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Relationship between Biopolitics, Education and Environmental Policies Today

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Summary

Education is a political act, since it is a public issue, but at the same time proposes an epistemology of knowledge and an ontology of Being, which is why this work argues that environmental education (EE), as well as environmental policy, is an affirmative act that proposes an alternative relationship between society and nature. Therefore, EE requires the support of political ecology and environmental justice in order to envision possible solutions to environmental conflicts. In this context, EE fosters a reunion of human beings with nature in conditions of equality by ending the metaphysical assumptions of superiority of the Being. Thus, EE is one that opens human thought towards the otherness in conditions of equality, eradicating from the civilizing horizon the supremacist-racist metaphysical positions of modernity-coloniality. EE seeks to generate a re-existence against supremacist temptations shedding light on the problem of anti-civilization that impregnates modernity. EE is education for critical self-reflection and understanding of environmental complexity. Hence, EE goes beyond the instrumental rationality means-ends in which the banking education and education for the labor world have placed her.

Key words: Political Ecology, Biopolitics, Modernity-coloniality, Civilizational crisis.

Introductory Notes

It is pertinent to recognize the relationship between politics and education in general, considering that there are relationships between politics and environmental education, which is even more pertinent if we reflect critically between political ecology and environmental education. It is opportune since education and politics are implemented based on ethical-ontological considerations as well as epistemological assumptions that presuppose ways of *being* in the world, that is, the transcendent and immanent way of inhabiting the world of human beings. Political practice, as well as pedagogic,

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comes from ontological, axiological assumptions, as well as epistemological, which presuppose and support them.

The emphasis of this work will be on the ontological foundations of education and how power affects educational postulates, sometimes in a veiled way, others explicitly. The problem of Western ontology presupposes not only power relations between people, but of human beings with and over nature; with particular emphasis - in the case of modernity - on the dominance of human beings over nature, specifically of the western white man over the otherness.

If education is understood as that proposed by Durkheim (1996), that is, that action capable of developing human capacities in a comprehensive way, both intellectual, as well as moral, then education is conceived as a complex process of epistemic formation as well as ontological and axiological. That is why, in education, there is implicitly a contradiction between the freedom of thought and the moral norm that contains it, understanding that knowledge is generated in socially determined contexts (Durkheim, 1996). Social norms foster the formation of institutions, such as the school and the State, institutions that at the same time reinforce social norms.

In this definition of education proposed by Durkheim, he implicitly refers to epistemological assumptions and explicitly refers to axiological assumptions, as well as ontological assumptions that support, in addition to presupposing pedagogical action. Now, if we extrapolate Durkheim's definition of education to Environmental Education (EE) it can be recognized that it presupposes, explicitly or implicitly, axiological, ontological and epistemological assumptions from which it starts. This means from a critical perspective, that it will be necessary to unveil, as well as reflect on these assumptions from which it is based and which are often not evidenced or made visible.

Regarding Biopolitics, if we understand it as care, administration and management of populations, as well as the resources on which these populations depend for their well-being and prosperity (Sandoval, 2016); the link between Biopolitics and environmental policies is observed, where environmental education becomes a comprehensive part of said link as it is considered an intervention strategy. EE has been designed in most countries as part of actions aimed at achieving a strong sustainability³ and even a weak sustainable development and proper management of natural goods, for the benefit of present and future human populations (ONU, 2019a).

From this instrumentalist perspective, which aims to solve problems through concrete actions and efforts, EE has been related in many countries of the Latin American and Caribbean region with weak sustainability as an end in itself, therefore, as if it were a pedagogy of sustainability, or a didactic of sustainability. This means that these ways of seeing and developing the EE are not the result of rethinking hegemonic economic rationality, as well as the epistemic and axiological scaffolding on which said proposal is based. On the contrary, they start from the presumption of international organizations that promote development and care for the environment (UNDP, ECLAC, UNEP, among others (ONU, 2017), which replicate criteria of social intervention incapable of understanding the environmental complexity, the importance of life and the environmental framework on which the balances that make life on a planetary scale depend.

It is therefore an EE, which does not derive from critical reflections, both epistemic, as well as axiological and ontological, to which the environmental crisis, as the civilizational crisis, drives us. Rather, it is an education that is regulated by international organizations according to an instrumental rationality, as well as the hegemonic model, which tries to sustain the market economy model despite the clear signs of exhaustion, destruction and contamination of planetary ecosystems, as well as the

³ In Spanish exists the possibility to make a difference between “sostenibilidad” and “sustentabilidad”, which has clear ideological differences and has long discussions in Latin America, and finally has been translated as weak and strong sustainability.

environmental crisis it faces (WWF, 2018). This EE model tends to be a banking pedagogical model (Freire, 2005) since what it promotes is an instrumental intervention on reality, which seeks specific economic ends, the productive insertion into the prevailing economic model, of the students into the labor market.

