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Research Article

Transcendence of Anthropocentrism in Education: A Historical and Theoretical Analysis of a Nonhuman World and the Decolonization of Interspecies Education

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The history of education structurally examines how pedagogical processes configure human relations with the wider, nonhuman world. School textbooks operate as institutional mechanisms and "technologies of normalization" that actively construct ontologies and regulate human-animal relations. This paper examines representative cases of the anthropocentric fundamentals of Greek education in the field of Natural History during the period 1938–1990 and suggests a transformative, posthumanist pedagogical paradigm for their transcendence. To address these planetary and educational impasses, we present the conceptual and practical architecture of the "Interspecies School" (also referred to as the "Multispecies School"). This paradigm decentralizes the human-centered orientation through relationalism, applying innovative curriculum areas, such as interspecies biology, soil studies, and ecological history, along with non-extractive methods, including Slow Pedagogy and Observation-With. For this reason, this approach goes beyond strict cognitivism by integrating sensory knowledge, cultural sensitivities, and emotional attunement into posthumanist discourse. Ultimately, this paper argues for an ethical shift toward interdisciplinary justice, ecocentric values, and a responsible, embodied symbiotic coexistence on a planetary scale.

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1. Introduction: The problem of educational ontology

The history of education analyzes how institutionalized pedagogical processes structurally shape human relations with the world beyond the human. School textbooks, far from being neutral vectors of knowledge, function as authentic

institutional mechanisms and "technologies of normalization"^[1]. They actively construct resistant ontologies and hierarchize human-animal relations. Within the framework of critical educational hermeneutics, this normalization operates as a mode of ontological violence, defining the boundaries of what or who qualifies as a subject of moral concern^{[2][3]}.

This study conducts a genealogical deconstruction of the anthropocentric foundations embedded within Greek Natural History curricula and textbooks from 1938 to 1990. The significance of this historical trajectory is not merely archival; it is organically tied to contemporary demands for a radical educational restructuring. By unearthing the genealogical roots of environmental objectification, this macrohistorical perspective exposes how modern eco-pedagogical reforms remain covertly tethered to resource-management rationalities^[4]. At the same time, as an initial move toward the decolonization of this space, this historical trajectory intersects with Indigenous frameworks of "relational accountability" and "place-thought"^{[5][6]}, positioning the non-human element not as a passive backdrop, but as an active field of legal and philosophical continuity that challenges the Eurocentric epistemological architecture.

This specific historical timeframe captures the crucial era of post-war reconstruction and rapid state-led developmental nationalism in Greece, which solidified the nation's extractive relationship with nature. Notably, while contemporary textbooks have undergone revisions, they continue to treat the environment through a lens of human resource management rather than true interspecies partnership. Focusing on the 1938–1990 foundations is essential, as modern curricula still inherit these core anthropocentric assumptions. Without deconstructing these historical roots, contemporary textbooks—despite minor environmental updates—continue to reproduce the same anthropocentric biases, leading readers to the false assumption that today's curricula have genuinely transitioned toward an interspecies perspective.

The realization that past curricula systematically reduced nature to "cheap nature" serves as the foundational catalyst for introducing Critical Enbiagogy (Εμβιαγωγική)^{1[7][8]}. This theoretical intervention is materially enacted through the model of the Interspecies School. The choice of "interspecies" over "multispecies"² specifically emphasizes the active, negotiated, and political transitions occurring between distinct subjective agencies, rather than merely cataloging a passive plurality of co-present species within a shared environment^{[8][9]}. This paradigm seeks to decenter the human subject through a relational ontology and defend interspecies justice.

2. Historical corpus and methodology

To ensure empirical validity and epistemological rigor, it is essential to render the paper's historical corpus and methodological procedures explicit.

