ear does not apprehend number as such; it apprehends patterned relations – intervals, repetitions, returns – that unfold in time. In this sense, numerical proportion is already temporalized in musical experience: it becomes something that can be anticipated, repeated, and embodied in listening. Number, therefore, is not opposed to experience but disclosed through it.

Music occupies a privileged place in this context precisely because it manifests number as something heard, felt, and enacted. As Andrew Barker has shown, harmonic ratios were never conceived independently from performance and listening practices (Barker 1984: 10-8). The numerical structure of music was inseparable from its perceptible effects on the listener, including pleasure, emotional modulation, and ethical influence. This point is reinforced by testimonies concerning musical education: as M.L. West notes, even philosophical figures such as Socrates are associated with instrumental practice, suggesting that musical knowledge involved embodied familiarity rather than purely theoretical understanding (West 1992: 26). Thus, even where number plays a foundational role, it does so within a framework that presupposes bodily engagement with sound.

This point becomes clearer when one considers the ethical and cosmological dimensions of Pythagorean harmony. In later testimonies, *harmonia* is described not merely as proportional relation but as a principle of attunement that unifies the soul, the body, and the cosmos. The soul itself is sometimes described as a kind of harmony, an idea Aristotle explicitly criticizes in *De anima* I 4, while nonetheless acknowledging its significance within earlier thought (Aristotle, *De anima* 407b27-408a18). What matters for present purposes is not the metaphysical accuracy of this claim, but its implication: harmony names a dynamic relation that is lived and enacted, not merely contemplated.

Plato's engagement with Pythagorean ideas both preserves and transforms this conception. In the *Republic*, musical harmony is explicitly connected to the formation of character and the regulation of desire. Musical modes and rhythms are said to shape the soul through habituation, operating below the level of explicit cognition (Plato, *Republic* 401d-403c). While Plato famously subordinates sensory pleasure to rational order, he never treats music as a purely abstract system. On the contrary, its power lies precisely in its capacity to organize bodily affects in accordance with intelligible principles. As Ernest McClain has argued, Platonic discussions of music often presuppose a deep engagement with numerical structures that are not merely theoretical but embedded in perceptual and performative contexts (McClain 1978: 15-25).

The *Timaeus* radicalizes this connection by embedding musical proportion within a cosmological framework. Here, the structure of the world-soul is described in terms of harmonic ratios analogous to those governing musical intervals (Plato, *Timaeus* 35b-36b). Yet the dialogue goes further: in its account of the motions of the heavens, Plato describes the planets as tracing complex circular paths characterized by what he calls the "back-circlings and advances of their circular courses on themselves" (*Timaeus* 40c). This formulation introduces a dynamic conception of order that is not static but rhythmic – structured by repetition, variation, and return. Cosmic order thus appears not only as proportion but as patterned movement in time. In this sense, the cosmos itself can be understood as a large-scale rhythmic system in which regularity and deviation coexist within an intelligible pattern. As A.P. David (2006: 207) has argued, ancient conceptions of rhythm – particularly in their connection with dance and circular movement – articulate a continuity between human motion and cosmic order, such that rhythm names not only a musical structure but a more fundamental mode of organized movement linking body and universe.

Cicero's *De re publica* offers a Roman rearticulation of this idea, introducing the famous image of the "music of the spheres." The celestial harmony described there is inaudible to human ears, yet Cicero insists that it follows the same proportional principles as earthly music. This harmony is not only a structure but a process: the movements of the celestial bodies generate a continuous, ordered pattern. The inaudibility of cosmic music does not make it irrelevant to human experience; rather, it reinforces its normative status. Human musical practices, as well as ethical and political forms of life, are implicitly measured against this larger rhythmic order. As Daniel Heller-Roazen (2011: 45-52) has suggested in his reading

of Platonic cosmology, the “song itself” points toward an order that exceeds immediate perception yet grounds it, linking audible and inaudible dimensions of harmony.

What emerges from these sources is a conception of number and harmony that cannot be adequately captured by the opposition between abstraction and embodiment. Number, in the Pythagorean tradition, is not an abstract schema imposed upon sound, but a principle disclosed through sonic experience and enacted through musical and cosmic patterns. Harmony, in turn, names a mode of attunement involving the body, the emotions, and the social order, while extending to the structured movements of the cosmos. Modern interpretations have often flattened this complexity by aligning Pythagorean aesthetics with a narrowly rationalist view of music; yet, as Carl Huffman (1993: 60-8) has shown, number remains inseparable from physical processes and perceptible effects. To treat harmony as a purely intellectual structure is therefore to overlook the experiential dimension that made musical proportion philosophically significant. Reconsidered in this way, Pythagorean thought opens a space for dialogue with contemporary aesthetics as an early attempt to think the unity of order and experience across sonic, bodily, and cosmic levels. The following sections will build on this reinterpretation by examining how rhythm and bodily experience function within ancient musical thought more broadly, before turning to classic rock as a contemporary site in which these tensions reemerge in transformed form.

