

Homo Resonans: sound, resonance, and the emergence of sacred consciousness

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ABSTRACT

This paper examines the roles of sound, resonance, and rhythmic attunement in the emergence of consciousness and proposes a reconsideration of the human being as *Homo resonans*: a fundamentally relational organism whose awareness unfolds through embodied participation in acoustic worlds. Drawing on phenomenology, anthropology, archaeology, sound studies, neuroscience, affect theory, and religious studies, the study argues that sound precedes symbolic language both evolutionarily and developmentally, serving as a primary medium through which perception, memory, sociality, ritual practice, and sacred experience are formed.

Through a synthesis of hermeneutic interpretation, phenomenological analysis, and interdisciplinary scholarship, the paper explores how rhythm, vibration, repetition, and listening shape consciousness before conceptual abstraction. Particular attention is given to pre-historic ritual acoustics, proto-musical communication, oral consciousness, sacred vocality, acoustemology, and contemporary research on neural oscillations and rhythmic synchronization. Resonance is examined not merely as an acoustic phenomenon or metaphor but as a constitutive relational structure linking body, environment, memory, affect, culture, and consciousness. Ritual sound practices, collective vocalization, and rhythmic entrainment suggest that awareness emerges through participatory attunement rather than detached cognition alone, while contemporary neuroscience reinforces this view through evidence of oscillatory coordination across neural and bodily systems. The paper advances *Homo resonans* as a philosophical anthropology grounded in resonance, embodiment, and relational becoming. Within this framework, sound is understood not merely as an object of perception but as a fundamental condition through which consciousness emerges, meaning is constituted, and the sacred is encountered.

Key words: *Homo resonans*; resonance; consciousness; acoustemology; ritual acoustics; sacred sound.

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“The world is sound”

Nada Brahma

Introduction. Reframing the Human

What if humans are not primarily thinking beings—but resonant beings?

This question challenges one of the central assumptions of modern Western thought: that rational cognition constitutes the defining essence of the human being. From the Cartesian separation of mind and body to contemporary theories of symbolic cognition and information processing, dominant philosophical traditions have understood consciousness as fundamentally intellectual, representational, and detached from lived sensory experience. Human identity has consequently been defined through reasoning, language, abstraction, and symbolic manipulation. Yet such accounts may overlook a more primordial dimension of existence. Before humans speak, categorize, calculate, or theorize, the body already perceives, responds, vibrates, and resonates. Perception precedes abstraction; attunement precedes conceptualization. We enter the world through rhythm, pulse, breath, vibration, and sound before language. Long before symbolic systems stabilize meaning into

words and signs, awareness unfolds within dynamic fields of sensory engagement and acoustic relation.

What emerges here is not simply an alternative theory of cognition but a different understanding of being itself. We do not first stand apart from the world to interpret it intellectually. Rather, existence unfolds through rhythms already felt, inhabited, and embodied before they become objects of reflection. Consciousness appears initially not as detached observation but as resonant immersion. The biological classification *Homo sapiens sapiens* identifies humanity as a single species, while philosophical formulations such as *Homo faber*, *Homo economicus*, *Homo ludens*, and *Homo religiosus* illuminate different dimensions of human existence. These formulations need not be understood as competing anthropologies but as complementary expressions of the same condition: the maker, the player, the thinker, the worshipper, and the meaning-seeker coexist within human life. This study proposes that beneath these manifestations lies a more fundamental structure: the human being as *Homo resonans*.

The concept of resonance employed here extends beyond its strictly acoustic meaning. Resonance is a dynamic process of attunement through which bodies, emotions, environments, memories, and social systems respond to one another in patterns of reciprocity, amplification, and coherence. It is not merely a property of sound but a mode of relation through which identity, culture, and conscious experience emerge. To describe the human being as resonant is to emphasize that existence unfolds relationally, rhythmically, and corporeally rather than through isolated cognition detached from the world. At the phenomenological level, resonance is encountered not first as a concept but as lived intensity. One does not simply hear resonance; one undergoes it. The body senses vibration before reflective thought organizes experience into categories. Rhythm is felt before explanation. Resonance therefore belongs to a pre-conceptual field of awareness in which self and world have not yet become fully differentiated. Existence is experienced first as participation in a meaningful and affective reality rather than as detached observation.

This argument draws significantly upon the phenomenology of Maurice Merleau-Ponty (1962), whose critique of Cartesian dualism and reductive accounts of perception reestablished embodiment as foundational to conscious life. In *Phenomenology of Perception*, he argues that perception is not secondary to thought but the primary ground from which reflective awareness emerges. Against conceptions of the body as a mere biological object or physical mechanism, he develops the notion of the lived body as the medium through which the world is disclosed and experienced. The body is not something possessed by consciousness but the very structure through which subject and world enter into relation. By redirecting philosophical attention to lived experience, Merleau-Ponty demonstrates that awareness is always situated, perceptual, and embodied. Yet while his analysis powerfully illuminates embodiment, its acoustic and vibrational dimensions remain comparatively underdeveloped. The present study extends these phenomenological insights by proposing that resonance and vibration are not secondary sensory phenomena but primary structures through which embodied perception, attunement, and worldly engagement become possible.

Recent developments in posthumanist and new materialist thought further reinforce this reorientation away from disembodied conceptions of cognition and subjectivity. In *The Posthuman*, Rosi Braidotti (2013) critiques the autonomous and self-sufficient subject inherited from Enlightenment humanism, proposing instead a relational understanding of existence grounded in interdependence, embodiment, and becoming. Responding to a world

shaped by technological mediation, globalization, ecological interconnection, and increasingly porous boundaries between human and nonhuman life, she challenges anthropocentric assumptions and emphasizes the constitutive entanglement of subjects within broader material, biological, and environmental networks. Although Braidotti does not address acoustic experience directly, her account of embodied relationality provides a valuable framework for understanding resonance not merely as metaphor but as an ontological condition. From this perspective, consciousness appears not as an isolated interior domain but as an open and emergent process constituted through ongoing interactions among bodies, technologies, environments, and affective forces.

Similarly, Karen Barad's theory of "intra-action", developed in *Meeting the Universe Halfway* (2007), challenges conventional distinctions between subject and object by arguing that entities do not pre-exist their relations but emerge through specific relational configurations. Within Barad's framework of agential realism, reality is not composed of separate natural and social domains but of dynamic entanglements in which matter, meaning, agency, and knowledge are co-constituted. Intra-action designates the ongoing processes through which boundaries, identities, and phenomena are enacted rather than assumed as given. Barad's account deepens the phenomenological orientation developed here by suggesting that resonance is not an interaction between already constituted entities but a process through which relational beings become perceptible and materially articulated. Acoustic attunement thus appears not merely as sensory reception but as a mode of world-formation in which subjects, environments, and meanings arise within an ongoing field of embodied entanglement. Although Barad's agential realism differs from Merleau-Ponty's phenomenology by questioning the priority traditionally accorded to the experiencing subject, both perspectives converge in rejecting dualistic conceptions of human existence. The present study draws upon this shared emphasis on relationality while retaining the phenomenological importance of lived embodied experience.

A related development appears in David Abram's ecological phenomenology (1997), which emphasizes the reciprocal and participatory relationship between perception and the more-than-human world. In *The Spell of the Sensuous*, Abram challenges the modern assumption that awareness exists apart from its environment, arguing instead that perception unfolds through continuous sensory engagement with a living earth. Drawing upon Merleau-Ponty's phenomenology, Indigenous traditions, and ecological thought, he contends that cognition remains deeply dependent upon the wider field of relations from which it emerges. Perception is therefore not the passive reception of an external reality but an active exchange between embodied beings and the sensuous worlds they inhabit. Abram further highlights the sensory foundations of language, suggesting that human speech, even in its most abstract forms, retains echoes of the expressive vitality of the natural world. Yet while his work illuminates the ecological and participatory dimensions of experience, the ontological significance of sound, vibration, and resonance remains only partially explored. The present study extends Abram's ecological phenomenology by developing an acoustic account of relationality in which listening, rhythm, and vibrational attunement function as primary modes of engagement with a living world.

The philosophy of listening developed by Don Ihde (2007) and Jean-Luc Nancy (2007) further clarifies this orientation toward embodied and relational perception. In *Listening and Voice*, Ihde challenges the predominance of vision in Western philosophy by emphasizing the distinctive character of auditory experience. Unlike visual perception, which often establishes distance be-

tween observer and observed, sound envelops the listener, situating awareness within a dynamic field that includes language, music, silence, and the broader sonic environment. His analysis reveals the auditory as a fundamental yet frequently overlooked dimension of experience, one that resists reduction to objectifying forms of knowledge. Nancy extends this insight in *Listening* by exploring the relationship among sound, resonance, and subjectivity. Distinguishing listening from mere hearing, he argues that it entails a heightened openness to resonance through which meaning and selfhood emerge. The body itself functions as a resonant chamber, responding through both external attentiveness and internal vibration. Because sound cannot be fully held at a distance, listening implicates the whole being in processes of response. Subjectivity therefore appears not as a self-contained interiority but as an ongoing reverberation shaped through exposure to others, environments, and the acoustic world.

An important anthropological extension of this phenomenological orientation appears in Steven Feld's concept of "acoustemology", a term combining acoustics and epistemology to describe sound as a fundamental mode of knowing, inhabiting, and relating to the world. In *Sound and Sentiment* (2012), Feld's ethnographic study of the Kaluli people of Papua New Guinea, the author demonstrates that sound functions not merely as a sensory phenomenon but as a cultural medium through which social relations, emotional life, memory, and cosmological understanding are expressed and sustained. Through his analysis of weeping, song, poetics, and environmental soundscapes, Feld reveals how auditory practices embody deeply felt sentiments and mediate relations among persons, places, spirits, and the natural environment. Listening thus emerges as a relational and ecological practice embedded in lived experience rather than a passive reception of acoustic stimuli. Feld's contribution is particularly valuable because it grounds phenomenological accounts of resonance in concrete cultural realities. Resonance appears not simply as a philosophical metaphor but as a lived mode of world-disclosure through which individuals and communities orient themselves within meaningful horizons. Acoustic experience participates in the formation of identity, memory, and belonging, demonstrating that sound is inseparable from the social and symbolic realities it helps constitute.

While Feld's concept of acoustemology emerges from the ethnographic specificity of Kaluli sound practices, Nancy's philosophy of listening develops a more explicitly phenomenological account of resonance and subjectivity. Rather than collapsing these perspectives into a single theoretical position, the present study understands them as complementary. Feld demonstrates how sound mediates culturally situated forms of knowing and belonging, whereas Nancy illuminates the ontological and existential dimensions of resonance. Together, they reveal how acoustic experience is simultaneously culturally constituted and fundamentally relational.

Within this framework, consciousness appears less as a static faculty of abstract reasoning than as a dynamic process of attunement. Human beings are embodied and relational organisms whose awareness develops through patterns of resonance linking body, environment, memory, emotion, and social life. Sound is not merely an object perceived by consciousness; it is one of the conditions that situate awareness within a meaningful horizon of experience. The pages that follow explore this proposition through an interdisciplinary investigation of sound, resonance, ritual, symbolic emergence, and sacred experience. Tracing a path from prehistoric soundscapes to symbolic language, and from ritual acoustics to neural synchronization, the study argues

that consciousness remains deeply rooted in acoustic and rhythmic structures that both precede and sustain symbolic thought. Drawing inspiration from Feld's acoustemological perspective, it extends these insights toward a broader phenomenology and ontology of resonance, integrating anthropology, phenomenology, sound studies, archaeology, and consciousness research. Ultimately, the paper proposes the figure of *Homo resonans*: the human being understood not merely as a rational or symbolic creature but as a resonant being whose existence unfolds through ongoing attunement.

