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The Relationship Between Education and the Environment: A Critical and Nonviolent Perspective

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Abstract

The relationship between education and the environment has undergone various historical phases, as exemplified by practices such as open-air schools and forest schools. These educational approaches emphasize the significance of learning in natural contexts to foster a dialectical relationship between theory and practice, a core characteristic of experiential learning. Such practices offer a response to contemporary environmental challenges by proposing a non-competitive and nonviolent interaction with the environment, integrating the needs of human life with the preservation of ecosystems.

However, these perspectives often conflict with current educational systems, which tend to be neutral or subordinate to dominant economic and political dynamics. Traditional pedagogy frequently neglects the role of the teacher's personal experience as an integral component of the educational process, favouring detached and abstract approaches. This paper instead advocates for an engaged pedagogy, wherein the educator's experience becomes both educational content and a tool for transformation. The nonviolent dimension of educational practice emerges as a process of conscientization, bridging theory and practice, and driven by engagement with what lies outside school buildings and beyond the certainties imposed by an education system often subservient to a neoliberal economy.

[1] The text was written in a spirit of collaboration between the authors: Paola Rigoni wrote and edited sections 1, 2, and 4. Dino Mancarella wrote and edited section 3.

This economy, by projecting human existence into an artificial and abstract dimension, has contributed to a loss of connection with reality. Neoliberalism has promoted consumption as the solution to existential crises, distancing humans from the authentic needs of the natural and animal environment. From this critical perspective, education must reclaim its transformative role, abandoning subordination to the market and reorienting itself toward a practice that fosters critical, nonviolent awareness. Such an approach is essential to addressing global challenges through sustainable and reality-based solutions.

Introduction

The relationship between education and nature is often interpreted through a romantic or idealized lens, reducing the experience of the natural world to a mere emotional backdrop or recreational opportunity. While such approaches may stem from sincere affective intentions, they tend to obscure the deep epistemological potential that the relationship with the natural environment offers to educational processes. What is often overlooked is that nature, far from being a neutral background, is the original matrix of knowledge—a dynamic space in which human thought emerged from direct experience. Since the dawn of humanity, the observation of natural cycles, the rhythms of the seasons, animal behaviour, and material transformations have constituted the earliest cognitive acts, the first exercises in reflection, hypothesis, and inference. Nature, therefore, is not external to the mind, it is its first interlocutor. This direct contact with reality laid the foundation for symbolic thinking, abstraction, logic, and ultimately scientific reasoning.

In this light, education in nature should not be viewed as a supplementary or marginal activity, but as a foundational experience for cognitive development. Maria Montessori clearly recognized the formative power of the natural environment. For her, nature represented a living laboratory in which the child could autonomously engage, observe complex relationships, and develop a method of understanding grounded in sensory experience, order, and repetition. Immersed in nature, the child not only explores but constructs their intelligence through a deep relationship with the world around them.

A consistent and contemporary perspective is developed in the concept of place-based education (Soble, 2004) which emphasizes learning rooted in real and lived places. According to Sobel, it is precisely concrete, immersive, and contextualized experience that allows children to develop an authentic

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connection to the world and a sense of ecological responsibility. Taken seriously, this statement implies a profound shift in educational paradigms: it calls for reimagining school not as an isolated or abstract space, but as a living extension of the territory, an interface between culture and environment.

The contact with the natural world, in this sense, is not merely instrumental (i.e., teaching content through real-life examples), but becomes a form of learning in itself. The child does not simply learn in nature but learns with nature through orientation, care, slow time, the ability to read the signs of the landscape, to interact with living beings, to anticipate consequences, and to reflect on their actions. The environment, therefore, is not a passive backdrop but a co-educator*,* a living presence that stimulates ecological intelligence*,* namely, the ability to think in terms of relationships, processes, and interdependencies. This approach also involves a change of scale: learning does not develop from abstract generalizations but from situated, concrete situations in which knowledge is intertwined with daily life, with the real needs of the community, and with the identity of place. Through this immersion in reality, children develop a form of complex and reflective thinking, capable of connecting the particular to the universal, a systemic process in which mind and environment are interconnected elements within a larger network of relationships (Bateson, 1972). According to this perspective, every act of knowing is situated within an ecological context: to know is to perceive patterns, recognize recurrent structures, and intuit underlying connections. From this standpoint, education becomes a matter of cultivating a systemic awareness, encouraging learners to "think in relationships" rather than in isolated units of knowledge. Nature, therefore, is not just a source of content (science, biology, geography), but a model of thought.