Facing this hegemonic and uncritical perspective, Latin American environmental thought (see: Leff (2000 and 2002), Floriani & Elizalde (2016), Carrizosa (2014), Boff (2015) proposes an EE *against the flow*, an educational perspective capable of preserving life contrary to the educational model of modernity whose result is the environmental crisis currently facing and whose main feature is the global risk (Beck, 1998). An alternative EE, outside the margins of the intervention policies of international organizations. Latin American environmental thought disrupts the order of the thinkable, the rationality and modernity; when trying to think an environmental education from a critical philosophical thinking (Leff, 2002), not instrumental but to generate an educational perspective capable of preserving life on the planet in all its forms. Hence, environmental thought turns out to be an important input for EE, which has been building strategies for strong sustainable uses of the natural environment and dialogues with indigenous, peasant and Afro-descendant minorities from epistemic, ontological and axiological ruptures. Therefore, political ecology and ecological economy (see e.g. Leff (2019), Martínez Alier and Roca (2000), who resume the criticisms of modernity, to instrumental rationality, to Eurocentric and colonial thought, gave important guidelines from critical reflections on EE in Latin America and the Caribbean.

Therefore, it is important to reflect on an EE perspective that is not manipulated by economic interests, nor responds to the discourses of a weak sustainable society, but to think from and for life; an education that reconsiders that human beings are not the only species with the right to live, to inhabit, to Be on our planet. Thus, EE transcends the logocentrism of sciences as they have been built up to now, the primary utilitarianism of production and profit. The EE that is proposed from Latin American environmental thought is a militant one in favor of life, not as an instrumental EE in favor of sustaining the economic market model that devastates life and puts at risk the planetary balances on which life depends, at least as known so far.

It is, therefore, from this context, that this work critically reflects on two models of EE, one characterized by the environmental Biopolitics that has been developing since the late 1960s (Sandoval, 2016) and that prevails in the objectives of Agenda 20-30; and the other EE model that begins and is based on the critical dialogue of knowledge, the epistemological, ontological and axiological rupture (Leff, 2002) in addition to its bet for life (Leff, 2014). In other words, it is a reflection on the ontological and epistemic assumptions that underpin these EE proposals. Ultimately these are two opposing historical projects.

This critical reflection implies a critique of the same idea of educating, of the results that modern education has had, not only ecologically, but in life itself, because modern rationality drives a totalitarian thought that in a parallel way exploits and destroys human beings and life on the planet as we know it (WOF, 2018). It is argued that EE is emancipatory, which implies epistemic-ontological tensions and ruptures, which do not coincide with the principles of weak sustainability and therefore require epistemological, ontological and axiological clarities; that environmental thought can provide, in this case from political ecology.

Environmental Crisis: Between Biopolitics and Ontological Rupture

Modernity is founded in parallel to colonialism, so its power and knowledge devices are closely linked; knowledge and power were consolidated as the same historical project in modernity (Quijano, 2007, Mignolo, 2007). The liberating knowledge of immanent modernity was subjected to the instrumental knowledge of modernity and the transcendent will, of will of power. Modern knowledge was the counterpart of knowledge that colonized at the same time that it built areas of knowledge,

epistemic regions through which it appropriated cultural otherness, as well as nature (Machado, 2017); at the same time that it differentiated *being* from *non-being*, from what is the own and the foreign (Quijano, 2007, Mignolo, 2007).

It is in this context, that modern knowledge required ways to appropriate otherness as reality, which it did through classifying, controlling, predicting, making, manipulating, and managing living beings (human and non-human) and the rest of natural elements as factors of production. This way of proceeding was the sign of the instrumental rationality that disillusioned the world (Weber, 2002). Modern knowledge was erected as a weapon of conquest and colonization, as well as a way of being in the world (Quijano, 2007), a model of knowledge that promoted instrumental rationality that exploits both human beings and nature. Modern rationality is the rationality of domination, conquest and exploitation of human beings (otherness), of natural beings (plants and animals) as well as of abiotic elements.

The knowledge that was generated in modernity-coloniality was organized for the purposes of colonial production that gave way to mercantilism and capitalism. The knowledge produced under this ontological-epistemic matrix marked the course of modernity. From its beginnings, Enlightenment maintained a close link with the conquest of America and the appropriation of otherness for instrumental exploitation purposes (Machado, 2017, Castro-Gómez 2005). The science resulting from the *modern cogito* generated the technology that required the coloniality, commercialization, and then capitalism, thus technology stands as the means for the application of knowledge and merchandise (Leff, 2000).

Modernity was erected as a way of inhabiting the world, as a way of *being* in it. It creating new ways of thinking and knowing human beings and their relationship with the environment, which later became hegemonic through colonialism (Dussel, 2000). The instrumental, pragmatic knowledge that was engendered by immanent modernity and afterwards consolidated in modern science, and the instrumental reason that animates it, is the same as that which seeks control over life and the resources on which it depends. The instrumental reason that strives to unveil the world as an object of knowledge, using an efficient means-ends logic, of benefits without costs; a rationality that in turn also bases economic thought with a logic of profit that transmutes life for capital and therefore destroys life.