3. Rhythm, proportion, and the body in ancient musical thought

While number and harmony provide the structural framework of ancient musical thought, rhythm (*rhythmos*) introduces a decisive shift toward temporality and bodily experience. Unlike harmony, which can be conceived in spatial and proportional terms, rhythm unfolds in time and directly implicates movement and corporeal responsiveness. Ancient discussions of music recognize this distinction, even when they seek to subordinate rhythm to rational order. As a result, rhythm becomes a privileged site for observing the tension between intelligibility and embodiment within classical aesthetics.

In early Greek usage, *rhythmos* does not simply denote metrical regularity. As Émile Benveniste noted, the term originally refers to a form in movement, a temporary configuration rather than a fixed structure (Benveniste 1969: 123). Although Benveniste’s linguistic analysis belongs to modern

scholarship, it captures an intuition already present in ancient sources: rhythm names a mode of organization inseparable from change and bodily enactment. Music, insofar as it is rhythmic, is never merely an object of contemplation; it is something that happens to and through bodies.

Plato's treatment of rhythm in the *Republic* makes this point explicit within a broader framework of education (*paideia*) and political formation. In the construction of the polis, the development of the *polites* depends on a carefully regulated balance between *mousikē* (musical education) and *gymnastikē* (bodily training) (Plato, *Republic* 401d-e; 411c-412a). Rhythm plays a central role in this process: together with melody and harmony, it enters the body through habituation, shaping affective responses prior to rational reflection (Plato, *Republic* 401d-402a). Musical training is therefore not merely aesthetic but political, insofar as it forms dispositions that align the individual with the order of the city. Rhythm mediates between body and polis, organizing movement, perception, and ultimately character.

This ambivalence toward rhythm persists throughout Plato's aesthetic reflections. On the one hand, rhythm must be regulated to ensure moral and political order; on the other hand, its efficacy depends on its capacity to move and affect bodies (Plato, *Republic* 401d-403c). Plato's concern is not that rhythm is bodily, but that bodily influence might escape rational control. Musical education thus aims not at eliminating rhythmic pleasure, but at aligning it with an intelligible conception of order. Rhythm, in this sense, becomes a site where number, habit, and corporeality intersect.

Of particular relevance is Aristotle's account of rhythmic and musical pleasure as something experienced bodily yet capable of contributing to intellectual enjoyment (Aristotle, *Politics* VIII, 1340a-1342b). The pleasure derived from music is not reducible to raw sensation; it involves recognition, anticipation, and patterned response over time. Rhythm structures these responses by organizing temporal experience, allowing listeners to perceive continuity, variation, and return. In this way, rhythm mediates between number and experience, translating proportional relations into lived temporal patterns that can be both felt and understood. Music thus engages the body not only as a passive receiver of stimuli, but as an active participant in the organization of temporal and affective experience.

This emphasis on temporality and patterned movement also resonates with the broader cosmological framework already discussed in relation to the "music of the spheres". The ordered motions of the heavens – described in terms of circularity, variation, and recurrence, including what can be understood as a circle with retrogressions (Plato, *Timaeus* 40c)

– suggest that rhythm is not confined to musical practice but expresses a more general principle of organization across bodily, civic, and cosmic domains. In this way, the same patterns of repetition and variation that structure musical experience can also be understood as operating at a cosmological level, reinforcing the idea that rhythm mediates between numerical order and embodied time.

Ancient theories of musical ethos further reinforce the connection between rhythm and the body. Musical rhythms were believed to influence posture, movement, and emotional disposition, shaping the listener's comportment toward the world. As Barker (1984: 25-30) has shown, discussions of rhythm in Greek musical theory are closely linked to dance and coordinated bodily motion. Music was thus never conceived as a purely auditory phenomenon, but as an integrated field in which sound, movement, and social practice converge.

Taken together, these perspectives show that rhythm is the point at which numerical proportion becomes temporally and bodily realized. It structures perception, action, and social coordination by organizing experience in time. For this reason, ancient attempts to regulate rhythm should be understood not as a rejection of embodiment, but as an acknowledgment of its aesthetic and political force. This insight will prove crucial in the following section, where the temporal and embodied dimensions of classic rock can be understood as a contemporary reconfiguration of these concerns.