2.1. Corpus constitution

The empirical baseline of this research comprises a purposively constituted historical corpus of primary and secondary school textbooks on Natural History, Botany, Zoology, and Anthropology approved by the Greek Ministry of Education and issued by the State School Textbook Publishing Organisation (SBPO). The chronological boundaries (1938–1990) span from the Metaxas regime, through

post-war reconstruction and the Cold War, up to the dawn of contemporary cross-thematic reforms. To document this trajectory, an initial historical archive comprising ten (10) approved school textbooks and curriculum framework documents published between 1938 and 1990 was compiled and screened. Materials were considered eligible when they (a) fell within the specified chronological period, (b) were officially approved or issued within the Greek state educational system, (c) addressed Natural History, Botany, Zoology, Anthropology, or closely related biological content at the primary or lower-secondary level, and (d) contained substantive material relevant to the construction of human–nature relations. From this initial pool, a final sample of six (6) textbooks was purposively selected for detailed qualitative analysis on the basis of two additional functional criteria: (a) their sustained or institutionally significant use in primary or lower-secondary education and (b) their explicit role in the standardization of environmental and biological classifications. The remaining materials were used for contextual orientation but were not included in the close textual analysis. The corpus includes seminal textbooks authored by Papaspyrou and Doros^[10], Gavalas^[11], Pantelouris^[12], Tsilithras^[13], Aspiotis^[14], and Georganopoulos and Vacharopoulos^[15].

2.2. Units and categories of analysis

The fundamental unit of analysis was defined as any "thematic reference"—including textual passages, taxonomies, illustrative narratives, and linguistic tropes—that structurally configured human-nature dynamics. These analytical categories did not precede the reading as rigid, static templates. Instead, they emerged through an iterative and recursive engagement with the texts, capturing the shifting logics of the corpus:

- Foundational anthropocentrism: Textual instances positioning the human at the top of the natural hierarchy or as the definitive purpose of creation.
- Industrial / extractive utilitarianism: Taxonomic classifications evaluating flora and fauna firmly through the lens of economic profit, labor productivity, or resource material extraction.
- Human-centered ethics: Narratives that project human civic values (e.g., obedience, loyalty, submission) onto nonhuman animals to enforce social discipline.
- Management of natural resources: Curricular shifts, predominantly post-1970, introducing conservationist jargon, wherein eco-preservation remains subordinated to the rationalization of national financial capital.

2.3. Methodological procedure

Data triangulation and interpretation followed the tenets of critical discourse analysis and post-qualitative inquiry. This approach rejects sterile empirical tabulation in favor of tracing subtextual, political, and macroeconomic rationalities embedded within pedagogical texts^{[7][16]}. Data triangulation (or, more accurately, crystallization) was employed functionally—not to achieve a positivist validation of "objective facts," but to cross-reference and map linguistic tropes at the textual level against macro-level state agricultural strategies and postwar developmental legislative decrees (such as Legislative Decree 4379/1964) across successive decades. This interpretive matrix reveals how the educational apparatus functioned to produce compliant subjectivities tailored to eco-destructive economic growth. To maintain methodological transparency without reproducing positivist assumptions, qualitative thematic shifts were

interpreted in conjunction with parallel historical-political developments, ensuring that critical interpretations were grounded in structural socio-economic data.

3. The traditional paradigm: Nature as an object of exploitation

3.1. Anthropocentric hierarchy and taxonomic logic

Greek Natural History textbooks published between 1938 and 1970 organized biological knowledge around a rigid *scala naturae* (the scale of beings). Within this framework, biological species were evaluated solely on their direct utility for human industrial and agricultural exploitation. Papaspyrou and Doros^[10] (see also ^{[11][13]}) explicitly stated that "animals and plants are in the service of man," framing Natural History as a tool for the optimized extraction and utilization of nature for the benefit of man. This structural legacy carried directly into the secondary education textbooks of the 1970s, such as Tsilithras^[13], which fortified a highly localized agrarian pragmatism. This configuration epitomizes what Plumwood^[17] diagnoses as the "dualistic logic of sovereignty" or "logic of dominance," where the nonhuman world is systematically marginalized and rendered a passive reservoir of resources for human self-realization.

This rigid educational framework appropriated and simplified early philosophical taxonomies. While the Western tradition often attributes the roots of this oppressive hierarchy to Aristotle, a historical and pedagogical reading of *Parts of Animals*^[18] reveals him as an integrative thinker who emphasized a psychophysiological continuum and a profound biological and emotional bond, recognizing in nonhuman beings the capacity for physical perception, deliberateness, and cooperation.