Modern thought advanced on the subjective rationalization (Horkheimer, 1973) as well as on the experimental knowledge that gave the nomothetic bases that built the metaphysical image of Planet earth as a *living machine*, of nature as an automaton, therefore, the assumption that nature, like another machine, can be controlled as long as the laws that allow its movement are known (Bacon, 2011). The watchmaking universe is the sign of mechanical modernity, based on the principle of thermal transfer as the origin of mechanical and vital energy. The reduction of universal complexity to the security of the laws of mechanics built the illusion of the domain of reason over nature.

Thus, the arrival of modernity in the XV and XVI centuries brought a new look at the world and the beings that inhabited it, a look that was accompanied by a profound ontological change that presupposed the Euro centrism and European cultural monism. The otherness was denied as beings with whom it was not pertinent to enter into a dialogue, instead a crusade to conquer other cultures and nature was promoted (Machado, 2017, Castro-Gómez 2005). The warrior impulse as a way of *being* accompanied the wars to recover the Iberian territories (from the Arabs), as well as the conquest of the overseas territories to which the expansion of the warrior impulse of the late Middle Ages led (Machado, 2017). Modernity-coloniality is the result of this warrior impulse that repealed the right of appropriation and destruction of the otherness by force, the right to impose its vision as unique as well as universal.

Governing and managing nature has been the objective of knowledge since the hegemonic rise of modernity, which was no longer content with the contemplation of the world, but with an intervention on it in order to develop the productive forces (Marx, 1976), for the sake of the accumulation of profit, which promoted the exploitation of nature, but also of work of the human being himself. Since its hegemonic project, modern experimental knowledge has always oscillated between the world as an automaton or an inert object, for which an instrumental technology that transmutes life for capital has been consolidated; a model in which God governs the universe, so knowledge allows manipulating and exploiting nature, but also human beings (Cassirer, 2014).

This instrumental knowledge characteristically of transcendent modernity implies not only the disenchantment of nature, but also the idealization and homogenization of its complexity, with which the complex became the simple, taking as a guide the method of analysis and decomposition of everything into its simplest parts (Descartes, 2006) and the complex Eco systemic-cultural balances were simplified until they turned nature and human beings into plain resources appropriable only by some. Within this perspective, nature can supposedly be subdued and appropriated by private agents, who give a monetary meaning to nature by transforming it into a marketable resource. This economistic vision is based on metaphysical epistemic assumptions and on an ontology of domination over the otherness that was positioned through war and conquest as the hegemonic project of Eurocentric modernity (Sandoval, 2016).

The vision of conquering and governing the world has developed a knowledge, that has been the instrument through which a historical project that sought to order and govern nature and human beings was consolidated, submitting diversity to a unique model that was imposed as a must be of objects and subjects. The spirit of war and conquest from which modernity-coloniality were born simultaneously propelled an epistemology as well as an ontology capable of controlling; as well as to govern. Modernity gave the necessary assumptions with which exploration began, as well as the conquest of the otherness. Modern knowledge theoretically and practically allowed the exploitation and colonization of nature, as well as of non-western European cultures, so that the technical knowledge that conquered nature provided the basis for colonizing cultures (Sandoval, 2016).

The spirit of war and conquest was consolidated as a management-government project as well as administration of nature, subjecting the territories and the cultures that settled in them to the logic of capital accumulation and development of the productive forces under the logic of Western European domination. Modernity-coloniality shaped a social order that legitimized the private appropriation of nature as a sign of Biopolitics, in which the social agents found a sense of life in the production and generation of wealth, in the individual appropriation of nature and transmutation of life by capital.

Modern knowledge fostered the significance of identity and territory from Europe, cultural and biological diversity ceased to be important in the same way that nature became disenchanted. Biological and cultural diversity had to be reduced to the patterns of production, generation and accumulation of wealth that drove the warrior spirit of the conquest-colony; of technology and knowledge that transmute life into capital, diversity was meaningless in a unique universe, a unique thought, a unique God.

The disenchantment of nature, the annihilation of the other Gods from the rest of the cultures, the destruction of shrines and rites to Mother Nature was part of the modernizing project. The disenchantment of the world as a sign and symbol of modernity (Weber, 2002) as well as of analytical rationality (Horkheimer, 1973), disenchant the world to subject it to the logos and the laws of the market; the only “true” value of modernity is the value that the market assigns to beings and entities, and it is through the coloniality of power (Quijano, 2007), the coloniality of knowledge (Lander & Coronil, 2000) and the coloniality of being (Maldonado-Torres, 2007) that these structures are perpetuated to the present day through modern scientific thought.