Historical models of open-air education provide powerful empirical evidence for the pedagogical value of nature-based learning. Open-air schools, emerging in early 20th-century Germany and spreading across Europe, were a response to urban health crises and aimed to promote physical and psychological well-being through unstructured interaction with natural environments (Maynard & Waters, 2007). These schools sought to counteract the effects of industrial urbanism and sedentary classroom routines by integrating fresh air, movement, and sensory engagement into the daily rhythm of learning. Similarly, Forest Schools, inspired by Scandinavian traditions, offer entirely outdoor learning environments that emphasize autonomy, creativity,

resilience, and social-emotional development (Knight, 2013). These models provide living examples of John Dewey's educational philosophy, particularly his concept of learning by doing, where direct experience becomes the foundation for reflective thinking and intellectual growth (Dewey, 1938). Dewey's idea of growth was not confined to the quantitative accumulation of knowledge but understood as the expansion of one's capacity for meaningful experience. For Dewey, growth is not merely an individual advancement in skill or information, but a deepening of the ability to engage with the world in intelligent, responsive, and transformative ways. It is a qualitative process: a growing richness in how one perceives, values, and acts within experience. This conception of growth is rooted in Dewey's pragmatist epistemology, in which knowledge is not a static possession but a mode of action, inseparable from the conditions in which it is generated and applied. Growth, therefore, entails an increasing capacity to reconstruct experience, to make sense of it, to reorient oneself within it, and to open up new possibilities for meaning and agency. In this light, education becomes the process through which experience is rendered more articulate, connected, and capable of sustaining inquiry.

Meaningful experience unifies doing and undergoing, thought and feeling, self and world. It resists fragmentation and contrasts educational models that reduce learning to discrete outcomes or compartmentalized knowledge. In those models, growth is often understood as linear progress along standardized metrics; for Dewey, however, growth is recursive, situated, and always contingent upon the quality of the learner's engagement with their environment, there is the integration of sensory, emotional, and cognitive experiences, which resonates closely with the embodied, multisensory, and relational learning promoted by outdoor pedagogies. These dimensions are not peripheral but central to the cultivation of intelligent behaviour, in Deweyan terms intelligence arises not from the abstraction of experience into disconnected facts but from the capacity to make sense of experience as a whole, through a dynamic interplay of perception, emotion, and action.

This contrasts sharply with neoliberal models that associate growth with productivity, standardization, and measurable outcomes. Outdoor education, in this light, becomes a site where learning regains its integrity, where children do not merely acquire knowledge, but live it, test it, and transform it through concrete engagement with the world.

This embodied engagement is particularly relevant in today's educational landscape, where many learners experience increasing detachment from both place and process. Fragmented curricula, screen-mediated instruction, and assessment-driven routines tend to flatten experience, severing the connections between knowledge, affect, and action. Outdoor learning resists this fragmentation by rooting educational practice in sensorial immediacy and lived context. It restores the learner's body and environment as legitimate and essential sources of meaning-making.

Moreover, this pedagogical orientation carries ethical and civic implications. By inviting learners to dwell attentively in a specific place observing, caring, responding, outdoor education fosters a form of ecological literacy that is both intellectual and affective. It supports not only knowing about nature but knowing with nature: a relational stance that deepens empathy, responsibility, and a sense of belonging. In this way, Dewey's vision of education as the continuous reconstruction of experience gains new relevance in the context of ecological crisis and educational reform alike.