The originality of the present study lies not in introducing entirely new concepts but in bringing into systematic dialogue approaches that have largely developed independently. By integrating phenomenology, acoustic anthropology, archaeology, sound studies, neuroscience, and religious studies, the paper proposes *Homo resonans* as a philosophical anthropology in which resonance constitutes a foundational condition for the emergence of consciousness. In this way, the study extends phenomenological accounts of embodiment by foregrounding sound and vibration as primary structures of lived experience while placing contemporary neuroscientific research on neural oscillations into dialogue with anthropological and philosophical understandings of resonance. The paper's principal contribution, therefore, is the articulation of an interdisciplinary framework through which consciousness, symbolic life, and sacred experience may be understood as emerging from processes of embodied acoustic attunement.

The notion of the sacred employed in the present study is understood primarily in a phenomenological and anthropological sense rather than as referring exclusively to institutional religion or theological doctrine. It designates modes of experience in which reality is encountered as possessing heightened presence, relational depth, and existential significance through processes of embodied resonance and participatory attunement. While such experiences are frequently articulated within ritual and religious traditions, they are not confined to them. In this sense, sacred consciousness refers to a mode of awareness in which resonance becomes a medium through which meaning, belonging, and transcendence are disclosed. This understanding is informed by Eliade's conception of the sacred as a distinctive mode of experiencing reality (1987), while also recognizing, following Turner (1969), Bell (1992), and Rappaport (1999), that ritual provides one of the principal cultural contexts through which such forms of consciousness are enacted, embodied, and transmitted. Taken together, these considerations suggest that *Homo resonans* should be understood not simply as a descriptive metaphor but as a heuristic model for investigating the emergence of consciousness through embodied resonance across biological, cultural, and spiritual domains.

A tripartite anthropology of consciousness

The present study is informed by a tripartite theoretical and methodological framework comprising hermeneutics, phenomenology, and noetics. Developed through earlier investigations of dialogical ethnography, performativity, mythology, identity, and transcendence (Kavouras 2006a, 2021, 2023a, 2023b, 2023c), the framework provides an integrated approach to interpretation, lived experience, and direct awareness. While these earlier studies developed the tripartite framework primarily through ethnographic, performative, and hermeneutic investigations, the present study extends that framework into the interdisciplinary fields of acoustic

anthropology, sound studies, and consciousness research. In this respect, *Homo resonans* represents not a reformulation of the earlier model, but its application and further development within a broader philosophical anthropology centred on resonance, embodiment, and relational becoming.

The framework is grounded in anthropology, understood as the study of human diversity and difference across cultures, historical periods, and modes of existence. At the same time, it remains informed by contemporary scientific and technological developments in the exploration of both the microcosm and the macrocosm, including advances in genetics, neuroscience, and quantum physics. Rather than treating the sciences and the humanities as separate domains, the theory seeks to establish a dialogue between them, recognizing that both contribute to humanity's evolving understanding of reality.

The approach is fundamentally interdisciplinary and cross-disciplinary. Within the humanities, it draws extensively from the performing arts—particularly storytelling, music, and theatre—which are understood as closely related to ritual and ceremonial forms of knowledge and practice. It also engages literary traditions ranging from ancient sources, such as Greek tragedy and world mythologies, to modern and postmodern writings concerned with imperialism, anti-colonialism, existentialism, and the human condition. Furthermore, it incorporates insights from the contemplative and mystical traditions of diverse cultures, including forms of shamanism, yoga, Sufism, Taoism, Zen Buddhism, and the ascetic traditions of Orthodox Christianity.

At the core of the theory lies the proposition that our understanding of reality is not identical with our direct awareness of reality. Human beings encounter the world through multiple layers of interpretation, experience, and awareness. Each of these modes reveals particular aspects of reality while simultaneously concealing others.

Hermeneutics constitutes the first dimension. Interpretation generates images, representations, narratives, and conceptual frameworks through which reality becomes meaningful. Every interpretation discloses certain aspects of reality while obscuring others, and interpretations of interpretations accumulate across cultures and historical periods, producing a kaleidoscopic multiplicity of perspectives through which the world, others, and the self are perceived. Hermeneutics, therefore, operates within a fundamentally mediative and differentiating structure. It presupposes a subject, an object, and the relation between them. Through language, symbols, and cultural forms, it articulates distinctions, generates meaning, and reveals the diversity of human understanding.

Phenomenology constitutes the second dimension. Although still mediated by the relationship between subject and object, it shifts attention away from interpretative constructions toward lived experience itself. Rather than emphasizing the plurality of meanings, phenomenology focuses on the singularity of experience as it emerges in consciousness. The mind temporarily brackets the diversity of interpretations to attend more directly to what is experienced. Here, reality is approached not primarily as an object of explanation but as a field of immediate lived presence. Phenomenology moves closer to the experiential ground from which interpretations arise.

Noetics constitutes the third dimension. It refers to intuitive, self-reflexive awareness in which mediation and duality are progressively reduced or suspended. In noetic awareness, reality is neither primarily interpreted nor merely experienced; it is directly apprehended. This mode of knowing represents a culmination of self-awareness in *Homo sapiens sapiens*, whereby consciousness becomes aware of itself as consciousness. The distinction between

subject and object, observer and observed, self and world becomes increasingly transparent. Noetics, therefore, concerns a participatory form of knowing grounded in direct awareness rather than in conceptual representation.

The movement from hermeneutics to phenomenology and from phenomenology to noetics may be understood as a progressive reduction of mediation. Hermeneutics reveals the multiplicity of meanings; phenomenology reveals the singularity of lived experience; noetics reveals the possibility of direct awareness beyond conceptual and experiential dualities. These dimensions should not be understood as mutually exclusive stages but as complementary modes of human knowing, each possessing its own validity and domain of application.

Taken together, hermeneutics, phenomenology, and noetics constitute a comprehensive framework for investigating consciousness, culture, and reality. The framework seeks to integrate interpretative, experiential, and intuitive modes of knowing, while remaining attentive to the diversity of human traditions, the insights of contemporary science, and the enduring quest to understand the relationship between self, world, and being.

The present study employs this tripartite framework throughout. The archaeological, anthropological, philosophical, religious, and neuroscientific materials discussed below are approached hermeneutically as systems of meaning, phenomenologically as forms of lived experience, and noetically as expressions of direct participatory awareness. Together, these dimensions provide the methodological basis for the exploration of *Homo resonans*.

These three dimensions should not be understood as rigid analytical categories imposed upon the material, but as complementary perspectives that remain in continuous dialogue throughout the present study. Accordingly, the discussions that follow move between hermeneutic interpretation, phenomenological description, and noetic reflection according to the particular character of the archaeological, anthropological, philosophical, and neuroscientific evidence under consideration (Figure 1).

The primacy of sound

Sound precedes language both evolutionarily and developmentally. Before symbolic systems stabilized meaning into grammar and representation, humans encountered the world acoustically: through pulse, rhythm, vibration, breath, and tonal variation. The auditory field constitutes one of the earliest dimensions of experience, shaping perception before reflective cognition. In this sense, sound is not secondary to consciousness but foundational to its emergence. Its significance begins before birth. The fetus encounters rhythmic auditory stimulation within the maternal body long before visual perception becomes dominant. Heartbeat, breath, movement, and vocal resonance create an enveloping acoustic environment in which rhythm and vibration are experienced directly through the body. Awareness develops not through detached observation but through immersion in resonant patterns already felt somatically. Listening precedes seeing; vibration precedes conceptual distinction. At this primordial level, sound is not yet objectified as an external phenomenon. It is lived as atmosphere, continuity, and corporeal participation. The body does not initially stand apart from acoustic experience to analyze it; rather, it is carried by rhythm before reflective separation emerges. Acoustic awareness thus belongs to a pre-reflective dimension in which self and environment remain intertwined.

Such observations challenge philosophical traditions that privilege symbolic cognition as the defining feature of humanity.

Symbolic cognition refers to the capacity to construct meaning through signs, language, and abstraction. While central to human culture, this capacity may arise from more primordial forms of perception grounded in rhythm and acoustic attunement. Unlike visual representation, which often separates subject from object, sound surrounds, penetrates, and synchronizes bodies within shared temporal fields. Hearing situates the perceiver within an immersive and participatory environment. This distinction between acoustic and symbolic cognition is crucial for understanding the formation of consciousness. Acoustic cognition may be understood as a mode of knowing grounded in rhythm, vocalization, embodied listening, and affective participation. Meaning here is not primarily abstract or representational but experiential, relational, and socially enacted. Symbolic cognition, by contrast, stabilizes experience into signs, concepts, and linguistic structures that enable abstraction, reflection, and formal communication. The transition from acoustic immediacy to symbolic representation marks a significant transformation in human evolution, yet symbolic systems never fully detach from the embodied and sonic foundations from which they arise.

Steven Mithen's *The Singing Neanderthals* (2006) supports this argument by challenging evolutionary accounts that privilege language while marginalizing music. Drawing upon evidence from archaeology, evolutionary anthropology, neuroscience, developmental psychology, and comparative studies of non-human

primates, Mithen argues that music occupies a central rather than peripheral place in the emergence of human cognition. He proposes that early hominin communication consisted of a holistic mode of vocal expression integrating emotion, gesture, rhythm, and vocalization before the development of fully differentiated language. Communication, in this account, was organized not around discrete semantic units but around expressive and socially coordinated interaction. Mithen's contribution is particularly significant because it questions the assumption that language evolved solely through increasingly sophisticated symbolic representation. Instead, he argues that music-like communication played an important role in the development of social cohesion, emotional expression, and cognitive complexity, contributing to the conditions from which language later emerged. Sound functioned not simply as a vehicle for transmitting information but as a medium through which social bonds, shared attention, and collective participation were established and sustained. At the same time, Mithen's reconstruction of prehistoric communication necessarily relies upon interdisciplinary inference rather than direct evidence, and the precise evolutionary relationship between music and language remains a subject of ongoing debate. Nevertheless, his central insight remains philosophically important: the origins of communication may lie not exclusively in symbolic representation but in embodied, rhythmic, and affective forms of sonic interaction. Resonance and attunement appear, from this perspective, not

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A Philosophical Anthropology of Resonance and Consciousness

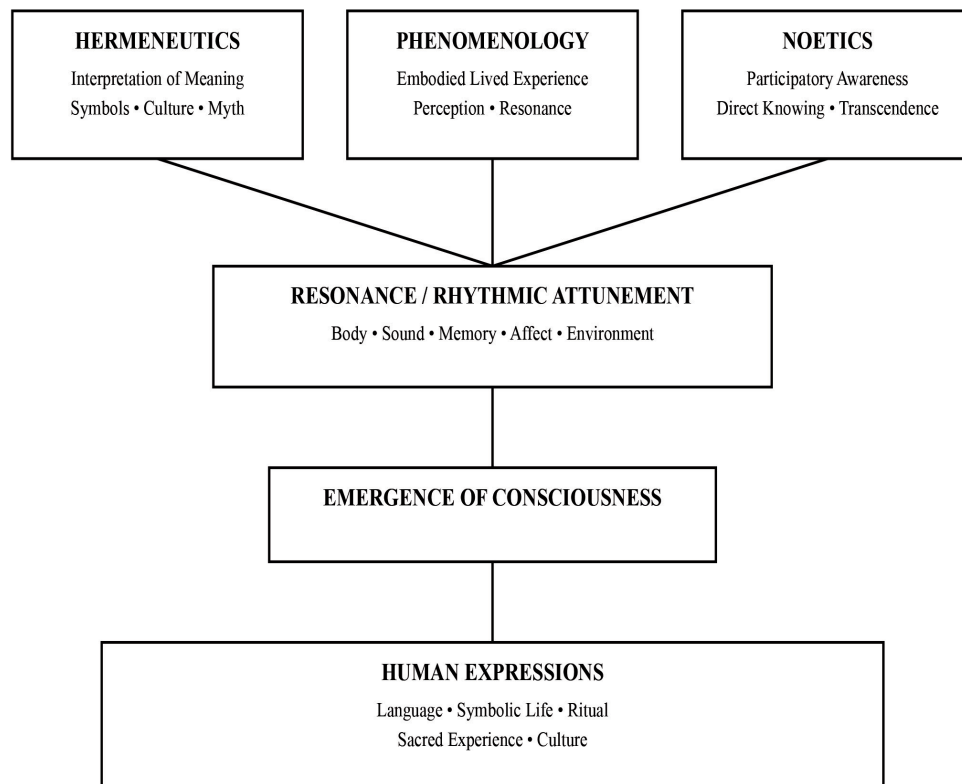


Figure 1. The conceptual framework of Homo resonans.

as secondary cultural developments but as foundational dimensions of human awareness and social life.