Conversely, modern Greek curricula removed this shared bio-psychological continuum, displacing it in favor of an aggressive industrial utilitarianism and "plant blindness"—the perceptual incapacity to recognize the inherent worth of plants^[19]. Flora and fauna were partitioned into binary schemas of "beneficial" versus "harmful" assets, rendering their ecological roles invisible and forming the philosophical foundation for ecosystem and colonial exploitation.

3.2. Distant knowledge and the silent object

A definitive characteristic of this traditional paradigm is the structural cultivation of a distanced relationship to knowledge. The student learns about nature, never with it or as an organic, functionally integral part of it. Knowledge is presented as one-dimensional and one-sided: humans observe and exploit, while the natural world remains a passive, voiceless object.

School texts, such as Aspiotis^[14], framed science as a means for the rational exploitation of natural resources, reflecting a broader ideological framework of developmental nationalism, growth, and biophysical control over nature. Implicitly, this pedagogical distance functions as the epistemological wing of the "animal-industrial complex"—a systemic arrangement in curricula that desensitizes students to environmental violence, transforming living existence into quantifiable, inanimate commodities^[20].

4. Socio-political and geopolitical factors

The dominance of this utilitarian and taxonomic model was driven by three institutional parameters:

- The postwar developmental paradigm: After the Greek Civil War, capital accumulation required the degradation of the environment into "cheap nature." School textbooks were tasked with shaping productive citizens to fuel state extraction. This structural alignment reflects the broader dynamics of capitalist global ecology, where state educational apparatuses function to produce compliant subjectivities^[21] that view ecosystems as costless externalities destined for economic growth^{[22][23][4]}.
- The technocratic turn of the Cold War: Following the Sputnik shock of 1957, science education was globally restructured towards a strict positivism. Nature was transformed into a laboratory, taxonomic object to be studied from a safe, detached distance.
- The nationalist apparatus: Emerging from successive dictatorial regimes, the management of rural areas and agricultural production was deemed crucial to national sovereignty. Textbooks served as technologies of normalization, placing the modern citizen at the absolute pinnacle of creation.

4.1. *The ideological nuances of the 1960s and the 1964 reform*

The 1960s in Greece represented an intense socio-political arena where macroeconomic imperatives clashed directly with emerging intellectual movements. To realize how natural sciences were armed to be released, one must analyze the ideological subtext of the innovative 1964 Educational Reform (Legislative Decree 4379/1964), headed by Prime Minister Georgios Papandreou and the educator Evangelos Papanoutsos.

Before this intervention, the late 1950s curriculum was influenced by technocratic and positivist views of the post-Sputnik era. Science education operated as a state-sanctioned mechanism of biophysical control, mapping nature through a dry, mechanical taxonomy designed to produce compliant citizens for a nationalist agrarian state. The natural world was a silent grid of production targets.

The 1964 Reform attempted a systemic disruption of this rigid scholasticism. It shifted the focus of natural sciences away from blind memorization and toward child-centered inquiry. Ideologically, the reform sought to break the sterile taxonomic containment of nature, yet it ultimately remained a humanist project. Even within this newly democratized, inquiry-based framework, the ultimate epistemological goal of studying nature remained tied to national modernization and developmental nationalism. As seen in the textbook of Pantelouris^[12], Anthropology, the relevant chapter addressing the relationship between humans and the natural environment views this connection strictly from an anthropocentric, utilitarian, and medical-centered perspective. The natural environment is analyzed as a source of either resources or risks to human health. The focus is on what humans "take" (benefits, vitamins, purity) and what they "suffer" in the absence of these elements, while the concept of ecological responsibility—that is, what humans "give" or what they destroy—is entirely absent.

4.2. Chronological evolution of agricultural policy and textbooks

The intersections between macroeconomic agrarian objectives and the pedagogical orientation of Greek science curricula across the postwar era demonstrate a deliberate alignment between state production requirements and textbook paradigms, as detailed in Table 1.