A natural environment, with its complexity and coherence, educates us to perceive the whole, to think relationally, to respect limits and rhythms. In an age of oversimplification, ecological education offers a powerful response: it prepares minds to see the bigger picture and to act with awareness of the interdependence between living beings (Louv, 2008). From this perspective, education in nature is not a nostalgic return to the past, but a deeply contemporary act, capable of weaving together knowledge and place, experience and reflection, individual and community. It is, perhaps, one of the most fertile grounds for rethinking the very meaning of education today.

Pedagogy and Democracy

The relationship between pedagogy and democracy is foundational, not incidental. As Dewey (1916) argued, education is the primary vehicle through which individuals become capable of participating in democratic life: it is through learning. not only academic content, but ways of being, interacting, and thinking that we cultivate the dispositions of citizenship. Education, when conceived as experience (Dewey, 1938), must place the individual in relation with others, with the environment, and with the community. Outdoor education offers a particularly powerful space for this relational learning: by removing rigid classroom hierarchies and reconnecting students with their surroundings,

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it enables the kind of embodied, situated, and participatory experience that supports democratic formation (Sobel, 2004; Biesta, 2017).

However, while democracy is often defined as a method of collective decision-making grounded in participation, dialogue, and mutual recognition, the lived reality of many formal educational environments, schools, colleges, and universities, frequently falls short of this ideal. In these spaces, pedagogy often assumes the form of a tense relationship between "major" and "minor" voices: the adult as authority and the student as subordinate. This dynamic can foster what Rosenberg (2003) and Patfoort (1995) describe as violent education, a mode of instruction in which control, domination, and silencing prevail over dialogue, cooperation, and the recognition of others. Biesta (2013) warns against the reduction of education to mere outcomes or instrumental functions, arguing instead for a pedagogical ethic centred on subjectification that is supporting individuals to become autonomous and responsible subjects with others.

In this light, the essential question is not what subject matter is being taught, but *how* it is taught. A mathematics teacher can reinforce authoritarianism as much as a literature teacher can foster freedom or vice versa. When classrooms become spaces where students cannot freely express themselves, where educators model coercion rather than nonviolence, and where structures prevent real participation, we are no longer in the realm of democracy. We may instead be witnessing what Hassner (1992) described as democrature: a system that formally adopts the language and rituals of democracy (discussion, choice, representation) but in practice maintains asymmetry, hierarchy, and control. It is therefore legitimate to argue that in many formal educational contexts, we encounter not democracy, but educational democrature, a simulation of democratic learning in which participation is controlled, expression is constrained, and pedagogical authority is rarely questioned.

To become transformative, pedagogy must resist this erosion. It must embrace ethics, shared responsibility, and participation. This means not only revising curricula but redefining teacher-student relationships and decentralizing power. Dewey envisioned schools as "embryonic communities", where democratic habits are formed through collaborative learning. This vision remains urgent.

Moreover, while some argue that education should primarily prepare students for the workforce, here we try to contend that such preparation must go far beyond technical competence. It must include the cultivation of adaptability, ecological consciousness, critical thought, and civic responsibility, capacities

essential not only for future employment but for collective survival. To reduce education to employability is to risk raising generations that are technically skilled but ethically adrift.

This risk is amplified in what can be described as a "vision society", a world increasingly mediated by screens, curated images, and flattened communication. We are constantly confronted with representations rather than realities, and interaction is often reduced to visual consumption or symbolic approval (an emoji, a like, a swipe). This two-dimensional logic of engagement undermines the three-dimensional complexity of real democratic life: dialogue, conflict, ambiguity, and presence. If we no longer practice speaking with others, truly listening, disagreeing, building shared meaning, but only messaging, reacting, and performing ourselves in digital fragments, then we lose the very ground on which democracy depends.

This creates fertile soil not for democratic deliberation, but for oligarchy, a form of governance by the few, where power is not earned through wisdom or ethical leadership, as Plato envisioned in *The Republic*, but seized by those who excel in manipulation, surface appeal, and marketable charisma. In this light, democracy becomes not only hard to practice, but hard to imagine. To resist this drift, education must help students to know themselves, to observe the world beyond themselves, to exercise discernment, to ask: What should I take in? What should I reject? How do I act ethically, not just efficiently?