A complementary perspective appears in Jonathan Sterne's *The Audible Past* (2003), which examines sound not simply as a sensory phenomenon but as a historically and culturally structured mode of knowledge. Rather than treating sound reproduction technologies as neutral inventions, Sterne traces the cultural, scientific, and philosophical conditions that made modern auditory practices possible. Through his analysis of telephony, phonography, and related technologies, he demonstrates that listening is shaped by historically specific assumptions about bodies, communication, perception, and knowledge. In doing so, Sterne challenges both the visual biases that have often characterized accounts of modernity and the tendency to regard sound as a secondary object of analysis. His work reveals auditory experience as a distinctive domain of cultural organization and epistemological practice, possessing its own histories, forms of mediation, and modes of understanding. Sterne's contribution is valuable because it demonstrates that listening is not a passive sensory activity but a historically situated mode of knowing and relating. Sound emerges as a significant medium through which identities, memories, technologies, and social relations are organized and transmitted. At the same time, his analysis remains primarily concerned with the cultural and technological mediation of sound in modernity rather than with the deeper phenomenological or ontological significance of resonance itself.

The present study extends these insights by moving beyond sound as a cultural object toward resonance as a constitutive process. Resonance is approached not simply as auditory perception but as a dynamic structure through which bodies, emotions, memory, and awareness become attuned within patterned relations. From this perspective, sound technologies and auditory cultures represent particular historical expressions of a more fundamental condition: the resonant processes through which human beings participate in, interpret, and inhabit meaningful worlds. This emphasis on patterned relation is essential. Consciousness does not arise from isolated sensory events but through recurring rhythmic organization. Patterned vibration may be understood as the structured repetition of oscillatory processes through which coherence and meaning become perceptible. Rhythm organizes attention; repetition stabilizes memory; synchronized movement and vocalization generate collective identity. Through recurring acoustic patterns, individual perception becomes integrated into shared temporal experience. At the phenomenological level, repetition is never merely mechanical recurrence. It deepens familiarity, sedimenting experience within bodily memory until rhythm becomes lived orientation. What is repeated gradually acquires affective density, symbolic significance, and communal meaning. Through recurrence, sound becomes a medium through which memory is preserved, identity is reinforced, and collective experience is transmitted. Awareness itself is shaped through rhythmic forms of participation.

Walter Ong's *Orality and Literacy* (2002) illuminates this dynamic by examining the profound differences between oral and literate modes of consciousness. Ong argues that oral cultures organize knowledge through speech, memory, repetition, formulaic expression, and communal performance rather than through the visual and spatial structures associated with writing. In primary oral cultures, knowledge must remain memorable in order to endure, encouraging the development of rhythmic patterns, mnemonic formulas, narrative repetition, and participatory forms of communication. Oral thought is therefore fundamentally temporal and auditory, unfolding through embodied acts of speaking,

listening, remembering, and responding. Ong's analysis is especially valuable because it demonstrates that sound structures not simply communication but entire ways of thinking, knowing, and inhabiting the world. At the same time, his distinction between oral and literate consciousness can appear more sharply drawn than lived experience suggests. Although writing, print, and later electronic media profoundly transform cognition and social organization, they do not eliminate the acoustic foundations of communication. Literate and technological cultures continue to depend upon speech, vocal expression, rhythm, and auditory interpretation. Even written language retains traces of its oral origins in cadence, emphasis, repetition, and narrative form, while spoken language remains shaped by tonal, melodic, and temporal structures that precede and exceed symbolic representation. Language may therefore be understood not as a departure from acoustic experience but as its transformation: a process through which fluid, embodied patterns of sound become increasingly stabilized within symbolic systems while retaining their resonant and rhythmic foundations.

The primacy of sound also reshapes our understanding of consciousness itself. If awareness emerges within rhythmic fields of embodied resonance, cognition cannot be reduced to disembodied computation or symbolic manipulation alone. Human beings do not simply interpret reality intellectually; they inhabit it through embodied involvement with rhythms, voices, sounds, and patterns that organize experience before they become objects of reflection. This attunement is not solely cognitive but also affective and mnemonic. Before interpretation becomes conceptual, the body responds to tonal shifts, rhythmic tensions, intensities, and atmospheres. Acoustic experience discloses a mode of knowing inseparable from lived participation. One feels resonance before fully understanding it. Meaning arises not first through abstract concepts but through temporal processes of listening, remembering, repeating, and responding. Awareness initially encounters reality as a field of relations unfolding through rhythm and sound. Sound is therefore not merely perceived by consciousness but participates in its formation. The symbolic capacities that later characterize human thought remain grounded in more fundamental acoustic and embodied modes of experience. Language itself preserves traces of these origins in its rhythms, cadences, repetitions, and vocal inflections. Before the human becomes *Homo symbolicus*, it is already *Homo resonans*: a vibrational and relational being whose awareness is shaped through rhythmic attunement. Consciousness emerges not in isolation from sound but through temporal and resonant processes that bind memory, communication, embodiment, and social life into meaningful forms of experience.

Contemporary affect theory further clarifies why sound possesses such formative significance before reflective interpretation and fully articulated conceptual thought. In *The Power at the End of the Economy* (2014), Brian Massumi challenges models of human action grounded exclusively in rational choice, emphasizing instead the role of affective processes operating at nonconscious, infra-individual, and transindividual levels. For Massumi, experience is shaped not only by deliberate cognition but also by intensities, tendencies, and relational forces that orient bodies before conscious judgment emerges. Affect is therefore not opposed to reason but constitutes a dynamic dimension of experience through which perception, action, and social life are continually modulated. His work provides an important bridge for understanding acoustic cognition as fundamentally affective and pre-discursive. Sound, rhythm, and vibration engage bodily responsiveness before they are fully organized into symbolic meaning. Acoustic

experience operates through forms of attunement that exceed conscious interpretation, shaping attention, emotional orientation, and engagement at levels not entirely reducible to linguistic representation. Just as Massumi emphasizes the transmission and amplification of affective tendencies across social fields, resonance may be understood as a process through which bodies become dynamically coordinated within shared affective environments. Rhythm and vibration do not simply convey meanings that have already been constituted; they help generate the conditions that make meaning possible. Acoustic resonance organizes bodily and emotional life before reflective awareness stabilizes it within conceptual frameworks, revealing consciousness as a process arising through ongoing relations of affective attunement and embodied engagement.

Yuk Hui's reflections on technics and cosmotechnics in *The Question Concerning Technology in China* (2016) further illuminate the relational dimensions of acoustic experience. Revisiting Heidegger's critique of modern technology, Hui challenges the assumption that there exists a single, universal form of technics derived from the Western philosophical tradition. Instead, he argues that different cultures have developed distinct ways of relating technics, nature, and cosmic order, each grounded in particular metaphysical and historical understandings of existence. His concept of cosmotechnics emphasizes that technological practices cannot be separated from the cosmologies, values, and modes of life within which they emerge and acquire meaning. Hui's work is especially relevant for understanding resonance as more than a sensory or physiological phenomenon. If experience is always situated within culturally specific relations among technics, environment, and cosmos, resonance may likewise be understood as a mode of attunement participating in broader structures of world-disclosure. Acoustic experience does not occur in isolation from cultural and cosmological frameworks but unfolds within historically constituted patterns of significance that shape how people inhabit and interpret their environments. His contribution is particularly valuable because it shifts attention away from universalist accounts of perception toward culturally situated forms of engagement. Resonance thus appears not simply as an event occurring within the individual subject but as a relational process linking body, environment, technics, and cosmology. Listening becomes a form of attunement through which human beings negotiate their place within larger orders of existence. Acoustic experience may therefore be understood not only as a mode of perception but also as a cosmological relation connecting awareness to the cultural, environmental, and technological worlds from which it takes shape.

The primacy of sound ultimately reveals something fundamental about existence. Before consciousness becomes fully symbolic, it is rhythmic. Before the world is conceptualized, it is encountered acoustically. Human beings emerge not as detached observers but as resonant participants within fields of vibration that shape perception, relation, memory, and becoming.

Archaeologies of resonance

If sound played a formative role in the emergence of consciousness, traces of this acoustic orientation should appear within the earliest ritual and communal settings. Archaeological and anthropological evidence increasingly suggests that prehistoric cultures were organized not only through visual symbolism or material survival but also through carefully structured sonic experiences involving echo, reverberation, rhythm, and collective

vocalization. Such evidence points to an early understanding of sound not merely as communication but as transformation. Among the most compelling examples are prehistoric cave sites whose acoustic properties appear to have played a significant role in ritual activity. Many Paleolithic caves containing visual markings, ceremonial deposits, and other indications of symbolic behavior also exhibit distinctive acoustic characteristics, including echo amplification, reverberation, and unusual resonant effects. While the precise intentions of prehistoric communities remain difficult to determine, the convergence of archaeological and acoustic evidence suggests that sound formed an important dimension of how such spaces were experienced and used. These sites were not simply settings for ritual practice; their acoustic qualities actively shaped perception and embodied experience. Chanting, percussion, and vocalizations within enclosed stone chambers would have produced immersive auditory effects that could influence bodily awareness, spatial perception, and emotional intensity.

The cave functioned not merely as a physical enclosure but as a resonant environment. Sound returned transformed through stone surfaces, generating echoes and reverberations that altered the listener's relation to space and to the source of the sound itself. The voice no longer appeared entirely one's own once it reverberated through cavernous depths. Echo introduced a dimension of alterity into perception: one encountered one's own vocal expression returned from elsewhere, mediated by the acoustic properties of the surrounding space. Research in archaeoacoustics supports the view that sound constituted a meaningful aspect of many ancient ritual settings (Scarre and Lawson, 2006).

More recent developments in archaeoacoustics have further strengthened the empirical basis for interpreting the acoustic dimensions of prehistoric ritual. Till (2014) demonstrated that systematic acoustic analysis can reveal recurring relationships between architectural form, resonance, and patterns of human occupation at archaeological sites, suggesting that sonic properties were not incidental but may have influenced ritual practices and spatial organization. Fazenda et al. (2017), through detailed acoustic measurements conducted in decorated Palaeolithic caves, showed that areas containing prehistoric parietal art frequently coincide with locations exhibiting distinctive reverberation and resonance characteristics, reinforcing earlier hypotheses concerning intentional acoustic selection. Similarly, Waller (2019) argues that echoes and other acoustic phenomena may have contributed to the symbolic and spiritual significance of cave environments, shaping ritual experience through perceived interactions between sound, space, and the unseen. Although these studies do not conclusively demonstrate intentionality, together they considerably strengthen the archaeological evidence that acoustic environments were an important component of prehistoric symbolic and ceremonial life.