Era	Primary state agricultural objective	Predominant curricular projection and paradigm
1950s–1960s	Postwar socioeconomic demands: Postwar economic endurance, domestic agrarian self-sufficiency, and the halting of urbanization.	Human-centric ecological utilitarianism, focusing on domestic animal usefulness, obedience, and local labor profit (e.g., ^[11]).
1960s–1970s	Agricultural modernization, integration of intensive chemical inputs, and macroeconomic focus on industrial crop yields.	Rigorous binary classification dividing ecosystems into economic assets ("useful") versus targets for absolute eradication ("harmful").
1980s	Supranational and structural drivers: Accession to the European Economic Community, mitigation of severe soil erosion, and structural resource management.	Technocratic resource governance: Institutional shift toward state-managed conservation; transitioning from unmonitored extractivism to technocratic "rational resource management" (e.g., ^[15]).

Table 1. *Diachronic mapping of state agronomic directives and curricular orientation*

5. Critical Enbiagogy: Epistemological positioning and literature dialogue

The introduction of Critical Enbiagogy^[8] goes beyond a simple appendage to existing environmental discourses. Instead, it marks an essential epistemological shift. To articulate its central contribution, it must be thoroughly contextualized in relation to recognized traditions:

- Environmental education: Traditional frameworks frequently restrict themselves to the transmission of abstract scientific literacy and resource management. Critical Enbiagogy rejects this technocratic stance, conceiving sustainability not as resource accounting, but as a political ethic of cohabitative and symbiotic justice.
- Critical ecopedagogy: While ecopedagogical frameworks—such as the one articulated by Kahn^[24]—successfully dismantle corporate extractivism, they remain fundamentally limited by their humanistic architecture. By framing crisis intervention around "human stewardship," traditional ecopedagogy inadvertently reproduces a paternalistic hierarchy, positioning nature as a vulnerable, external object dependent on enlightened human supervision. Critical Enbiagogy emerges as a necessary education of resistance that transforms this paradigm.
- Posthumanist education and critical animal studies: Critical Enbiagogy deeply aligns with Braidotti's^[25] posthumanist ethics, which dissociates subjectivity

from human exceptionalism and recognizes our entanglement with nonhuman material agents. However, it moves beyond the empirical data obsession (e.g., carbon metrics, abstract green indices) that characterizes representational validation in traditional educational studies.

- Common worlds pedagogy: Drawing heavily from Haraway's^{[26][27]} concepts of "sympoiesis / worlding-with" and the common-world methodologies of Taylor and Pacini-Ketchabaw^[9], Critical Enbiagogy pushes children beyond the artificial boundaries of the classroom. It expands this paradigm by explicitly repositioning nonhuman animals as active pedagogical participants and co-teachers, whose somatic choices, spatial migrations, and behavioral refusals are elevated to decentralized, relational invitations and transformative educational reference points, thereby challenging any lingering notion of human exceptionalism or hierarchical governance within the context of classroom interaction. This structurally mirrors Aristotle's ecological observations in his *Historia Animalium*^[28], where living organisms are understood only in direct relation to their specific habitat and mutual dependencies.

By redefining the earth as a lively, open entity, Critical Enbiagogy overturns the Eurocentric epistemological background of the Enlightenment, replacing Cartesian dualisms with inherited and posthumanist understandings of the earth as an active, communicative subject^{[29][30]}. Critically, this shift cannot remain a purely cognitive exercise; it requires an embodied, sensory reawakening to the shared postmaterialist assemblage we inhabit. Incorporating the critiques of Zoe Todd^[5] and Vanessa Watts^[6] regarding the exclusionary nature of Western posthumanism, Critical Enbiagogy actively avoids using Indigenous "place-thought" merely as a secondary validation of Euro-American theory, allowing these non-dualistic traditions to unsettle the foundational basis of educational subjectivity. By integrating affect, sociability, and cultural sensitivities as legitimate ways of knowing and interpreting, Interspecies Education goes beyond theoretical environmentalism, culminating in a deeply felt, lived practice of "being with" and thriving alongside nonhuman agents. This approach connects Western posthumanist critiques with long-standing Indigenous knowledge systems; it recognizes that local, land-based cosmologies have always resisted the extractive politics of modernity, thereby offering critical ontological anchors for a truly decolonized, interspecies education that honors our shared community of life. The transition from historical diagnosis to the framework developed below should therefore be understood as a theory-building and design-speculative step rather than as an empirical inference that has itself been experimentally validated. The historical analysis identified recurring curricular structures—anthropocentric hierarchy, instrumental valuation of nonhuman life, epistemological distance, the silencing of nonhuman agency, and the subordination of ecological relations to developmental rationalities. The Interspecies School translates these diagnosed structures into corresponding counter-principles: ecocentric curricular organization, recognition of intrinsic value, situated and embodied learning, attention to nonhuman agency, and relational forms of ecological governance. The architectural, curricular, and administrative proposals that follow are consequently presented as heuristic design propositions derived from this historical and theoretical synthesis. Their feasibility, educational effects, regulatory implications, and ecological consequences require subsequent