To reverse it, it will be necessary to recognize how the modern economy has been constructed as a science of behavior of productive agents (Marshall, 1931), which has emphasized profit and the capitalization of profit. Thus, work is defined from the economy as the transformation of natural assets into goods by means of which human needs are satisfied; it is the conscious transformation of nature by human beings, mediated by their needs (Marshall, 1931). This way of knowing and conceiving ended up disenchanting the world and consolidating the industrial society marked by an economistic and instrumental rationality.

Thus, Eurocentric ontology and epistemology allow nature to be conceived as a passive object and therefore conducive to *overshadow* the knowledge it produces (Machado, 2017). Nature, like other human beings, *people without history*, became objects of knowledge, but also objects of exploitation, production and consumption. The logic of the unique thought, of the unique culture, of the unique Being, prevailed as the unique rationality, driven by its technology that transforms diversity into merchandise.

Under the sign of modernity-coloniality, knowing is an act of domination, which lasts after the end of colonization, typical of the Eurocentric instrumental rationality where the otherness were subsumed by the spirit of war and conquest that opened the path to modernity. This form of domination is fostered by normalization processes based on a taxonomy of bodies, beings, confession and examination (Foucault, 2007) and the application of relations of *governance, pastoral techniques and sexuality techniques*, considering the interest of power in preserving and intervening life, since the emergence of modern states (Foucault, 2007).

Therefore, Bio-power is that type of power that is exercised over life from within, interpreting it, regulating it, rearticulating it and appropriating it again. Bio-power is a form of power in which it becomes a vital function, which comes to constitute a domain over life, in such a way that each individual participates in the production and reproduction of power by supporting and reactivating it; it is not submission to external power, but it is living by reproducing the vital organization of power (Sandoval, 2016). Regulation and control over life from within is shaped by the ability of the power to organize discourses, through which it orders reality and establishes ways of constructing self-knowledge and of the otherness. The normalization of life by power occurs when it is able to organize and legitimize forms, models, processes, methods of knowing and learning the reality of itself, as well as of everything else that exists in the world (Foucault, 2007, 74). In this context, it should be noted that the ontology of being in the West allows knowledge to be articulated through discourse, through which it creates and recreates ways of knowing and appropriating reality.

The ontology of being in the West is the foundation of instrumental reason and hegemonic subjectivity. The discourses organized from this hegemonic vision present the environmental problem as a problem for the stability of human populations, mainly; associated with the harmful effects of pollution and degradation of ecosystems on public health. Public Health, as a State problem, takes a dimension in the order of Biopolitics, in which the norm regulates the way of living, organizing and controlling life through the state management of life itself. The care of ecosystems in particular, and of nature in general, responds to a State policy whose purpose is the care of the life of populations, regulating life so that the conditions that allow the reproduction of political and economic power are preserved (Sandoval, 2016).

Thus, to ecological purification as an objective of environmental conservation, contains a way of governing and controlling both nature and human beings, according to the principles of Bio-power. The environmental policy generated by international organizations since the 1972 Stockholm Summit uses technologies in which power, through the Member States, takes as its own the problem of life to extend its domain and order over it (Sandoval, 2016). The ecological imbalances that were visualized since the mid-sixties allowed the generation of intervention strategies on life, human populations, as

well as on the environmental goods on which people's lives depend, as a central problem of the government and the States.

The environmental discourse of the global north is transferred to the periphery through international organizations, mainly the UN and the network of agencies that depend on this multilateral organism and impose environmental preservation actions based on command and control policies, as well as on market mechanisms, by means of which it is intended to mitigate the ecological devastation of the dominant economic model. Thus, the disciplines of the body and the regulations of the population in modernity, constitute the strategies through which the organization of power and knowledge about life are implemented (Foucault, 2007).

However, the environmental crisis not only implies a crisis of the economic model, but an epistemic as well as an ontological rupture with the historical project of modernity. Latin American thinkers have generated explanations for the conditions of "backwardness" in the region, from the *Dependency Theory* (Bambirra, 1974 / Dos Santos, 1978 / Marini, 1973), *The Invention of the Third World* (Escobar, 1996), the proposal of modernity / coloniality (Quijano, 2007 / Mignolo, 2007 / Machado, 2017 / Castro-Gómez 2005), and more recently the Latin American environmental thought (Leff, 2002-2003 / Angel-Maya, 2013 / Carrizosa, 2015 / Noguera, 2011 / Floriani, 2004 / Porto-Gonçalves, 2001 / Gonzáles-Gaudiano 2012). Latin American environmental thought stands as an alternative to the environmental proposal of the global north.

The context of Latin American environmental thought is based on a conception of the environment as a complex relationship in which "the symbolic physical, biological and cultural worlds are articulated" (Corbetta et al., 2019, 322). This conception not only refers to the complexity of society-nature relations, but it is also a strategic definition that allows the emergence of Latin American environmental thought and the rupture of this thought with epistemological and modern ontology, because an object of study separated from the subject that knows is no longer recognized. In addition, the complexity of the world is no longer simplified nor a supremacist ontological monism is maintained.