Studies of Paleolithic caves, megalithic tombs, rock shelters, and sacred architectural spaces have shown that acoustic properties often contribute significantly to the sensory character of ritual life. Such findings do not by themselves establish specific ritual functions, nor do they permit definitive reconstructions of experience. Nevertheless, they suggest that resonance, reverberation, and controlled auditory conditions formed part of the broader multisensory frameworks within which ritual activities were enacted and understood. In these contexts, sound cannot be reduced to aesthetic accompaniment; it appears to have helped organize attention, memory, symbolic association, and shared experience. The significance of prehistoric acoustics therefore lies not only in the existence of sound-producing activities but in the

experiential possibilities created by resonant environments. Echo transforms ordinary vocalization into an encounter with acoustic difference, returning the voice detached from its source yet still connected to it. Reverberation alters the perception of boundaries between body and environment, generating the impression that space itself responds. Within enclosed ceremonial settings, auditory experience becomes immersive rather than directional, drawing participants into a shared sensory field and intensifying experiences of collective attunement. As studies in music archaeology have demonstrated, the relationship between sound and ritual extends beyond symbolic representation to encompass social cohesion, emotional engagement, memory formation, and the embodied experience of communal life (see also Jiménez Pasalodos, Till, and Howell, 2013).

These ritual settings may be understood as early laboratories of resonance in which sound mediated relations among body, space, memory, and the sacred. Whether or not prehistoric communities conceptualized such experiences in explicitly religious terms, the acoustic properties of ritual environments appear to have provided powerful conditions for intensifying engagement, shaping perception, and fostering forms of attunement that connected individuals to broader social, environmental, and cosmological horizons. At the phenomenological level, such settings likely transformed not only cognition but the very structure of lived experience. Rhythm reorganizes bodily temporality, while repetition gradually suspends habitual modes of perception. Sustained resonance can generate an intensified sense of presence in which awareness becomes distributed across bodies, sounds, surfaces, and spatial depths. Under such conditions, consciousness appears less as a self-contained interiority and more as a process unfolding within a shared acoustic field. The boundaries separating self and environment become less sharply defined as perception is drawn into the interplay of vibration, echo, movement, and response. Resonant ritual environments may also have contributed to altered states of awareness through processes of rhythmic entrainment and sensory synchronization. Repetitive percussion, chanting, vocalization, and coordinated movement align bodily rhythms across participants, generating shared temporal frameworks of experience. Contemporary neuroscience describes this phenomenon as entrainment: the tendency of biological systems to synchronize with recurring external rhythms and oscillatory patterns. Long before such processes could be scientifically described, ritual communities appear to have recognized through practice the transformative capacities of collective sound-making and rhythmic coordination.

From an evolutionary perspective, rhythmic and vocal coordination likely played a central role in the development of social cohesion, emotional attunement, and collective life. Shared sonic practices do more than transmit information; they generate affective environments from which cooperation, belonging, and group identity emerge. Collective sound-making functions not simply as expression but as a means of synchronizing bodies, emotions, and expectations, creating experiential bonds that exceed individual awareness. Rhythm coordinates bodies, and coordinated bodies strengthen the conditions for social integration and communal life. Yet the significance of ritual resonance extends beyond social functionality alone. Repeated ritual sounds do more than coordinate groups externally; they also shape awareness internally by organizing attention, emotion, memory, and anticipation into recurring patterns. Through repetition, acoustic events acquire stability, familiarity, and symbolic significance. Sounds that initially function as sensory experiences gradually become carriers of collective memory and cultural meaning. A chant repeated across

generations becomes more than a sequence of sounds; it becomes a living repository of communal identity, embodied history, and shared experience. Resonance thus serves not only as a medium of communication but also as a process through which memory, culture, and consciousness become mutually constituted. Repetition transforms transient acoustic events into durable structures of significance, linking bodily experience to symbolic worlds through the gradual accumulation of affective and mnemonic associations. Ritual sound therefore operates simultaneously at sensory, social, and symbolic levels, sustaining forms of collective life reproduced not only through ideas and representations but through shared rhythmic practices.

The emergence of proto-symbolic thought may consequently be inseparable from rhythmic repetition itself. Recurrent sonic patterns create recognizable structures capable of carrying shared significance prior to the development of formal linguistic systems. Sound functions as a bridge between immediate sensory experience and symbolic representation. Ritual refrains, recurring drum patterns, chants, and repeated vocalizations establish stable associations that gradually connect acoustic forms with collective meaning. Meaning does not initially arise through abstract conceptualization but through embodied familiarity and repetition. Rhythm becomes recognizable before it becomes interpretable. The body remembers recurrence before reflective thought explains it. Symbolic consciousness may therefore originate less in detached cognition than in the gradual sedimentation of rhythmic experience into durable forms of memory, expectation, and social significance. Listening, in this context, is not merely the reception of acoustic stimuli but a participatory mode of inhabiting the world. Repeated engagement with shared sonic environments shapes perception, emotion, and collective identity by embedding individuals within common patterns of experience. Sound organizes relations among memory, place, affect, and belonging, providing a medium through which communities maintain continuity across time. Acoustic practices do not simply communicate meanings that already exist; they help constitute the experiential worlds within which meaning becomes possible.

Resonance occupies a crucial position in the transition from sensation to symbol. Through repetition, acoustic events acquire emotional weight, mnemonic stability, and cultural significance. What begins as rhythmic engagement gradually becomes tradition, narrative, and symbolic order. The origins of symbolic consciousness may therefore be sought not only in the development of abstract representation but also in the enduring capacity to inhabit, remember, and reproduce shared worlds through sound.

Mircea Eliade's *The Sacred and the Profane* (1987) further illuminates the ritual dimensions of prehistoric acoustics. Eliade argues that sacred space is distinguished from ordinary space through experiences that rupture the homogeneity of everyday existence, establishing privileged sites of orientation, meaning, and connection with a deeper order of reality. His analysis demonstrates how the sacred manifests through particular places, times, natural phenomena, and cosmological structures, transforming ordinary environments into meaningful worlds. Ritual spaces function not simply as physical locations but as experiential centers where dimensions of existence perceived as sacred are encountered. Yet while Eliade's account offers a powerful understanding of how sacred worlds are constituted, the sensory dimensions of these experiences remain comparatively underdeveloped. His emphasis falls primarily on symbolic structures, cosmological orientation, and the manifestation of sacred meaning, while less attention is given to the role of sound in shaping encounters with the sacred. The cave, temple, or ceremonial enclosure is not only

seen differently; it is heard differently. Echo, reverberation, rhythmic repetition, and collective vocalization may contribute as profoundly to experiences of sacred presence as visual symbols or architectural forms. Sacred space may therefore be understood not only as symbolic architecture but also as resonant architecture. The acoustic properties of ritual settings shape perception by influencing how bodies experience space, time, and relation. Resonance intensifies presence, amplifies attunement, and alters ordinary patterns of awareness. Sacred environments communicate not solely through what they signify but also through how they sound, revealing an acoustic dimension of sacrality that complements and deepens the symbolic and cosmological structures emphasized by Eliade. Reverberation alters perceptions of depth, proximity, and bodily orientation, while acoustic immersion creates atmospheres in which space appears responsive, dynamic, and alive. Sacredness may emerge not only through symbolic representation but through intensified sensory engagement in which resonance reorganizes the relation between body and world.

The concept of a “technology of consciousness” becomes useful in this context. Technologies need not be mechanical instruments alone; they may also consist of patterned practices that systematically shape attention, perception, and experience. Ritual sound technologies—chanting, drumming, repetition, rhythmic movement, and call-and-response structures—operate by modulating awareness through resonance and rhythmic entrainment. Such practices organize collective attention while simultaneously transforming subjective experience. They reveal that consciousness is never entirely individual but arises relationally through shared rhythms, coordinated attention, and participatory attunement. The communal chant creates a field of resonance in which identity becomes distributed across bodies rather than confined within isolated subjects. Through synchronized vocalization and rhythm, individuals enter shared experiential worlds that exceed the boundaries of personal awareness. Ritual acoustics may therefore represent one of the earliest forms of collective cognition. The archaeological record suggests that early humans did not simply inhabit physical environments; they inhabited acoustic worlds. Caves, rituals, instruments, echoes, and rhythmic practices formed resonant ecologies within which perception, identity, memory, and meaning were collectively shaped. Long before philosophical reflection articulated concepts of selfhood, consciousness, or transcendence, communities engaged in sonic practices that organized experience through vibration, repetition, and attunement. The emergence of symbolic culture may thus have been grounded, at least in part, in these shared acoustic worlds where sound mediated relations among body, community, environment, and the sacred.

The movement from sound to symbol did not occur through the abandonment of resonance but through its gradual stabilization into increasingly formal structures of memory, myth, and language. Resonance remained the experiential ground from which symbolic thought emerged, continuing to shape human meaning-making long after the development of more abstract systems of representation. Recent archaeological theory increasingly supports the view that ritual settings operated through multisensory and affective orchestration rather than symbolic representation alone. In *Archaeology and the Senses* (2014), Yannis Hamilakis critiques the tendency within archaeology to privilege vision and interpret the past primarily through detached observation. In its place, he proposes a sensorial archaeology that emphasizes the embodied, affective, and multisensory dimensions of experience. Perception, memory, materiality, and environment are understood as deeply intertwined, shaping the ways individuals and communities in-

habit and make sense of the world. Hamilakis’s work provides a valuable bridge to the present discussion because it shifts attention from symbols as isolated carriers of meaning to the sensory and affective conditions that sustain meaning. Ancient ritual practices were not simply systems of symbolic communication but immersive events involving bodies, sounds, movements, objects, atmospheres, and places. Such settings organized perception through embodied engagement, drawing individuals into shared sensory worlds where memory, identity, and social relations were continually reproduced. The argument developed here similarly suggests that prehistoric consciousness was shaped not primarily through detached symbolic observation but through embodied participation within resonant environments. Rhythm, movement, sensory intensity, and acoustic immersion did not simply accompany ritual activity; they formed part of the experiential matrix through which symbolic meanings acquired force and durability. Resonance appears not as a secondary dimension of ritual life but as one of the conditions that made collective memory, symbolic thought, and cultural worlds possible.

Likewise, Graham Harman’s object-oriented ontology in *Object-Oriented Ontology: A New Theory of Everything* (2018) complicates anthropocentric understandings of ritual space by challenging the assumption that reality exists primarily in relation to human perception. Harman argues that objects possess their own autonomy and reality, exceeding the ways they appear to observers and resisting complete reduction to human meanings or functions. Ritual settings cannot be understood solely as symbolic constructions projected by consciousness. The material world participates in experience through its own irreducible presence. Harman’s account offers an intriguing way of rethinking prehistoric ritual environments. Cave acoustics, echoes, resonant surfaces, stone chambers, and material structures may be understood not simply as passive backgrounds for ritual activity but as active elements within broader networks of relation. The cave is not merely a container for experience; its physical properties contribute to the forms of experience that become possible within it. Acoustic effects arise through encounters among bodies, voices, materials, and spatial configurations, revealing a world in which meaning emerges through relational engagement rather than human intention alone. These considerations point toward a deeper understanding of prehistoric consciousness. Early humans did not simply produce sound within ritual settings; they entered acoustic relations capable of transforming bodily awareness, collective identity, and the perception of reality. Ritual resonance was not ornamental to existence. It was constitutive of how worlds were sensed, inhabited, remembered, and shared. Consciousness developed not in isolation from its material surroundings but through ongoing engagement with resonant environments where bodies, sounds, spaces, and things became intertwined. Ritual acoustics thus reveal a mode of existence in which the boundaries between humans and their environments remain fluid, relational, and continually negotiated through resonance.