Neoliberalism, with its emphasis on outcomes, rankings, and productivity, increasingly asks for workers without ethics, individuals who are flexible, silent, and compliant. But democracy asks for citizens, individuals who are capable of judgment, dissent, and solidarity.

This contradiction is sharpened by another paradox: we are now educating what may be the materially wealthiest generation in human history (in the Global North), yet we lack the pedagogical frameworks and models to genuinely engage with them. Many educators find themselves unprepared to relate to this generation, not only because of rapid technological shifts, but because our own models have disappeared. For centuries, pedagogy relied on modelling, teachers as ethical exemplars, guides through complexity. But in today's disoriented world, what models can we offer? When we lack the structural and emotional training to engage with students as full persons, we risk becoming what Dewey warned against: not facilitators of growth, but minor tyrants enacting routines of control without understanding.

In this sense, a pedagogy for democracy must begin with the recovery of authentic presence with learning to be with others in real time and space, in conflict and collaboration, in uncertainty and reflection. Only in this three-

dimensional ground of experience can democracy be lived, and not merely simulated.

Pedagogy and the Economy

Since the 1970s, society has been profoundly reshaped by proponents of neoliberal thought. This economic theory maintains that human well-being is achieved through entrepreneurial freedom, secured by a system based on private property, free markets, and open trade. The state's role is limited to ensuring the conditions necessary for market operation, protecting private property and facilitating the creation of new markets, even in sectors like education and healthcare.

Over time, neoliberalism has become globally dominant, influencing the economic policies of nations with diverse traditions, from former Soviet republics to Western social democracies. Deregulation, privatization, and the reduction of state intervention in welfare have been widely adopted, often under pressure from institutions such as the IMF, the World Bank, and the WTO. Politicians across the spectrum, along with economists and cultural figures, have promoted this ideology under the guise of defending core civilizational values like human dignity and individual liberty.

Behind these seductive ideals, however, lies an economic shift that has placed money at the centre of society (Silo, 2006), transforming the market into a universal ethical principle. Neoliberalism is not merely an economic theory but a comprehensive worldview that shapes public policies, institutions, social practices, and even cultural values. It has redefined the roles of the state, citizenship, and the market, becoming the dominant framework within which political and economic decisions are made.

Its consequences have been profound: it has triggered radical transformations and increased inequality, undermining traditional structures of the state, labour, and social relations. Everyday life has been redefined according to market logic, overshadowing other social values (Harvey, 2005). For this reason, some scholars have referred to it as a hegemonic ideology (Harvey, 2005; Bourdieu, 1998).

Several scholars aligned with critical pedagogy, such as Peter McLaren, Henry Giroux, and Gert Biesta, have voiced strong critiques of education systems that function as neutral and utilitarian extensions of the market. This perspective insists that education has broader purposes and reclaims its transformative potential. The goal of education is not merely to transmit skills

for the labour market, but to cultivate conscious citizens, capable of critical thinking, resistance to injustice, and active participation in democratic life.

McLaren and Giroux (2002) note that "educational theorists have come increasingly to view schooling as a resolutely political and cultural enterprise" (p. 30). Educational institutions thus play a significant role in reproducing social, cultural, and economic inequalities through curricula that, like goods and services, are ideologically encoded and subjected to the logic of commodification.

Biesta (2010) highlights that contemporary educational discourse is dominated by the measurement of outcomes, which plays a disproportionate role in policy-making, at the expense of valuing what truly matters; he argues that the emphasis on quality assurance and individual cost-effectiveness has displaced the civic dimension of education, i.e., what the educational community can do for society. This shift has led to a depoliticization of relationships, between state and schools, and between teachers, parents, and students reducing their interactions to questions of "service quality." Biesta thus calls for a reorientation of education away from a purely instrumental logic (based on measurable outcomes) toward a relational logic, reclaiming the ethical and political dimensions of teaching.