Contemporary Environmental Policies

The environmental policies that Latin American States implement, generally come from recommendations, as well as from international agreements (Sandoval, 2016). This is largely due to the fact that the United Nations (UN) since 1968 summoned the world conference on trade, as well as in 1972 a similar one on environment and human ecology. These paths marked the international agenda in relation to environmental policy, many of the UN recommendations have become policies in Latin American States, who have tried to implement an environmental agenda in accordance with the guidelines of international organizations (Sandoval, 2016).

The *Tragedy of the Commons*, identified by Garrett Hardin in 1968 (2005), is largely the basis of political reflections on the preservation and conservation of *natural resources*, as it is discussed under this logic that are the best strategies, the most rational, in the matter of environmental preservation. Hardin assumes that individual interest is the "rational", he states that "... as a rational being, each pastor seeks to maximize his profit" (Hardin, 2005, 4), leading to the ruin of the common assets. He also introduces in *The Tragedy of the Commons*, the idea of the *limits of growth*, when he states that in "... a finite world this means that the per capita distribution of the world's goods must decrease" (Hardin, 2005, p. 2), which introduces the main political actions: State control or internalization of costs by the market.

But the environment, it is immeasurable, there is no way to put market criteria on it, as universal criteria; although it is openly discussed, since the publication of *The Tragedy of the Commons*, whether it is the State or the market that should control natural assets to avoid their destruction, the truth is that until now neither the State nor the market have achieved the *long-term* productive use of

natural assets (Ostrom, 2000). The idea of the destruction of the common assets has been present since Aristotle in Book III of "Politics" (Ostrom, 2000, 27), also among other theorists of *Ius Naturalism* (Hobbes, 2017) as well as of *Political Realism* (Hardin, 2005).

From this perspective on the international agenda since the Stockholm Conference in 1972, in which a Declaration of 26 Principles and an Action Plan with 109 recommendations were issued, it is possible to observe a double UN position on environmental conservation strategies. Some strategies directed towards command and control policies, and others towards the internalization of environmental externalities through market instruments, on the other. In other words, the discussion on environmental preservation mechanisms persists: the State or the market to avoid its destruction.

The position of the *United Nations Conference on the Human Environment* (1972) reflects the positions of both *Ius Naturalism* as that of *Political Realism*, in the sense that human beings competed with each other in search of their own benefit; but also the need for a powerful arbitrator capable of imposing order on all the actors. This is how the policies proposed by the UN through the Stockholm Conference maintain the classic vision of European political theory that focuses on selfishness, the fight between peers and the survival of the fittest. Or, as Maldonado-Torres (2007) would say, the *ego conquered* as the spirit of modernity-coloniality that remains in force on the UN agenda.

This is how Biopolitics is played, through the domination of life. To demonstrate its persistence and *modus operandi*, a brief historical tour is made here. Specific goals were set at the Stockholm Summit: a ten-year moratorium on commercial whaling, the prevention of deliberate oil discharges into the sea since 1975, and a report on energy uses for 1975 (UN, 1972). The Stockholm Declaration on the Human Environment and its principles formed the first body of an "international law" for issues related to the environment. This despite the fact that the initial recommendations considered that it would be the States who "... should adopt an integrated and coordinated approach to planning their development so as to ensure the compatibility of development with the need to protect and improve the human environment for the benefit of its population"(UN, 1972).

In the same sense, another central document that set the course for environmental policies in Latin America was the 1984 *Brundtland Report*, for which the World Commission on Environment and Development met for the first time. The Commission (made up mostly of the countries of the Global North) started from the conviction that it is possible for humanity to build a more prosperous, fairer and more secure future. A conviction to which none in principle would have objections, however, the problem lies in the strategies to achieve it. It is there that the *Brundtland Report* - also called *Our Common Future* - is imposed with an action program that aims to not give up on *development* (liberal, economical, growth-based) and at the same time seeks to conserve natural assets.

Our Common Future tries to face the situation of extreme poverty in which large segments of humanity and environmental problems live, and proposes as elements of mediation the primary institutions of modern western societies: the State and the market. Thus, the World Commission aims to be a guide for the international community in the matter of preservation and development. The Commission has the following objectives, among others: a) Examine critical development and environmental issues; b) Formulate realistic proposals in this regard; c) Propose new forms of international cooperation, d) Promote the levels of understanding and commitment of individuals, organizations, companies, institutes and governments (CMMA, 1992). Thus, the *Brundtland Report* remains on the axis of the logic of the ontology of the *ego conquest* of modernity, by continuing to insist on its theoretical references and classical values (individual, development, market, etc.), its development model.