From sound to symbol

One of the defining transformations in human evolution is the movement from immediate acoustic participation to symbolic representation. Humans did not remain solely within fields of rhythmic resonance and embodied vocalization; over time, sound became stabilized into signs, narratives, myths, and increasingly complex systems of meaning. Symbolic cognition did not emerge in opposition to acoustic experience. Rather, symbolic systems

developed from pre-symbolic structures rooted in repetition, rhythm, memory, and collective attunement. Language itself may be understood as the gradual sedimentation of sound into symbolic form. This transition from vibration to meaning represents not a rupture but a continuity. The earliest symbolic structures likely arose from repeated acoustic patterns that gradually acquired stable associations within communal life. Ritual chants, rhythmic sequences, and recurring vocalizations generated mnemonic stability long before the appearance of writing. Through repetition, sounds became familiar; through familiarity, meaningful; and through meaning, symbolic. What later appears as abstraction may originate in embodied recurrence. Symbols do not arise *ex nihilo* through acts of pure cognition. They crystallize gradually from patterns of rhythmic engagement already sedimented within bodily memory and communal practice. The symbolic order emerges from resonance before being formalized into concepts, categories, and systems of representation.

The relationship between repetition and symbolic emergence is therefore crucial. Repetition stabilizes memory by creating recurring patterns capable of collective recognition and transmission across time. Memory, in turn, enables abstraction by allowing repeated experiences to be apprehended as enduring forms rather than isolated events. Through this process, rhythmic engagement gradually acquires symbolic structure. The movement from sound to symbol unfolds through recursive patterning: repetition generates memory, memory enables abstraction, and abstraction gives rise to symbolic worlds. At the phenomenological level, repetition transforms experience by deepening familiarity and expectation. Rhythm organizes anticipation before conscious interpretation fully emerges. What recurs gradually acquires affective, mnemonic, and experiential weight. The body learns patterns before the intellect formalizes them into symbolic categories. Symbolization thus originates not solely in conceptual thought but in the embodied retention of recurring resonance.

Terrence Deacon's *The Symbolic Species* (1998) provides a valuable framework for understanding this transformation. Deacon argues that symbolic thinking developed through a long evolutionary process involving the co-development of language, cognition, social communication, and neural organization. Rather than treating language as a fully formed cognitive faculty that appeared suddenly, he emphasizes the gradual emergence of symbolic capacities through increasingly complex relational processes. Meaning, in this view, arises not from isolated signs alone but from networks of symbolic relations that enable human beings to think beyond immediate perceptual experience and share increasingly sophisticated forms of social understanding. Deacon's contribution is especially important because it avoids simplistic oppositions between biological evolution and cultural symbolism. Language is not treated as an abstract code imposed upon consciousness from outside history but as an emergent achievement rooted in the evolutionary development of embodied minds and social relations. By emphasizing the co-evolution of brains and symbolic communication, he demonstrates that symbolic thought is inseparable from the processes through which meaning is learned, shared, and transmitted across generations. Nevertheless, while Deacon provides a compelling account of symbolic cognition, the acoustic and rhythmic dimensions of this process remain comparatively underdeveloped. The present study extends his framework by suggesting that symbolic capacities evolved not only through increasingly complex representational relations but also through prior forms of rhythmic engagement, vocal coordination, and acoustic attunement. Resonance, repetition, and patterned sound may have provided some of the experi-

ential conditions that first gave symbolic thought stability, transmissibility, and collective significance.

Daniel Everett, in *How Language Began* (2017), supports this argument. Challenging theories that treat language as an innate and largely autonomous grammatical faculty, Everett argues that it evolved gradually through cultural development, social interaction, and shared symbolic practices. Rather than arising from a pre-programmed linguistic structure, language developed in response to the communicative needs of increasingly complex communities. Meaning, in this account, emerges through culturally transmitted patterns of interaction, shared attention, and the cumulative invention of symbolic forms. For Everett, cultural emergence is significant because it highlights the continuity between embodied interaction and symbolic abstraction. Language develops not from isolated cognition but from collective activity structured by repetition, memory, gesture, vocalization, and social exchange. Symbolic systems are inseparable from the cultural environments within which they evolve and acquire significance. By situating language within broader processes of cooperation and social complexity, Everett reinforces the view that symbolic thought emerged gradually from embodied and relational experience rather than appearing as a fully formed cognitive capacity. At the same time, his emphasis on communication and cultural adaptation leaves open questions concerning the deeper experiential dimensions of symbolic formation. Language serves not only practical and informational functions but also affective, ritual, aesthetic, and sacred ones. The symbolic power of sound cannot be reduced to communicative utility alone. Vocal expression carries emotional intensities, rhythmic structures, and resonant qualities that exceed the transmission of information. We do not merely communicate through language; we inhabit shared worlds of meaning through it. Language remains rooted in the embodied and acoustic dimensions of experience from which it emerged, preserving within symbolic form traces of the resonance, rhythm, and attunement that preceded it.

The notion of language as "frozen music" captures the continuity between acoustic vitality and symbolic stabilization. Spoken language retains melodic contour, rhythmic pacing, tonal inflection, and temporal movement inherited from earlier acoustic forms of awareness. Even within highly abstract symbolic systems, meaning continues to depend upon cadence, emphasis, silence, and vocal modulation. Poetry, chant, liturgy, and oral storytelling preserve this connection most visibly, though ordinary speech itself remains inseparable from rhythm and sound. Language retains traces of its acoustic ancestry. Beneath semantic structure remains tonal movement; beneath conceptual order, rhythmic force. Even silent reading often preserves a subvocal cadence, as though awareness continues internally to echo the auditory origins of meaning. The word never fully abandons vibration.

Studies of orality and literacy (e.g., Ong, 2002) demonstrate that language emerged from traditions in which memory, repetition, performance, and vocal expression played central roles in the preservation and transmission of knowledge. Although writing transforms cognition by externalizing language into visual and textual forms, the auditory foundations of communication remain active beneath literate abstraction. Rhythm, repetition, and vocal patterning continue to shape how meaning is produced, remembered, and shared. This persistence suggests that symbolic systems never fully transcend resonance. Even philosophical discourse, scientific terminology, and religious doctrine retain acoustic traces through rhythm, rhetorical patterning, and vocal expression. The symbolic order is not detached from embodiment but layered upon deeper temporal and rhythmic foundations. Meaning may

become increasingly abstract, yet it continues to depend upon forms of organization inherited from the conditions of its emergence. Resonance may therefore be understood as a precondition of symbolicity itself. Before symbols can refer abstractly, bodies must already move rhythmically within shared worlds of attention, memory, and affect. Sound establishes relational continuity; symbols crystallize and extend it. Myth, narrative, and inner speech arise through the internalization of acoustic structures and patterns of social engagement.

The development of inner speech is especially revealing in this regard. Thought often unfolds rhythmically, silently echoing vocal patterns first encountered through sound, dialogue, and communal interaction. Inner speech may be understood as internalized resonance: the voice folded inward into reflective awareness. Even silent thought retains cadence, tonal movement, recurrence, and rhythmic pacing. This observation complicates computational theories of mind. Thinking is not simply abstract symbolic manipulation occurring within neural isolation. Awareness remains shaped by bodily temporality, sensory memory, and acoustic inheritance. Reflection carries traces of prior listening. In a related critique of reductive accounts of cognition, Iain McGilchrist (2012) argues that human understanding cannot be adequately explained through analytical processing alone but depends upon broader modes of relational, contextual, and embodied engagement with the world. While his analysis approaches the question through the differing orientations of the cerebral hemispheres, it supports the more general claim that consciousness exceeds mechanistic models of information processing. The internal voice is never entirely detached from the resonant world out of which subjectivity takes shape. The transition from sound to symbol, therefore, does not represent the replacement of resonance by abstraction. Symbolic thought arises from resonance and continues to depend upon it. Human beings become symbolic creatures not by escaping acoustic embodiment but by transforming rhythmic attunement into increasingly complex structures of memory, language, and meaning. The symbolic order remains marked by its sonic origins. Beneath every concept lies rhythm; beneath every word, vibration. The history of consciousness may thus be understood not simply as the ascent of abstraction but as the transformation of resonance into meaning.

Contemporary media theory further complicates the movement from sound to symbolic abstraction by drawing attention to the material conditions through which communication is stored, transmitted, and stabilized. In *Gramophone, Film, Typewriter* (1999), Friedrich Kittler argues that media technologies do not merely convey information; they actively reorganize perception, memory, and the conditions of thought. Technologies capable of recording sound, images, and other physical traces of experience transformed the relationship between symbolic representation and material reality, revealing that communication cannot be reduced to abstract signification alone. Kittler's analysis provides a valuable bridge to the present argument by demonstrating that symbolic systems remain inseparable from the material and sensory conditions that allow them to emerge, circulate, and acquire cultural force.

In a related but more explicitly posthuman direction, N. Katherine Hayles, in *Unthought* (2017), challenges the assumption that cognition is identical with conscious symbolic reasoning. Drawing on neuroscience, cognitive science, and systems theory, she argues that cognition extends beyond conscious awareness to include nonconscious processes, bodily responsiveness, environmental interaction, and forms of information processing distributed across human and technical systems. Conscious thought

emerges from a broader cognitive ecology that exceeds reflective awareness and cannot be reduced to rational operations alone. Hayles's contribution is especially relevant because it reinforces the proposition that symbolic thought arises from deeper layers of embodied and relational activity. Conscious reasoning depends upon processes operating beneath, around, and beyond reflective awareness. Cognition is not a purely internal activity but a dynamic interaction among bodies, environments, technologies, and perceptual systems. Symbolic thought emerges from these wider fields of relation rather than standing apart from them.

Taken together, these perspectives invite a reconsideration of symbolic consciousness. Symbols do not replace resonance; they extend it into new forms of memory, transmission, and abstraction. Language remains acoustically haunted by the rhythms from which it arose. We continue to think not only through concepts but also through cadences, tonalities, repetitions, and the silent reverberations of embodied speech. To become symbolic is not to abandon resonance but to internalize and transform it. The movement from sound to symbol preserves within abstraction the traces of its acoustic origins, allowing resonance to persist as a hidden yet enduring dimension of consciousness.

The sacred dimension of sound

Across cultures and historical periods, sound has occupied a privileged position within experiences of the sacred. Chant, prayer, invocation, mantra, liturgical recitation, drumming, and sacred song appear with remarkable consistency throughout religious life. Such practices suggest that sound functions not merely as symbolic ornamentation within ritual but as a primary medium through which transcendence, communal identity, and altered states of awareness are encountered. The sacred is not only represented through sound; it is often experienced acoustically. This recurrence raises a fundamental question: why does sound possess such enduring spiritual significance? One response is that acoustic experience uniquely mediates the relation between self and world. Unlike visual perception, which frequently establishes distance between observer and object, sound penetrates and envelops. Listening situates us within a field of participation rather than detached observation. Sacred sonic practices intensify this condition by synchronizing bodies, breath, emotion, and attention within shared rhythms of experience.