4. Classic rock and the aesthetics of embodied rhythm

The discussion of rhythm and bodily engagement in ancient musical thought provides a conceptual bridge to contemporary musical practices, particularly in classic rock. Rock music exemplifies how rhythm, repetition, and synchronization structure aesthetic experience through time and movement. Musical form in this repertoire emerges not only from harmonic relations, but from patterns that organize sound into lived, corporeal configurations. In this sense, classic rock can be read as a contemporary instantiation of Pythagorean principles, in which proportion is realized as a temporal and embodied ordering of sound.

Rhythm in rock functions as a medium of shared bodily experience. Repetitive drum patterns, basslines, and guitar riffs generate entrainment, synchronizing listeners and producing forms of collective affective alignment (Gracyk 1996: 45-8). As Christoph Cox (2011: 102-7) argues, musical

structures unfold as temporal processes that inseparably involve perception, movement, and affect. From this perspective, proportion is not abstractly conceived but enacted through patterned temporal experience. This becomes particularly evident in concrete musical structures and their technical articulation.

One illustrative example is Led Zeppelin's *Kashmir* (1975), whose driving, repeated riff creates an immersive temporal environment. The piece's apparent simplicity is in fact supported by a more intricate harmonic design: the repetition is structured around chromatic, ascending chords unfolding in a modal sequence, which generate a sense of continuous tension and expansion within a highly stable rhythmic framework. This interplay between harmonic motion and rhythmic stasis reinforces the listener's embodied engagement, as the ear perceives variation while the body remains anchored to a persistent temporal pattern. The aesthetic force of the composition thus arises not from harmonic complexity alone, but from the way proportional relations are distributed over time and apprehended bodily.

A related exploration of proportion through rhythm can be observed in the use of irregular time signatures in certain forms of classic rock. For instance, the Grateful Dead's *Playing in the band* (1972) famously employs a 10/4 meter, disrupting the listener's expectation of symmetrical phrasing while still maintaining a coherent groove. This asymmetrical temporal structure does not inhibit bodily entrainment; rather, it reconfigures it, requiring the listener to inhabit a more complex pattern of movement and anticipation. In this sense, irregular meter functions analogously to Pythagorean notions of proportion: not as abstract calculation, but as a lived organization of temporal experience.

A comparable logic of embodied proportion can be found in *Baba O'Riley* by The Who (1971), a track whose aesthetic force rests more on the persistence of a rhythmic structure unfolding in time than on harmonic development. The song opens with a repeating synthesizer pattern that functions as an ostinato, establishing a temporal grid long before the entrance of drums, bass and voice. This pattern is numerical in a minimal sense: it is defined by repetition, duration and intervallic regularity rather than by melodic expressiveness. What is crucial, however, is the way this abstract structure becomes bodily apprehensible. As the percussion enters, the listener's body is drawn into synchronization with a pattern that was already operative at the level of temporal organization. The experience of rhythm here precedes interpretation or emotional identification. It is felt as a proportional ordering of time that the body learns to inhabit.

In this respect, Baba O' Riley exemplifies a contemporary realization of the alignment of temporal relations apprehended through embodied listening.

A different but equally instructive case is provided by Black Sabbath's *Iron man* (1970), where rhythmic proportion is realized through slowness, weight and regularity. The song's iconic riff is built on a deliberately simple rhythmic figure, articulated at a heavy and measured tempo. Rather than inviting light or spontaneous movement, this rhythm imposes itself on the listener's body, producing a sense of gravitational pull and inevitability. The proportional order at work is not one of balance or symmetry, but of duration and resistance. The body feels the insistence of repetition and the physical demand of following the riff's tempo. This mode of rhythmic embodiment resonates strongly with ancient conceptions of music as a force capable of shaping bodily disposition and affective response. Here, proportion is not grasped intellectually but enacted somatically, reinforcing the idea that musical order operates through the lived experience of time.

A further example can be found in Iron Maiden's *The rime of the ancient mariner* (1984), whose powerful and repetitive riff of harmonized guitars unfolds over a galloping and immersive rhythmic pattern. Here, repetition operates as a structuring principle that sustains both tension and continuity, while the rhythmic propulsion produces a strong sense of forward motion that is immediately grasped at the level of the body. The layering of melodic and rhythmic elements generates a form of embodied *harmonia*, in which proportion is not statically perceived but dynamically enacted through listening. As in the previous cases, the aesthetic experience emerges from the interaction between numerical regularity, temporal extension, and corporeal response.