The same year that *Our Common Future* was published, the meeting on biodiversity in Colombia was convened, resulting in the 1986 Cartagena Protocol, as well as the complementary agreement, the Convention on Biological Diversity (CBD), which entered into force in September 2003. The

Protocol seeks to protect biological diversity by managing the transfer / trade / exchange between countries of living genetically modified organisms (LMOs) (SCDV, 2000). The preservation premises begin to analyze the possible risks related to biological contamination derived from LMOs. Along the same lines, the Nagoya Protocol appeared, effective since October 2014. This Protocol is a complementary agreement to the CBD and seeks to contain the loss of biodiversity typical of the capitalocene as well as to reduce the risks caused by LMOs.

In that same year the Montreal Protocol also appeared in 1986. This protocol is an international environmental agreement that achieved universal ratification to protect the ozone layer in order to eliminate the use of substances that deplete the ozone layer (ODS). The Montreal Protocol laid the foundations for agreements on the care of the atmosphere as a planetary emergency, it should be noted that the industrial use of chlorofluorocarbons (CFCs) were among the most recurrent ODS present in various levels of consumer goods (e.g.: refrigerators, aerosols, paints, plastics, among others).

In the same sense, at the Ministerial Conference on the Environment in Bergen (Norway) in 1990, it was specified that government management was central to the objectives of environmental preservation. The Bergen Conference was welcomed as a strategy for preserving the environment, holding the State responsible in social and environmental matters. This Conference represented an advance regarding the institutionalization of environmental policies, reinforcing the liberal position, but opening the debate by recognizing the inability of governments to reverse, by themselves, the environmental crisis. Thus, the Bergen Conference reaffirms the principles of *Ius Naturalism*, as well as Political Realism, according to which human beings compete with each other for natural assets and the State must control them in their disputes, but now with the perspective of a minimal State, typical of liberalism.

The 1996 Kyoto Summit Conference resulted in the Kyoto Protocol to reduce greenhouse gas emissions largely responsible for global warming. The Kyoto Protocol is an instrument by means of which it was sought to put into practice the provisions of the 1992 UN Framework Convention on Climate Change, in relation to reducing the generation of greenhouse gases (GHG), in particular the reduction of six gases of anthropogenic origin such as: carbon dioxide (CO₂), methane gas (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC) and sulfur hexafluoride (SF₆). It also sought to limit the use of three fluorinated industrial gases, such as hydrofluorocarbons (HFC), perfluorocarbons (PFC) and sulfur hexafluoride (SF₆). The reduction in an approximate percentage of at least 5% was intended, within the period between 2008 and 2012, compared to emissions in 1990 (UN, 1998).

The Kyoto Protocol demanded the ratification of at least 55 countries out of the 180 assembled in order for it to enter into force. The instrument was intended to limit GHG emissions from industrialized countries and set binding emission reduction targets for 37 industrialized countries and the European Union. The Kyoto Protocol, like the Brundtland Report, appeal to *common responsibility* and will. However, from a critical perspective, all these initiatives omit and fail to notice the enormous contradiction that exists with the politics of the *Tragedy of the Commons*, insisting on maintaining the command and control policy strategies and the State being the regulatory agent, within the margins of liberalism. The political will around the common good of life does not exist.

Therefore, what is clear is that the instruments of environmental management are framed within the perspective of Western hegemonic thought, according to which people compete with each other for natural assets, each actor seeks his own benefit, although in the medium term, this generated the ruin of all, with the aggravating circumstance of holding everyone accountable assuming that all the actors pollute and destroy nature in the same way. Hence, the command and control policies, as well as the

environmental economy instruments promoted by the UN, appear not to be efficient, since neither the State nor the market have shown the capacity or the real interest to contain the devastation of the nature. The UN does not take into account the inequality of powers, the differentiated responsibilities in pollution, the environmental conflicts that occur in the territories of the States, nor does it consider unfair trade between north-south, or the environmental paradises in which the pollutant companies from the north settle in the south, that is, it does not recognize the real causes of the problem that lie in the hegemonic neoliberal economic system itself, that is, the UN continues to reproduce colonialist structures, now, through the coloniality of knowledge, power and being.

Environmental Education: Complexity and Otherness

Adorno in his famous story *Education after Auschwitz* (1995) argued, from critical theory, that every educational act is frivolous provided that barbarism is not repeated. In the environmental crisis, what is observed is the inability of instrumental rationality to dialogue with the otherness and stop barbarism; that is to say, we are again before a totalitarian posture that pushes us, once again, to barbarism.

So, by way of approximation, it is affirmed that educating is going against barbarism, going against metaphysical ideas, as well as the ideas of modern supremacists of the Global North, as well as being in opposition to the instrumental rationality that tends to objectification and destruction of life, trying to make a profit by transmuting life for capital. Educating should be synonymous with teaching how to think autonomously, teaching how to open up to the diverse and communicate with the otherness, respecting diversity, eliminating any form of racist ideas (Quijano, 2007) and / or supremacists in personal thought, as well as collective, and should definitely open thinking to the environmental complexity and conditions of life. Educating allows human beings to humanize while pushing reason towards dialogue and encounters with the otherness.