At the phenomenological level, sacred sound is not first encountered as doctrine or representation but as lived intensity. Vibration is felt before it is interpreted. Chant reorganizes breathing; rhythm modulates bodily temporality; repetition alters attention. The sacred emerges not solely through belief but through embodied participation in resonant experience. One does not merely understand sacred sound conceptually; one undergoes it corporeally. The sacred, as understood here, refers not primarily to institutional religion or theological systems. Rather, it designates a dimension of lived reality experienced as meaningful, transformative, and irreducible to ordinary instrumental consciousness. Such experiences arise through intensified presence, heightened awareness, and relational depth. Sound assumes a distinctive role because resonance affects the body before conceptual interpretation. Vibration is sensed before it is explained. For Eliade (1987), sacred experience involves a rupture in ordinary modes of existence through which the world becomes charged with a heightened sense of meaning and presence. Yet sacredness is not only symbolically or spatially organized; it is also acoustically mediated. Echoing temples, reverberant caves, rhythmic chants, sustained

tones, and ritual silence reshape perception through sound, transforming physical environments into resonant fields of experience. Sacred space is therefore not simply a location but an atmosphere of attunement. Reverberation alters bodily orientation; resonance thickens perception; rhythmic repetition suspends ordinary temporality. The sacred becomes perceptible through acoustic intensification. Space itself begins to feel responsive.

Feld's concept of acoustemology (2012) presents listening not merely as a sensory activity but as a way of inhabiting and knowing the world. Sacred sonic practices organize forms of belonging that link body, memory, ancestry, landscape, and cosmology within shared experiential fields. The sacred appears not only as a system of beliefs but as a mode of attunement. Resonance precedes doctrine. One enters the sacred through listening and only later through interpretation. In *Nada Brahma: The World Is Sound* (1991), Joachim-Ernst Berendt moves more explicitly toward an acoustic ontology. Drawing upon musical traditions, spiritual practices, and reflections on developments in modern science, Berendt explores the possibility that sound, rhythm, and vibration constitute fundamental dimensions of reality and human experience. The Sanskrit expression *Nada Brahma*—"the world is sound"—serves as a guiding motif for a worldview in which existence is understood not as static substance but as process, resonance, and continual becoming. Berendt's contribution is noteworthy because it brings into dialogue domains often treated separately: music, spirituality, culture, and scientific inquiry. His work highlights the remarkable persistence of sound-centered cosmologies across diverse traditions while drawing attention to the significance of vibration, rhythm, and listening in shaping awareness. Especially compelling is his suggestion that hearing may offer a distinctive mode of access to reality, grounded less in detached observation than in participation, relationality, and attunement. Yet his synthesis occasionally moves toward a metaphysical universalism that can obscure important historical, cultural, and philosophical differences among the traditions he discusses. The challenge is therefore to preserve the ontological insight that resonance may be fundamental to human experience without collapsing diverse cosmologies into a single generalized spiritual framework. Resonance may be understood as a recurring structure of experience while still allowing for multiple cultural interpretations of its significance.

The sacred voice occupies a central place within this acoustic horizon. Across cultures, the human voice has frequently been regarded as more than a communicative instrument; it becomes a vehicle of transformation, invocation, presence, and attunement. Sacred vocal practices—from Vedic recitation and Gregorian chant to Sufi *dhikr* and Buddhist mantra—rely upon repetition, breath, rhythm, and resonance to shape attention and experience. Their efficacy often exceeds semantic content alone. The transformative force of sacred speech lies not only in what is said but also in how sound reorganizes bodily awareness, emotional orientation, and states of consciousness. This insight complicates modern assumptions that language functions primarily through semantic representation. Within sacred vocal practices, sound frequently precedes conceptual meaning while simultaneously generating experiential significance. A repeated mantra, for example, operates less as a propositional statement than as a rhythmic form of attunement. Through repetition, distinctions among speaker, sound, and listener may become less sharply defined as awareness is drawn into a shared field of resonance. Meaning is not merely communicated; it is enacted through vibration.

At the level of intuitive awareness, sacred sound often produces the sense that consciousness is no longer entirely en-

closed within itself. Resonance opens experience outward. The listener feels addressed by something exceeding individual subjectivity, even where no explicit theological framework is present. The sacred may therefore arise through intensified relationality itself: a heightened sense of participation within vibrational presence. Nancy's reflections on listening (2007) illuminate a mode of experience in which the self is not a detached observer but a participant within a field of relation. Listening involves an openness through which subjectivity becomes responsive to what exceeds it. This insight is especially significant within sacred contexts, where resonance transforms listening into an experience of attunement, exposure, and receptivity. The listener does not simply encounter a sound object; consciousness is drawn into a process of reverberation that unsettles rigid distinctions between self and world.

Sacred sound reveals a dimension of experience that precedes conceptual interpretation. One does not first analyze resonance and then participate in it; participation comes first. Through chant, rhythm, repetition, and sustained vibration, consciousness becomes immersed in patterns of relation that exceed ordinary modes of awareness. The sacred emerges not as an object of knowledge but as a mode of presence disclosed through listening. Silence likewise acquires a distinctive significance within acoustic spirituality. It is not merely the absence of sound but an active dimension of resonance. Every tone emerges from silence and returns to it; every act of listening depends upon intervals of stillness. Sacred silence functions not as negation but as receptive openness—the condition that allows resonance to appear. Mystical traditions across cultures repeatedly emphasize silence because it heightens sensitivity to subtle rhythm, breath, vibration, and presence. Phenomenologically, silence is never empty. It is a field of charged expectancy. Within stillness, attention deepens, and the body becomes more acutely aware of its own rhythmic existence—breath, pulse, tension, release, and repose. Silence reveals that listening is not passive reception but an active form of attunement.

The relationship between sound and silence also discloses the temporal character of sacred experience. Sound unfolds through duration; resonance requires time to emerge, expand, and dissipate. Sacred awareness likewise involves a transformation of temporality characterized by rhythmic immersion rather than fragmented distraction. Chant, ritual repetition, contemplative silence, and meditative listening reorganize subjective time by gathering attention within sustained patterns of recurrence. Hartmut Rosa, in *Resonance* (2019), argues that meaningful existence depends upon responsive relations through which the world is encountered not as an inert object but as something capable of answering, affecting, and transforming us. The quality of life depends less upon accumulation, acceleration, or control than upon the capacity to enter resonant relations with others, communities, environments, works of art, and the world itself. Although Rosa's analysis is not specifically concerned with sacred sound, his concept of resonance helps explain why listening, ritual, contemplation, and acoustic practice occupy such central positions within spiritual life. Sacred experience may be understood as an intensified mode of attunement in which the world becomes experientially responsive and vibrationally alive. Rosa's work also illuminates the spiritual condition of modernity. Contemporary technological culture frequently privileges acceleration, abstraction, and informational saturation at the expense of embodied listening and sustained attention. The result is not simply an excess of sound but a weakening of resonance. As meaningful relations with the world become increasingly fragmented, sound risks be-

coming noise: disconnected stimulation lacking depth, reciprocity, and responsiveness. The loss is therefore not merely aesthetic but existential. We are surrounded by unprecedented acoustic and informational abundance while becoming increasingly deprived of the forms of attunement through which experience acquires depth, significance, and presence.

Sacred sonic practices remain significant not only historically but philosophically. They preserve modes of awareness rooted in breath, rhythm, repetition, silence, and relational engagement. Through resonance, we encounter dimensions of meaning irreducible to conceptual analysis alone. The sacred emerges not beyond embodiment but through the deepening of embodied listening itself. Recent work in affect theory further clarifies this embodied dimension. In *The Affect Theory Reader* (2010), Melissa Gregg and Gregory Seigworth bring together a range of perspectives emphasizing how affect circulates through bodies, atmospheres, intensities, and relations before full conceptual articulation. Their work is especially relevant because it shifts attention toward the forces that move, orient, and connect us before they become objects of conscious reflection. Sacred sonic practices may therefore be understood as affective environments in which resonance shapes bodily awareness, emotional orientation, and collective attunement before doctrinal interpretation takes form. Charles Hirschkind, in *The Ethical Soundscape* (2006), develops a related line of inquiry. Through his study of Islamic devotional listening practices, Hirschkind demonstrates how sound participates in the cultivation of ethical subjectivity. Listening emerges not as passive reception but as a disciplined practice through which sensibilities, affects, and modes of attention are formed. His analysis is especially revealing because it shows that sacred sound is not merely expressive but formative. Repetitive listening practices shape perception, emotion, and moral orientation, embedding individuals within shared ethical and communal worlds.

Taken together, these accounts show that resonance operates not only at the level of sensation but also at the level of formation. Sacred sound does more than communicate meanings that already exist; it helps shape dispositions, attentional habits, emotional responses, and forms of belonging. Resonance becomes a medium through which bodies are attuned to worlds of significance that are simultaneously sensory, affective, ethical, and communal. To experience consciousness acoustically is to recognize that existence unfolds not as an isolated substance but as a process of resonance. We do not merely inhabit a world of sound; we dwell within networks of vibration, relation, and responsiveness that continually shape perception, memory, identity, and presence. The sacred may ultimately name not a separate realm beyond the world but a heightened mode of attunement to the resonant depths already present within it. What appears as transcendence may arise not through escape from embodied existence but through deeper engagement with the relational and vibrational processes that constitute experience.

Neuroscience and rhythmic consciousness

Recent developments in neuroscience and cognitive science increasingly support the proposition that consciousness is fundamentally rhythmic rather than static. Far from operating as a purely abstract computational system, the brain functions through dynamic oscillatory processes involving synchronization, repetition, timing, and patterned neural activity. Perception, memory, attention, emotion, and cognition depend upon rhythmic coordi-

nation across distributed neural networks. Contemporary neuroscience thus converges in striking ways with longstanding intuitions concerning resonance, vibration, and attunement. Neural activity unfolds through continuously fluctuating electrical oscillations commonly referred to as brain rhythms or neural oscillations. These processes occur across multiple frequency ranges and contribute to the coordination of sensory processing, motor activity, memory formation, and awareness. Such research suggests that cognition depends not simply upon the activity of individual neurons but upon the temporal organization of large-scale neural networks. Coherence emerges through patterns of coordination distributed across time and space rather than through isolated neural events. Rhythm is not added to cognition as a secondary modulation; it constitutes one of the conditions that make integration possible. Neural organization depends upon patterned recurrence, synchronization, and timing. Consciousness unfolds temporally before it becomes conceptually structured.

György Buzsáki's *Rhythms of the Brain* (2006) provides one of the most influential accounts of this oscillatory framework. Buzsáki argues that self-organizing neural oscillations constitute a fundamental organizing principle of brain function. Rather than treating rhythmic activity as incidental noise accompanying cognition, he demonstrates how oscillatory timing structures communication among neural assemblies and coordinates information processing across multiple spatial and temporal scales. Neural rhythms are not merely byproducts of cognition; they actively organize the conditions under which perception, memory, learning, and action become integrated into coherent experience. His contribution is especially valuable because it shifts the understanding of cognition away from static localization models toward dynamic processes of coordination and interaction. Neural coherence emerges through synchronization. The brain appears less as a collection of isolated modules than as a complex network of interacting oscillatory systems whose rhythms enable cognitive integration. Yet while Buzsáki's account is neurologically rigorous, its implications remain largely confined to neural mechanisms. The phenomenological significance of rhythm—how oscillatory organization shapes lived experience, embodiment, and awareness—receives comparatively little attention. The present study extends the oscillatory model into a broader philosophical anthropology. If rhythmic synchronization constitutes a fundamental principle of neural organization, resonance may be understood not merely as a metaphor for human experience but as one of its underlying conditions. Awareness emerges through patterns of temporal coordination linking brain, body, environment, and social world. Rhythm is not simply something consciousness perceives; it is one of the processes that make consciousness possible.