The embodied nature of rock rhythms is further enhanced by performance contexts. Live concerts amplify the physicality of sound, allowing listeners to feel vibrations through their bodies and to participate in collective entrainment. Here, the social dimension of rhythm – emphasized in both Plato and Aristotle – is particularly salient. Music becomes a practice not only of listening but of shared bodily experience, shaping emotional states and communal identity.

It is worth noting that this perspective challenges certain conventional hierarchies in aesthetics that privilege harmony, melody or compositional complexity as primary markers of value over rhythm. As Gracyk and other scholars of popular music have observed, rock's appeal derives precisely

from its temporal and affective patterns, which operate through repetition, variation and embodied engagement (Gracyk 1996: 45-50); Shusterman 2008: 20-30). From this standpoint, the aesthetic significance of rhythm – long recognized in ancient thought – remains central to contemporary musical experience, albeit in a transformed register.

Classic rock thus exemplifies a continuity with ancient ideas of musical proportion and rhythm while simultaneously expanding their scope. The bodily and social dimensions of rhythm, long acknowledged, but often minimized in intellectualist interpretations of Pythagoreanism, find renewed expression in amplified sound, extended repetition and communal listening. In other words, rock music reactivates the ancient interplay between number, rhythm and corporeal experience, making it tangible and immediate for modern audiences.

By approaching classic rock through the lens of Pythagorean aesthetics, we can reconsider broader questions about musical experience. Rhythm emerges as the site where order, perception, and affect converge. This suggests that aesthetic evaluation must attend not only to compositional structure, but also to how music is experienced in time and through the body. Ancient theory thus remains relevant, not as a historical curiosity, but as a framework for understanding music as an embodied and temporally structured practice.

5. Contemporary aesthetics and the return of Pythagorean themes

The preceding sections have highlighted the centrality of rhythm, proportion and embodied experience in both ancient musical thought and classic rock. Contemporary aesthetic theory provides a conceptual framework for understanding how these ideas remain operative today. Rather than treating rock as a deviation from classical aesthetics, recent scholarship allows us to recognize it as a site in which Pythagorean themes – number, rhythm and embodied order – reappear in transformed form. Theodore Gracyk's work on popular music is crucial in this regard because it shifts the focus of aesthetic evaluation away from purely formal complexity toward temporality and collective experience. In *Rhythm and noise*, Gracyk (1996: 45-50) argues that rock music is not organized primarily around harmonic development, but around groove, repetition and the stabilization of temporal patterns that listeners learn to inhabit. These patterns generate a shared field of embodied coordination: listeners do not

simply hear structure; they participate in it through synchronized movement and affective alignment. In this sense, Gracyk's account can be read as a contemporary reformulation of the Pythagorean insight that proportion is not merely an abstract relation, but something disclosed through perceptual and bodily engagement with patterned sound.

Christoph Cox's philosophy of sound deepens this perspective by foregrounding the material and processual nature of musical experience. In *Sonic flux* (2011) and *Sonic thought* (2018), Cox argues that sound is not best understood as a static object, but as a temporal flow that unfolds and transforms, engaging listeners as embodied participants in its movement (Cox 2011: 102-7; Cox 2018: 39-55). Listening, on this view, is not a detached cognitive act but a form of immersion in dynamic processes that involve perception, affect and bodily response. This emphasis resonates strongly with the ancient conception of rhythm as patterned movement in time: just as in Plato's *Timaeus* (40c) order is enacted through motion, here musical order is realized as flux, continuity and variation. Cox thus provides a vocabulary for understanding how proportion becomes experiential without reducing it to static numerical form.

Richard Shusterman's somaesthetics offers a complementary framework by placing the body at the center of aesthetic experience. For Shusterman, aesthetic perception is inseparable from bodily awareness, training and cultivation; the body is not merely the receiver of sensations but an active medium through which meaning and value are produced (Shusterman 2008: 20-30). Applied to music, this implies that rhythm and proportion are not simply heard but enacted through posture, movement and attention. Somaesthetics thus makes explicit what remains only partially articulated in ancient sources: that the experience of order is inseparable from the cultivation of embodied responsiveness.

Recent work by Giovannelli further extends this line of thought by arguing that the aesthetic evaluation of popular music cannot be separated from the ways in which it structures experience and meaning in everyday life (Giovannelli 2025: 10-25). Rather than treating songs as isolated objects, Giovannelli emphasizes their role in shaping attention, affect and interpretation across temporal contexts. This approach highlights that repetition and rhythmic organization are not merely formal devices, but mechanisms through which listeners inhabit and make sense of musical time. In this respect, Giovannelli's analysis converges with both somaesthetics and Pythagorean thought: musical order is not simply given, but realized through patterns of engagement that link perception, embodiment and value.