It is in this sense that it is stated that Environmental Education is not to solve instrumental problems, that is, to reverse the processes of pollution or degradation of ecosystems caused by the mode of production that exploits all forms of life and upsets natural balances of the life. EE is not environmental *engineering*, it does not pretend to find technical solutions to complex problems, and it is not environmental *politics* or *law*, because it does not pretend to resolve environmental conflicts, but from the externality of *logocentrism* of science it constructs alternatives to modernity through a critical dialogue of knowledge and dialogue with nature. As Paolo Freire would say, education does not transform the world, education transforms people and people transform the world.

EE is an attempt to remake the diverse educational systems on a planetary scale, it does not propose a curricular design, nor does it define which subjects "should" be taught; on the contrary, it establishes philosophical reflections (axiological, ontological, epistemic) of the transcendence of education, as well as that of a new education in the framework of the civilizing crisis that represents the contradictions of modernity. EE is a set of critical reflections to understand the ways of operating of modernity-coloniality through power, being and knowledge; thereby how colonialism is perpetuated. Thus, EE is a critique of scientific knowledge arising from this matrix of thought that supports the illusion of expert knowledge and an invitation to reflect on how this hegemonic knowledge makes it impossible to understand environmental complexity. On the contrary, EE seeks to regenerate an ethic of the human race, an ethic for life (Morin, 1999 / Leff, 2000) that allows transcending the civilizational crisis in which humanity finds itself facing the threat in the form of "a society of global risk" (Beck, 1998).

To suppose that EE is the instrument of education through which the UN mandates were achieved is a fallacy, because it hides those responsible, the power tensions; as a search for EE, which is, to rebuild society-nature relations without presumptions of dominance. The EE goes against the flow of those who seek the instrumentalization, the technification, the capitalization of the environmental disaster.

The EE recognizes that the environmental crisis is a civilizing problem, then a social problem, which therefore requires a social and not a technical response. Through EE it is possible to understand and therefore alter the social, economic and political conditions that promote the degradation and contamination of ecosystems. The environmental crisis is not a technical but a civilizing problem; an instrumental response is not required, but an alternative of being in the world without destroying the world.

Thus, asking: Is it possible to think about facing environmental problems with the ways of knowing and the conceptual tools of the XV, XVI, XVII, XVIII and XIX centuries? The question opens the possibility of thinking about EE as an alternative to instrumental education, since at the same time it is an epistemic, axiological as well as ontological question. The great environmental and social contradictions that humanity faces to a great extent are originated by a knowledge that does not know that it does not know, in a knowledge with "illusions of knowing" (Morin, 1999); that is to say, a knowledge that is ignorant of what it does not know, that raises illusions of knowledge and that drives a certain way of knowing that is imposed on other things and on other knowledge, to which simultaneously oppresses and excludes.

EE is not aligned with instrumental rationality or modern metaphysics; because what it seeks is to transcend the civilizing model that destroys nature; for this, it generates ways of being in the world, ways of being that do not lead to an *ethos* of superiority that reifies and destroys nature. For this reason EE is outside the logic of instrumental rationality, as well as the *logocentrism* of science, since it does not give a unique or instrumental answer, but rather opens the Being to other forms of Being and inhabiting the planet, beyond of subjective advantage or gain (Leff, 2014). In this sense, EE is reunited with the objective logic that seeks a vast system, a *hierarchy* of everything that is in the world (Horkheimer, 1973).

EE must be able to prepare humanity to face the risks of the capitalocene, since hegemonic knowledge is not capable of transcending unsustainability, it drives humanity to remain in error, and the possibilities of overcoming the environmental crisis are not generated. That is why environmental knowledge, as Leff rightly says (see in: Eschenhagen & Maldonado, 2017), must be able to discern and demonstrate the unsustainability of knowledge, it must open thought to the otherness and uncertainty. In this context, EE also problematizes the *banking education* to which Freire (2005) referred, to the pedagogy of view of a world turned into an object, to instrumental reason that ignores the ability of thinking as a critical agent of all supremacist metaphysics. It is in this sense that EE suggests opening thought to the otherness: cultures, groups and / or people; to think the different and even to think the unthinkable, maintaining a critical dialogue of knowledge with the otherness where nature is part of them. An EE not directed towards the domination of nature in the sense of Biopolitics, but of coexistence and mutual survival. Therefore, from this contextualization, EE is not united by principle or by end, nor as a means to achieve *development* (which is another way of referring to *progress*).

Environmental Education from no angle, is the means for *sustainable development*. Furthermore, any educational project that is assumed as a means of instrumental ends, even those organized from instrumental rationality, lead to a metaphysics of supremacist thought, that is, totalitarian. Hence, EE is not, nor can it be, the means to achieve *sustainable development*, nor *progress*; on the contrary, it is *anti-progressive*, because progress, as it is hegemonically understood, has been the cause of environmental problems.