At the phenomenological level, rhythm is not encountered as abstract frequency alone. It is lived as continuity, expectation, modulation, and temporal flow. The body senses rhythmic coherence directly through breathing, heartbeat, movement, and affective attunement. Experience is temporal before it is conceptual. Neural rhythm, therefore, corresponds not only to physiological activity but also to the lived structure of awareness. The concept of entrainment is particularly useful in this regard. Entrainment refers to the synchronization of independent oscillatory systems through rhythmic interaction. In neuroscience, the term describes the tendency of neural activity to align with external rhythmic stimuli such as music, speech, movement, and repetitive sound. Rhythmic stimulation can influence attention, emotional regulation, motor coordination, and states of awareness by organizing patterns of neural timing and responsiveness.

This capacity for synchronization helps explain why collective sound practices—chanting, drumming, ritual singing, and coordinated movement—exert profound psychological and social effects. Repeated rhythmic patterns align bodily and neural processes across individuals, generating shared affective states and intensifying experiences of collective attunement. Ritual resonance is not merely symbolic; it operates through coordinated rhythms that shape perception, emotion, and social cohesion. Entrainment also reveals that consciousness is intrinsically relational. The brain does not function as an isolated interior mechanism detached from its surroundings. Neural rhythms continuously respond to sensory environments, social interaction, and embodied movement. Awareness emerges through ongoing exchanges linking organism and world. Consciousness is not simply located within the brain; it unfolds through dynamic patterns of coordination extending across body, environment, and social life.

Daniel Levitin's *This Is Your Brain on Music* (2007) illuminates the integrative role of sound in human cognition. Drawing on neuroscience and musical experience, Levitin demonstrates that music engages a wide range of neural systems simultaneously, including those involved in perception, emotion, movement, memory, expectation, and reward. Musical experience is therefore not confined to a single cognitive domain but recruits distributed networks across the brain, revealing the deeply integrative character of sound. Levitin's contribution is especially important because it challenges the assumption that music occupies a peripheral place within human cognition. Against views that treat music as an evolutionary byproduct or cultural ornament, he argues that musical capacities are deeply rooted in human experience and intimately connected to the ways the brain organizes perception, memory, and emotion. Music does not simply accompany conscious life; it participates in shaping it. At the same time, his framework remains primarily situated within cognitive neuroscience and the psychology of musical experience. The broader ontological implications of rhythmic integration receive comparatively less attention. The significance of sound extends beyond emotional modulation or aesthetic pleasure toward a more fundamental question: whether awareness itself is structured through patterns of resonance, synchronization, and temporal attunement. From this perspective, rhythm appears not merely as an object of perception but as one of the conditions that make coherent experience possible.

Francisco Varela's work on embodied cognition and neurophenomenology provides a bridge between neuroscience and phenomenology. In *The Embodied Mind* (1991), co-authored with Evan Thompson and Eleanor Rosch, Varela argues that cognition cannot be understood as abstract information processing detached from bodily experience and environmental interaction. Consciousness emerges through embodied enactment: the dynamic coupling of organism and world through which meaning is continually brought forth rather than passively received. This perspective aligns closely with the present study's understanding of resonance as relational attunement rather than isolated mental representation. Varela's significance lies precisely in his refusal to separate lived experience from cognitive process. Consciousness is not something occurring exclusively inside the brain; it unfolds through reciprocal interactions among neural activity, bodily sensation, movement, attention, and environment. The knowing subject is always already embodied, situated, and engaged within fields of relation. Experience arises through participation in the world rather than through the internal manipulation of representations detached from it.

Antonio Damasio similarly challenges disembodied models of cognition by emphasizing the foundational role of bodily feeling in conscious awareness. In *The Feeling of What Happens* (1999), Damasio argues that consciousness emerges through the brain's ongoing monitoring and interpretation of bodily states. Emotion and bodily regulation are not secondary disturbances imposed upon rational thought but essential dimensions of awareness itself. Consciousness is, in a fundamental sense, the feeling of what happens: the lived experience of the organism responding to itself and its environment. Such findings reinforce the argument that cognition remains inseparable from affective processes and bodily rhythms. At the level of lived experience, these perspectives suggest that awareness is sensed before it is fully conceptualized. We continually experience shifts in affective tone, tension, intensity, and rhythm before reflective interpretation organizes them into explicit meanings. The body often "knows" through felt resonance before cognition articulates experience linguistically. Awareness arises not solely through representation but through embodied attunement.

The phenomenon of inner speech further illustrates the continuity between sound and thought. Inner speech is often experienced as silent language, yet it retains acoustic qualities inherited from vocal expression: cadence, emphasis, rhythm, and tonal movement. Thought unfolds temporally through recursive patterns of internal resonance. Even silent cognition carries traces of auditory structure. This observation complicates computational models that reduce thinking to abstract symbolic manipulation. Consciousness is not simply linguistic encoding occurring within neural hardware; it remains shaped by rhythmic embodiment, affective orientation, and sensory memory. The internal voice may be understood as an echo of prior relational experience—the acoustic world folded inward into reflective awareness. Research on memory likewise reveals the intimate relationship among rhythm, emotion, and identity. Musical and rhythmic stimuli frequently evoke powerful autobiographical recollections, affective intensities, and experiences of continuity between past and present. Sound organizes memory temporally, linking emotional life to patterned repetition and recurrence. Identity itself may therefore depend, at least in part, upon forms of rhythmic coherence sustained across bodily, social, and cultural existence. Memory, phenomenologically understood, is never merely archival storage. It is a reactivated resonance. A melody, cadence, or vocal inflection can suddenly restore entire affective worlds once thought absent. Sound reaches layers of experience that often precede verbal explanation. The past returns acoustically before it becomes narratively reconstructed.

Such findings suggest that consciousness is not a static entity located within the brain but an ongoing process of dynamic integration. Awareness emerges through continuous coordination among neural rhythms, bodily processes, sensory environments, and social interactions. Human beings remain acoustically and rhythmically open systems rather than self-contained cognitive machines. This perspective carries important philosophical implications. If consciousness depends fundamentally upon rhythmic coordination and embodied attunement, then resonance cannot be treated merely as a metaphor. It becomes a constitutive principle linking neural organization, bodily orientation, interpersonal relations, and cultural formation. The brain itself may be understood as a resonant structure continuously shaped through oscillatory interaction with the world. Contemporary neuroscience thus converges with phenomenology, anthropology, and ritual studies in revealing that human existence is fundamentally patterned, rhythmic, embodied, and relational. Consciousness unfolds not as an

isolated intellectual substance but as a dynamic attunement within networks of temporal coordination and lived engagement.

The human being is not only a symbolic organism. The human being is rhythmic consciousness embodied.

Recent developments in predictive processing and enactive cognitive theory further support this relational understanding of mind. In *Surfing Uncertainty* (2015), Andy Clark argues that cognition emerges through continuous interaction among brain, body, and environment rather than through isolated internal computation alone. The brain is not a passive receiver of sensory information but an active predictive system that continually anticipates, adjusts to, and helps shape the world it encounters. Perception, action, and cognition arise through ongoing cycles of prediction and correction linking organism and environment within dynamic processes of exchange. Clark's work connects contemporary cognitive science with the broader conception of resonance developed throughout this study. Thomas Fuchs similarly challenges models that reduce consciousness to processes occurring solely within the brain. In *Ecology of the Brain* (2017), he argues that the mind is not a product contained within neural mechanisms but an activity of the living person as a whole. Awareness emerges through reciprocal interactions among brain, body, and environment, integrating physiological processes with lived experience, affective engagement, and embodied presence. Neural activity cannot be understood apart from the organism whose life it serves. Fuchs's relational neurophenomenology reinforces the view that consciousness is fundamentally situated, embodied, and participatory.

Clark and Fuchs both reject the image of the mind as an isolated computational system observing an external world from within a neural enclosure. Cognition appears instead as a process of engagement unfolding through continuous exchanges between organism and environment. Perception is inseparable from action; understanding is inseparable from participation. Awareness emerges not through separation from the world but through ongoing involvement with it. Consciousness does not arise within a self-contained interior domain before encountering reality. It takes shape through patterns of interaction, coordination, and responsiveness linking body, environment, sensation, and meaning. The human being is not a detached spectator but a participant within fields of relation that continually shape experience. Consciousness studies increasingly point toward a profound reorientation of mind. Mind is not best understood as detached computation observing an external world from within neural isolation. Consciousness appears instead as a process of embodied becoming: rhythmic, affective, relational, and continuously shaped through dynamic attunement to the worlds it inhabits. Resonance is not merely a metaphor for connection but a way of describing the fundamental relational character of conscious life.

***Homo Resonans:* toward an acoustic anthropology of human consciousness**

The foregoing discussion indicates that resonance is not merely a feature of sound but a foundational structure of existence. From prenatal auditory immersion and prehistoric ritual acoustics to symbolic language, sacred vocality, and neural synchronization, consciousness repeatedly appears as a process shaped by rhythm, vibration, and attunement. The figure of *Homo sapiens sapiens* may therefore require reconsideration. The human being is not solely a rational or symbolic creature but also a resonant or-

ganism whose identity unfolds across acoustic, social, and environmental fields. This proposition does not reject symbolic cognition, language, or rationality. Rather, it situates them within deeper structures of embodied resonance from which they arise and upon which they continue to depend. Human beings become symbolic not by transcending acoustic existence but by transforming rhythmic attunement into increasingly complex forms of memory, representation, and culture. Beneath every symbolic system lies a more primordial ground of resonance.

The concept proposed here—*Homo resonans*—names this condition. The human being is fundamentally a resonant presence: a body capable of synchronization, repetition, responsiveness, and attunement. Consciousness appears not as isolated interiority but as reverberation among body, environment, memory, sound, and social interaction. Phenomenologically, resonance is experienced not only externally but existentially. We continually inhabit atmospheres of tone, rhythm, affect, and relational intensity that shape perception before reflective thought fully organizes experience. Harmony, tension, dissonance, and attunement are often sensed bodily and intuitively before they are conceptually interpreted. Awareness appears less as detached self-possession than as modulation within fields of lived relation. Hartmut Rosa's *Resonance* (2019) provides a powerful point of departure for developing this argument. Rosa contends that meaningful existence depends upon responsive relationships through which the world becomes capable of answering, affecting, and transforming us. Against social conditions characterized by acceleration, alienation, and instrumental control, he proposes resonance as a mode of relation in which self and world enter a process of mutual responsiveness and transformation. Human flourishing depends not primarily upon possession, mastery, or accumulation but upon the capacity to establish meaningful relations with others, nature, culture, and the world. Rosa's contribution is significant because it reorients the understanding of fulfillment from control toward attunement. Yet his account remains primarily sociological and existential rather than explicitly acoustic. Resonance functions largely as a relational concept rather than as an analysis of sound, rhythm, or vibration. The present study extends Rosa's insight by grounding resonance more directly in embodied rhythmic and sonic processes. Human relationality is not merely metaphorically resonant; it is physiologically, acoustically, affectively, and neurologically structured through patterns of synchronization, responsiveness, and temporal coordination.

This acoustic anthropology also reconfigures personhood. Modern Western philosophy has frequently imagined the self as autonomous, self-contained, and internally bounded. Consciousness becomes conceived as a private interiority separated from the external world. Resonance destabilizes such assumptions. A resonant being is fundamentally open: affected by rhythm, shaped through encounter, and continuously transformed through interaction. The self does not exist before engagement but emerges through it. Consciousness is neither an isolated substance nor a detached observer of reality. It unfolds within networks linking body, memory, environment, culture, and world. The human being is not only *Homo sapiens* or *Homo symbolicus*. The human being is *Homo resonans*: a being whose existence develops through the continual negotiation of rhythm, relation, and attunement. Nancy's reflections on listening (2007) reinforce this understanding of subjectivity. The self is not a self-contained interiority existing before relation. Awareness emerges through openness, responsiveness, and attunement that continually connect the self to the worlds it inhabits. The self reverberates before it reflects. The hermeneutic implications are equally significant. If subjectivity emerges

through resonance, interpretation is never purely intellectual decoding performed by an isolated consciousness. Meaning arises through embodied engagement with worlds already sensed, inhabited, and affectively charged. We interpret from within resonance before we interpret conceptually about it.