empirical investigation through pilot studies, participatory design, and context-specific evaluation.

6. The Interspecies School: A practical enactment framework

Translating Critical Enbiagogy from theoretical abstraction into material reality requires the operational architecture of the Interspecies School. Conceived explicitly as a radical theoretical experiment rather than an immediately applicable administrative plan, this model functions by highlighting what modern schooling renders structurally unthinkable, without requiring proof that every proposed architectural arrangement is immediately feasible within bureaucratic frameworks.

This model serves as the literal material cure to the historical pathology of educational environments, where mid-twentieth-century school designs systematically replaced natural soil with asphalt and concrete to enforce biosecurity containment. The Interspecies School deconstructs these sanitary fences in favor of open, contractual boundaries where different bio-social subjectivities dynamically clash, resist, and establish cohabitation terms^{[8][31]}.

6.1. The philosophy of education and institutional restructuring

The Interspecies (Multispecies) School reshapes education along five fundamental axes of transformation:

- From an anthropocentric to an ecocentric curriculum.
- From knowledge about nature to collaborative knowledge with nature.
- From rigid hierarchies to the complexity of ecological relationality.
- From instrumental mining to the recognition of intrinsic value.
- From clinical observation to deeply embodied, sensory, and affective *in situ* (on-site) participation that actively bridges our cultural, social, and ecological worlds.

6.2. Curriculum architecture

The interdisciplinary matrix is operationalized across four main foundational axes and a capstone scenario:

- Interspecies biology: Reorients life sciences around relational ecosystems and nonhuman entities, while critiquing Carolus Linnaeus's 18th-century taxonomy as an imperialistic mechanism and system of power.
- Soil and earth studies: Involves students directly in soil microbiomes, organic decomposition, and passive water systems.
- Ecological history: Critically deconstructs the anthropocentric jargon of historical textbooks (1938–1990) to reconstruct ecocentric and ecological perspectives.
- Language and environmental narratives: Analyzes discourse-driven dominance and implements creative storytelling from the lived perspective of nonhuman entities.
- Common worlds seminar: An interdisciplinary core course that addresses environmental humanities, biopolitics, and the fundamental rights of ecosystems. Grounded in the pedagogy of common worlds^{[32][9]}, this course engages learners with local socio-ecological multispecies communities to cultivate ethical coexistence beyond the artificial borders of the classroom.

6.3. Pedagogical methods and the natural environment

Daily teaching practice is based on three central principles: Observation-With (sensory immersion and affective attunement), Slow Pedagogy (cyclic ecological timelines), and Collective Learning (where ecosystems, socio-cultural heritages, and nonhuman entities act as active co-educators). This multisensory approach ensures that learning transcends strict cognitivism, anchoring the school's daily routines in the complex social, affective, and material assemblages necessary for a true symbiotic coexistence. It is of crucial importance that, when the behavior of nonhuman entities shifts or manifests as physical withdrawal, the school adopts a stance of strict cognitive modesty and partial knowledge; these changes are not redefined as readily legible educational data amenable to transparent decoding, but rather as ethical markers that highlight the limits of human representation. The physical infrastructure includes a Living Garden, a Soil Lab, and Quiet Observation Zones, utilizing portfolio assessment to measure active care practices instead of traditional grading.