Taken together, these perspectives allow for a more precise articulation of the continuity between ancient and contemporary aesthetics. What the Pythagorean tradition formulated in terms of number and harmony can be understood, through Gracyk, Cox, Shusterman and Giovannelli, as the organization of temporal and bodily experience. Contemporary aesthetic theory thus does not merely reinterpret ancient ideas, but clarifies their ongoing relevance. The Pythagorean insight that order must be experienced – heard, felt and enacted – finds renewed expression in modern musical practices like classic rock, where rhythm functions as the primary medium through which number becomes time and structure becomes experience.

6. Conclusion: rethinking harmonia today

This article has traced a conceptual trajectory from the Pythagorean understanding of number and harmony, through Platonic and Aristotelian reflections on rhythm and the body, to the embodied experience of classic rock and contemporary aesthetic theory. Ancient musical thought, far from being an abstract intellectual exercise, provides resources for understanding music as a lived and temporal phenomenon. By emphasizing rhythm, proportion and bodily engagement, the Pythagorean tradition anticipates concerns that remain central to contemporary aesthetics.

Classic rock exemplifies the continued relevance of these insights. Its emphasis on repetition, groove and collective entrainment shows that musical value emerges not only from formal structure, but from the organization of time, movement and affect. In this sense, contemporary music can be understood as a modern realization of principles already implicit in Pythagorean thought.

The recovery of antiquity proposed here is therefore conceptual rather than historical. Ancient frameworks offer tools for interpreting contemporary musical practices by foregrounding rhythm, embodiment and temporal structure. This perspective challenges traditional hierarchies that privilege harmonic complexity, highlighting instead the role of lived patterns and shared experience.

The interplay between number, rhythm and embodiment thus reveals a continuity across historical contexts. By recovering these insights, we gain not only a deeper understanding of ancient theory, but also a more precise way of thinking about music as an embodied and temporally structured art form.

Bibliography

Classical sources

- Aristotle, *De anima*, Engl. transl. J.A. Smith, in *The Complete Works of Aristotle*, vol. I, Princeton, Princeton University Press, 1984.
- Aristotle, *Metaphysics*, Engl. transl. C.D.C. Reeve, Indianapolis, Hackett Publishing, 2016.
- Aristotle, *Politics*, trans. C. Lord, Chicago, University of Chicago Press, 2013.
- Cicero, *On the commonwealth and On the laws*, Engl. transl. J.E.G. Zetzel, Cambridge, Cambridge University Press, 1999.
- Plato, *Republic*, Engl. transl. C.D.C. Reeve, Indianapolis, Hackett Publishing, 2004.
- Plato, *Timaeus*, Engl. transl. D.J. Zeyl, Indianapolis, Hackett Publishing, 2000.

Contemporary sources

- Barker, A., *Greek musical writings*, vol. I, *The musician and his art*, Cambridge, Cambridge University Press, 1984.
- Benveniste, É., *Le vocabulaire des institutions indo-européennes*, vol. I, Paris, Les Éditions de Minuit, 1969.
- Burkert, W., *Lore and science in ancient Pythagoreanism*, Engl. transl. E.L. Minar Jr., Cambridge (MA), Harvard University Press, 1972.
- Cox, C., *Sonic flux: sound, art, and metaphysics*, Chicago, University of Chicago Press, 2011.
- Cox, C., *Sonic thought: sound, philosophy, and music*, Chicago, University of Chicago Press, 2018.
- David, A.P., *The dance of the Muses: choral theory and ancient Greek poetics*, Oxford, Oxford University Press, 2006.
- Giovannelli, A., *Popular song and ethics: ethical perspectives and personal qualities*, "The British journal of aesthetics", 65/1 (2025), pp. 19-32.
- Gracyk, T., *Rhythm and noise: an aesthetics of rock*, Durham, Duke University Press, 1996.
- Heller-Roazen, D., *The fifth hammer: Pythagoras and the disharmony of the world*, New York, Zone Books, 2011.
- Huffman, C., *Philolaus of Croton: Pythagorean and Presocratic*, Cambridge, Cambridge University Press, 1993.
- Joost-Gaugier, C.L., *Measuring heaven: Pythagoras and his influence on thought and art in antiquity and the Middle Ages*, Ithaca, Cornell University Press, 2006.

McClain, E.G., *The Pythagorean Plato: prelude to the song itself*, York Beach, Nicolas-Hays, 1978.

Shusterman, R., *Body consciousness: a philosophy of mindfulness and somaesthetics*, Cambridge, Cambridge University Press, 2008.

West, M.L., *Ancient Greek music*, Oxford, Oxford University Press, 1992.