The understanding of identity developed here also resonates with the ritual and communal practices examined earlier in this study. Collective chanting, rhythmic movement, synchronized music-making, and ceremonial repetition generate experiences in which individuality becomes partially dissolved within shared temporality. Identity emerges through resonance as much as through cognition, through attunement as much as through reflection. Such experiences often produce the sense that the self exceeds its own boundaries. During collective rhythmic engagement, one may feel carried by a force larger than individual intention—absorbed into cadence, atmosphere, movement, and shared affective intensity. These moments reveal awareness not as a fixed interior substance but as a fluid process of becoming. Resonance, therefore, challenges the image of the autonomous self that has long dominated modern thought. Existence appears instead as fundamentally participatory: a continual movement of response and transformation through which body, world, and consciousness become mutually constituted within shared fields of experience. McGilchrist (2012) similarly argues that excessive reliance upon abstract and fragmented modes of thought can weaken relational, embodied, and participatory awareness. Detached abstraction risks producing forms of alienation from the world, body, and community. Resonance, by contrast, restores attention to the lived patterns of relation through which meaning emerges and is sustained.

Within this framework, culture may be understood as a form of acoustic architecture. Every culture organizes rhythms of speech, silence, ritual, music, labor, memory, and interaction into patterned structures that shape collective consciousness. Social life unfolds through recurring sonic forms: lullabies, prayers, festivals, mourning rituals, political chants, oral traditions, and musical practices all contribute to the creation of shared worlds of meaning. Culture resonates before it becomes systematized. Rhythms organize belonging. Vocal patterns transmit memory. Repetition stabilizes identity across generations. Even institutions depend upon tacit forms of temporal coordination and affective attunement that exceed formal ideologies and explicit beliefs. Communities are held together not only by shared concepts but by shared rhythms. Acoustemological approaches (Feld, 2012) demonstrate that cultures do not merely produce sound; they inhabit sonic worlds through which place, memory, identity, and knowledge become perceptible. Acoustic life is not supplementary to consciousness but constitutive of how worlds are experienced, interpreted, and shared. We dwell within culturally patterned fields of listening. *Homo resonans* is thus not simply a metaphorical reformulation of humanity but an anthropological condition grounded in lived engagement with resonant environments.

This understanding reshapes language. Language is not merely a vehicle for semantic transmission but a rhythmic relation. Tone, cadence, silence, repetition, and vocal texture shape meaning as profoundly as conceptual content. Communication unfolds not only through what is said but through how it is sounded, paced, and embodied. Even in technologically mediated societies, communication remains inseparable from resonance. Yet digital communication often fragments temporal continuity and diminishes opportunities for listening and embodied presence. The contemporary crisis of meaning may involve not only ideological fragmentation but also the erosion of

shared rhythms and durable forms of collective attunement. To lose resonance is not simply to lose connection; it is to lose one of the grounds through which meaning, belonging, and communal life become possible. Johann Hari's *Stolen Focus* (2022) offers a contemporary account of this condition. Hari argues that modern technological and social environments increasingly undermine sustained attention through continuous interruption, informational overload, and the commodification of human focus. While his analysis is directed primarily toward attention, concentration, and mental well-being, its implications extend further. The capacity for deep engagement with the world appears increasingly threatened by experiences organized around distraction, acceleration, and fragmentation. From the standpoint developed in this study, such dynamics affect more than cognition alone. They alter the very possibility of attunement. Resonance requires duration, receptivity, and continuity of attention. It depends upon the ability to remain present to rhythms, relationships, and processes unfolding through time. When attention becomes fragmented, deeper forms of engagement are weakened. Noise, in this sense, is not simply excessive sound. It is the disruption of meaningful attunement. Resonance depends upon responsiveness and relational depth, whereas noise disperses awareness across disconnected stimuli and competing demands. What is lost is not only concentration but the capacity to enter sustained relations with persons, environments, communities, and sources of meaning. The contemporary crisis may therefore be understood not only cognitively or socially but also acoustically and existentially. We are increasingly surrounded by information while becoming less able to dwell attentively within experience. The challenge is not simply to recover focus but to restore resonance itself. Without sustained attention, the rhythms through which consciousness, culture, and community achieve coherence risk dissolving into a continual flow of interruption and distraction.

The distinction drawn here between resonance and noise should not be understood as a simple opposition between meaningful and meaningless sound. As Jacques Attali (1985) has influentially argued, noise may itself become a creative and transformative force capable of disrupting established orders and opening new cultural possibilities. The present study employs the concept more narrowly to denote conditions in which sustained processes of relational attunement are interrupted or fragmented, while recognizing that noise may also participate in the emergence of new forms of resonance.

Against this fragmentation, practices of listening acquire renewed philosophical significance. Pauline Oliveros' *Deep Listening* (2005) offers an especially important contemporary response. Developed through decades of compositional, pedagogical, and experimental work with sound, Deep Listening proposes listening as an expanded mode of awareness that includes not only auditory perception but also attention to body, environment, memory, imagination, and collective presence. Listening becomes more than the reception of sound; it is a disciplined practice of attunement to the wider field of experience. Oliveros' contribution moves resonance from abstract theory into embodied practice. Deep Listening cultivates forms of awareness capable of counteracting distraction, narrowed perception, and habitual patterns of attention. Through sustained engagement with the sonic environment, listening reorients consciousness toward relation, presence, and responsiveness. The practice reveals that awareness is not fixed but can be transformed by the quality and depth of attention brought to experience. Yet Deep Listening is not merely therapeutic or aesthetic. Its deeper sig-

nificance lies in the anthropological insight it discloses: consciousness itself unfolds through ongoing processes of attunement. We do not simply perceive the world from a distance; we inhabit fields of relation that become accessible through attentive listening. To listen deeply is not only to hear more but to inhabit experience differently. From this standpoint, listening emerges as a practice of resonance. It restores sensitivity to rhythms, textures, silences, and relational dynamics often obscured within technologically accelerated cultures. Deep Listening thus exemplifies, in practical form, one of the central claims of this study: consciousness is not a self-contained interior faculty but a dynamic process shaped by continual acts of attunement to the worlds we inhabit.

The figure of *Homo resonans*, therefore, names more than a reformulation of humanity. It identifies a mode of existence grounded in vibration, synchronization, and relational openness. Human beings are not detached spectators confronting a mute world of objects; they are rhythmic participants within dynamic fields of resonance that continually shape perception, identity, memory, and meaning. This conception also carries important ethical implications. If humans are fundamentally resonant, then alienation, isolation, and ecological destruction may be understood, at least in part, as crises of disrupted attunement. Conversely, practices that cultivate listening, rhythmic participation, communal music-making, contemplative silence, and embodied presence become means of restoring relational coherence. We do not simply inhabit the world intellectually; we resonate with it.

Contemporary ecological and posthuman philosophy further expands this understanding of relational existence beyond anthropocentric frameworks. In *Being Ecological* (2018), Timothy Morton challenges assumptions that separate humans from the environments they inhabit. Ecological awareness, for Morton, begins with the recognition that existence is already entangled: life unfolds through networks of interdependence that exceed the boundaries of individual subjectivity. His work extends the figure of *Homo resonans* by emphasizing that consciousness is inseparable from broader fields of coexistence and relationality. A complementary account appears in *Vibrant Matter* (2010). Jane Bennett argues that agency and efficacy are not confined exclusively to human subjects but emerge through assemblages of human and nonhuman forces. Her vital materialism challenges the image of matter as a passive substance, drawing attention instead to the active role of material processes in the formation of events, relations, and experience. While Bennett does not develop an acoustic ontology, her work nevertheless supports a view of reality as dynamic, interactive, and constituted through networks of responsiveness that exceed purely human intentions. Together, these approaches deepen the acoustic anthropology proposed here by situating resonance within wider ecologies of relation. Consciousness does not arise in isolation but amid worlds already populated by bodies, environments, material processes, and modes of coexistence that continually shape experience. Resonance is not merely an interpersonal phenomenon but a broader condition linking human and nonhuman domains.

To exist is to vibrate within networks of relation extending across body, community, environment, memory, and world. Consciousness may be understood not as detached cognition but as ongoing attunement—a continuous process of becoming through resonance. The figure of *Homo resonans* ultimately names this condition: a mode of existence grounded not in separation, mastery, or autonomy, but in the capacity to participate responsively in the living textures of relation that make experience possible.

Conclusions.

Consciousness as resonant becoming

This understanding also transforms the sacred. Sacredness need not be conceived exclusively as a transcendent doctrine or metaphysical abstraction. It may instead emerge through intensified modes of resonance in which ordinary perception becomes charged with depth, coherence, and presence. The sacred appears when listening deepens, when rhythm synchronizes bodies and awareness, and when sound softens the boundaries between self and world. At the level of lived experience, such moments are often encountered not as intellectual conclusions but as states of heightened participation. One feels drawn into a deeper continuity with surrounding existence. The distinction between perceiver and perceived momentarily relaxes. Resonance becomes a mode of disclosure: a sensing of relational depth that precedes conceptual certainty. Silence likewise acquires renewed significance within this framework. It is not the negation of sound but its horizon—the receptive field from which resonance emerges and to which it returns. Every vibration unfolds temporally between sounding and fading, between presence and disappearance. Awareness likewise exists not as a fixed substance but as an ongoing movement: a continual process of rhythmic becoming.

Martin Heidegger's *Being and Time* (1962) offers a final point of philosophical orientation. Heidegger understood human existence not as a static entity but as a mode of being-in-the-world characterized by openness, temporality, and involvement within meaningful horizons of experience. His analysis of *Dasein* challenged conceptions of the self as a detached subject confronting an external reality, emphasizing instead that existence is always already situated within relations, practices, and shared worlds. In this respect, Heidegger's thought converges with the present study's rejection of isolated models of consciousness. Yet the argument developed here introduces an additional dimension. If existence is fundamentally disclosed through engagement with the world, resonance may be understood as one of the primary modalities through which such disclosure occurs. Before experience becomes fully articulated through concepts, symbols, or reflective interpretation, consciousness is already immersed in rhythms of breath, voice, movement, affect, and listening. We encounter reality not only through understanding but through attunement.

The human being does not merely speak.

The human being resonates.

To understand consciousness acoustically is, therefore, to recognize that existence unfolds not through isolated cognition but through rhythms that exceed us: heartbeat, breath, voice, memory, ritual, music, silence, and the innumerable vibrations through which worlds become perceptible and shared. Consciousness is not just a state possessed by the individual mind. It is an ongoing resonant process—a dynamic unfolding within the sounding fabric of existence itself. Contemporary critical theory increasingly converges around the recognition that relationality, affect, embodiment, and material entanglement challenge older models of isolated rational subjectivity. Across phenomenology, posthumanism, affect theory, ecological philosophy, and enactive cognitive science, awareness appears less as autonomous interior cognition and more as a dynamic process unfolding within networks of relation, rhythm, and responsive becoming. The concept of *Homo resonans* proposed throughout this study seeks to synthesize these developments by foregrounding resonance as a foundational anthropological and ontological principle linking body, sound, environment, memory, and consciousness.

In the end, perhaps the question is no longer whether humans are resonant creatures. The deeper question is whether, amid the accelerating noise of contemporary life, we remain capable of listening.

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