6.4. Sensory design and material restructuring — focus on the Avian Group

Rejecting the traditional enclosed classroom container, the physical plant of the Interspecies School undergoes a complete multi-species architectural alignment based on the environmental culture principles of Plumwood^[17]. When applying the Multi-Species Architectural Integration Matrix to the Avian Group, the curriculum and physical infrastructure are co-shaped by nesting rhythms and flight trajectories:

- Acoustic spectrum: Low-frequency vibration dampening and acoustic timber integration to protect acute avian auditory registers.
- Visual spectrum: Anti-collision micro-patterned UV glass installations to prevent human-centered glazing casualties.
- Tactile/structural specifications: Traditional walls are replaced with porous brickwork panels and unpolished, terraced stone rows to provide nesting cavities and roosting niches.

Indoor floor plates dissolve into continuous earthen beds connected to the external topography, fitted with permanent, low-resistance pressure panels to ensure unhindered egress for local wildlife. Students develop "decentered listening"—an acute, non-verbal attunement to avian somatic markers, territorial calls, and warning flights^[33].

6.5. Administrative navigation and strategic bureaucratic translation

To preserve the ontological objectives of the Interspecies School while operating within established state architectures, the institution utilizes a dual-discourse strategy^[9]. This method translates radical biocentric operations into accepted bureaucratic terminologies to fulfill legislative and administrative rubrics without compromising pedagogical practice. Table 2 illustrates this dual-discourse strategy by mapping conventional regulatory terminology onto the corresponding pedagogical intentions and material practices of the Interspecies School.

External regulatory vocabulary	Internal pedagogical intent and material reality
"STEM curriculum and quantitative data analysis"	Methodological tracking and multi-sensory mapping of local animal-led migrations.
"Civic responsibility, ethics, and citizenship"	Development of protocols for interspecies governance and cooperative coexistence.
"Health, safety, and environmental protocols"	Active conservation of interspecies habitats and non-intrusive coexistence in the landscape.

Table 2. *Analytical Reconstitution of Curricular and Bureaucratic Discourse*

As shown in Table 3, this strategy also extends to the management of bio-sanitary requirements, translating conventional state containment terminology into practices intended to maintain ecological integrity while satisfying regulatory and public-health requirements³.

Regulatory technical framework	Internal biocentric practice and rationale
"Zoonotic mitigation corridor"	Structural spaces designed for negotiated, non-coercive cross-species friction and contact boundaries.
"Organic waste biomass management"	Closed-loop management of multiple nutrient types, local composting, and ecological decomposition.
"Involuntary contact containment protocols"	Spatial planning aimed at actively respecting and preserving non-human territorial restrictions.

Table 3. *Strategic linguistic reconstitution of biomedical and environmental management*

6.6. Post-qualitative evaluation

In alignment with the post-qualitative rejection of rigid psychometric metrics^[16], evaluation within this paradigm intentionally discards numerical scoring systems. Instead, it relies on a diagnostic framework designed to observe the development of relational empathy and behavioral modification in response to non-human interactions^{[8][31]}. Table 4 presents this proposed assessment matrix, organizing relational attunement across three developmental levels and three evaluative fields.

Evaluative field	Emerging attunement (anthropocentric resistance)	Developing attunement (anagogical awakening)	Advanced attunement (enbiagogical symbiosis)
Somatic awareness and decentered listening	The learner relies exclusively on anthropocentric verbal registers; non-human physiological cues remain unacknowledged.	The learner observes distinct non-human behavioral shifts (e.g., posture alterations) but struggles to interpret them objectively.	The learner instantaneously attends and responds to subtle multi- species somatic indicators and warning signs.
Spatial responsiveness and boundary negotiation	The learner treats the educational landscape as an exclusive human asset, invading natural habitats without hesitation.	The learner identifies established wildlife territorial boundaries but requires adult guidance to alter physical trajectory.	The learner independently adjusts their spatial presence to respect non-human habitats, prioritizing co- shaped thresholds.
Adaptation to non-human behavioral shifts	The learner responds to animal avoidance or withdrawal with overt frustration, emotional indifference, or disciplinary action.	The learner acknowledges an animal's refusal to participate as a classroom disruption but struggles to reframe the plan.	The learner treats an animal's behavioral choices and bodily choices as a relational invitation and ethical boundary.