In this view, education must abandon its subordination to efficiency, productivity, and competitiveness (hallmarks of a neoliberal mindset) and instead embrace an emancipatory practice that fosters critical awareness and a culture of nonviolence. It must create educational contexts in which individuals study the world they inhabit, understand its contradictions, and imagine ways to transform it in the direction of greater social justice and sustainability.

Such an educational posture is more urgent than ever, given the trajectory of current global events. The world is increasingly marked by ecological crises, growing inequality, forced migrations, and conflicts. Only through an education capable of interpreting the complexity of reality and offering responses grounded in justice, solidarity, and sustainability can we face these challenges ethically and constructively. In this sense, critical pedagogy is not merely a theory of education, but a practice of resistance and hope, a call to envision and transform the world.

The Choice

Today, we stand at a crossroads. The direction we choose will have profound implications not only for the education system but for society as a whole. Pedagogy can no longer limit itself to adapting to constraints imposed by market

economics or institutional politics. On the contrary, it must become a force capable of critically interrogating the foundations of the dominant system, exposing its contradictions, and proposing concrete alternatives.

The term "sustainability," often reduced to a reassuring slogan, becomes devoid of meaning when not accompanied by a genuine commitment to social justice. The environmental crisis is only acknowledged when it directly affects household economies, such as in the case of rising energy costs, while its collective and global dimensions remain marginal in public discourse.

In this context, pedagogy assumes a critical responsibility: to align itself with educational practices that foster a renewed ethical and ecological sensitivity. This includes the recognition of the intrinsic dignity of all forms of life, the rejection of speciesism assumptions, and resistance to the hyper-individualistic logic that underpins neoliberal ideology. Such a task does not require pedagogy to imitate the methodologies of the natural sciences or to subordinate itself to narrowly defined standards of evidence-based assessment. Instead, pedagogy must reclaim its specific epistemological identity as a field that interrogates meaning, explores values, and cultivates the conditions for reflective human action.

Reductionist approaches, which privilege certainty, quantification, and control, risk obscuring the complexity of educational experience. They foster a vision of knowledge that is linear, functional, and instrumental, rather than relational, open-ended, and situated. This orientation runs counter to the essence of pedagogy, which must remain committed to addressing the irreducible dimensions of uncertainty, interpretation, and ethical responsibility. Human understanding emerges from complexity, not simplification; education, therefore, must prepare individuals to think in terms of interconnections, contradictions, and systems, rather than isolated facts (Morin, 2000).

Furthermore, pedagogy should not confine itself to academic institutions or private discourse. It must take an active position in public life, contributing to the interpretation of political language, the analysis of dominant narratives, and the cultivation of democratic competencies. This includes equipping learners to question philosophical and ideological assumptions, such as those underlying speciesism, before offering technical definitions. The failure to recognize the ethical implications of species-based hierarchies has had far-reaching consequences for human and non-human life alike (Singer, 1975). Addressing such themes demands a pedagogy capable of engaging with moral complexity, historical depth, and cultural critique.

Today's society is marked by a paradoxical condition: a surplus of information coexists with a deficit of meaning. The logic of disposability has

permeated not only economic and environmental systems but also human relationships and identities (Bauman, 2004). In the search for perfection, certainty, and recognition, often through mediated images, curated identities, and ephemeral fame, education risks being co-opted by ideals that are antithetical to peace, justice, and nonviolence. The prevailing imaginary is not shaped by ethical ideals or civic commitment, but by a pursuit of momentary visibility and personal satisfaction, echoing the cultural logic of Andy Warhol's "15 minutes of fame."

In such a climate, pedagogy must resist the allure of control, perfection, and technical mastery as primary educational goals. These ideals have contributed to an unrealistic and exclusionary model of the human being, one that denies vulnerability, diversity, and interdependence. A nonviolent and democratic education cannot flourish under such premises. It requires instead an acceptance of limits, a recognition of fragility, and a reorientation toward care, responsibility, and the common good.

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