Table 4. *Evaluative assessment matrix for relational attunement*

Teachers utilize this matrix alongside continuous pedagogical documentation derived from Taylor and Pacini-Ketchabaw^[9], capturing narrative observations of cross-species adjustments rather than tracking the acquisition of abstract environmental data.

6.7. *The museum of silent encounters*

The final project transmutes textual analysis into public pedagogy. Students isolate the violent, utilitarian language of Natural History textbooks to creatively reconstruct and present public multimedia exhibitions, seen entirely from the perspective of non-human beings. To prevent this exercise from devolving into yet another vehicle for human ventriloquism, the students' narratives are strictly structured around epistemological humility and partial knowledge, explicitly highlighting the unbridgeable phenomenological otherness of non-human subjectivities.

7. Conclusion

The genealogical deconstruction of post-war Greek natural history education exposes how taxonomic classification was weaponized to validate the physical sterilization and enclosure of school environments. Even the updated curricula of the 1980s framed nature through the lens of human resource management rather than as an equal interlocutor^[15]. These findings highlight five systemic impasses: the perennial dominance of anthropocentrism, an unyielding utilitarian rationality, the cultivation of detached knowledge, the absolute silence of the nonhuman element, and a colonial epistemology.

The material layout of the Interspecies School, proposed under the framework of Critical Enbiagogy, serves as the direct cure to this historical pathology. By replacing hyper-sanitized isolation with open, negotiated thresholds, the architecture transforms the school from an instrument of anthropocentric dominion into a living sanctuary where human and nonhuman trajectories actively co-shape a shared earthly community, charting a path toward planetary survival and interspecies justice. Confronting the deep “realpolitik” of institutional schooling and the systemic resistance inherent in industrial-style educational structures, this initiative refuses to operate as a standard reformist intervention. Instead, it approaches contemporary schooling through what Machado de Oliveira^[34] describes as “hospicing modernity”—offering a framework of compassionate care for a declining educational paradigm that drives ecocide, while simultaneously creating spaces where alternative, exploratory future scenarios can unfold amidst the collapse of the Anthropocene era. Far from being a detached utopian exercise, these speculative configurations find immediate practical alignment with emerging localized environmental justice movements that cross-reference social studies with non-extractive ecological preservation.

Statements and Declarations

Funding

No specific funding was received for this work.

Potential Competing Interests

No potential competing interests to declare.

Data Availability

The historical school textbooks and curriculum documents analyzed during the current study are available in public educational archives and state libraries. The specific corpus analyzed in this study is identified in Section 2.1 and in the corresponding references. No new dataset was generated as part of this study.

Author Contributions

A.H. was the sole author and is responsible for all aspects of the manuscript.

Footnotes

¹ The term Enbiagogy is preferred, as it better reflects the spoken language, while preserving the Greek root “bios.” Furthermore, the prefix ‘bi-’ aligns better

with the International Phonetic Alphabet and has already been featured in international conferences (e.g., Budapest END 2025 and ISCHE 47 Athens), launching its academic use.

² Here, a clarification is considered necessary. Although these terms are often used alternately, there is a fundamental difference between them in the way knowledge is organized and in the level of interaction between cognitive subjects. In the multispecies paradigm, linearity and sequential composition dominate. In contrast, the interspecies paradigm, which represents the contemporary educational challenge, merges scientific fields into a new whole. The boundaries between subjects become porous, allowing them to interact dynamically and intertwine with each other. This approach directly evokes the *élan vital* of Henri Bergson^[35]. Through this creative synthesis, the fields generate a new organic whole: a deeper, holistic, enbiagogical understanding. Crucially, while 'multispecies' operates descriptively to acknowledge co-presence, 'interspecies' acts normatively and politically, interrogating the active relational thresholds between distinct subjective agencies.

³ This biocentric restructuring does not abolish established public health protocols. "Negotiated friction" is structurally and architecturally mediated to ensure that biomedical safeguards, epidemiological tracking, and multi-species hygiene standards are meticulously adhered to in order to prevent cross-contamination. Rather than resisting bio-safety regulations, the framework recontextualizes them, demonstrating that ecological integration and epidemiological responsibility are mutually reinforcing dimensions of planetary health.

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