EE is the one that opens human thought to other things in conditions of equity, eradicating from the civilizing horizon the supremacist-racist metaphysical positions of modernity; a thought in the ability to understand environmental complexity through environmental knowledge, as Leff explains throughout his work. Thus, EE seeks to generate re-existence against metaphysical temptations

shedding light on the problem of anti-civilization that fertilizes modernity. The sense of EE is that of an education for critical self-reflection and the understanding of environmental complexity, beyond the instrumental and economic rationality in terms of means and ends in which bank education and education for labor world is used.

When thinking of the environmental crisis as a civilizing crisis, the immediate question is what place nature and the human being have in the illustrated project. The techniques that seek to dominate *natural forces* are the same through which the domination of human beings is managed (taxonomy, classification of diseases / patients, differentiation between normal / abnormal, among others) (Foucault, 2008).

EE is at the service of life, putting reason at the service of the "supreme goals of life" (Horkheimer, 1973, 102). If we consider EE as part of critical thinking, then we recognize in it the possibility of transcending subjective rationality and in addition also the domain of individualism. The human being, through thought, transforms nature in order to live within its biological niche, by satisfying its needs through the appropriation of nature, the human being becomes humanized, through work itself. By creating an abstract thought, a symbolic universe, ideas of beauty, of the future, of the past, this is concretized through the appropriation of nature. Therefore, this is the way in which the human species exists in the world, although it is expressed in each culture in a different way, and a very specific one is through modernity. That is why EE does not pursue sustainability as an objective, but rather to return reason to the service of life.

Unlike those who are committed to sustainable development, locally, regionally and globally; EE is not subordinated to the instrumental mandate, but rather through environmental knowledge which reveals the subjective rationality of sustainability, which seeks to maintain the civilizing model that destroys nature. Hence, the sustainability proposed since the *Brundtland Report* does not pose a break with the enlightened project that is killing and destroying the ecosystems on which life depends, as it is now known. It does not consider changing the civilizing model, but making it sustainable over time.

In EE, a new pedagogy is fostered, no longer of certainties, but of understanding of environmental complexity; for which communication beyond reason is essential, since reason is insufficient to understand complexity, on the other hand, beyond the certainty of reason, what is important is communication as a strategy for understanding the otherness. Education must lead to a new ontology, axiology and epistemology that deconstruct modernity. That is why it is required to develop an ethic where society regulates individuality and individuality gives autonomy to the social being. EE contains knowledge that comes close to ethical reflections, whenever a new axiology is needed, another epistemology as well as a new ontology, which allows the human species as a whole to overcome the challenges we face as a species.

Conclusions

Education is a political act, since it is a public matter, but at the same time it proposes an epistemology of knowledge and an ontology of being. EE, like politics, is an affirmative act that proposes an alternative relationship between society and nature. Thus EE must be accompanied by political ecology and environmental justice that contributes to the solution of environmental conflicts insofar as human beings all preserve nature, since EE fosters a reunion of human beings with nature in conditions of equality when finishing with the metaphysical assumptions of superiority of being. Educating is always a liberating action, and therefore axiological and ontological.

On the other hand, the environmental degradation and pollution that is expressed through the destruction and / or saturation of natural ecosystems, is not an ecological problem, because ecology strictly speaking is a science. The problem rather reflects the entropic process of social and economic systems. Hence, EE, starting from environmental knowledge (understood as evidencing and making

visible the unsustainability of modern knowledge), allows linking and relating different levels of social reality to natural reality, relating a greater number and diversity of multi-related variables. The importance of environmental thinking lies in the complexity of social reality, of linking social relations with natural ones, of finding how some relations coincide with others, expanding the possibilities of being in the world.

The environmental crisis is propitious in the processes of use and appropriation of nature by societies, in contemporary societies the hegemony of western culture promotes the capitalization of nature, even going beyond the capitalocene that transmutes life for capital, devastating life, as well as the environments that life depends on for its survival. The environmental crisis is the result of a civilizational project that seeks to expand profit and utility to the detriment of life, thus all forms of life are exploited in the capitalocene in order to expand and ensure material profit. The educational model that promotes banking education goes against the preservation and valorization of life, of human beings, as well as of non-humans, even of the physical-chemical means on which life depends. EE is a critical action rather than pedagogical action. It is not a question, in the first instance, of generating new instrumental didactics, but rather of re-thinking, re-existing and making new ways of being in the world, where the human being does not destroy the life of himself or of the other beings that cohabit on the planet. That is why the critical action of EE lies in a rethinking of being from an ontology, epistemology and axiology for life; a way of being in the world that shares with life, that preserves and values life as it is. Thus, EE links being with life beyond the formal curriculum of study plans and programs. It is about thinking and rethinking the values on which every educational model is practiced, promoting critical reflection of the values that appreciate life, so that EE is an ethics for life, autonomous and simultaneously collective.

The environmental problem arises from the myopia of modernity that is cut off by the *concurio ego* and the *cogito ego*, which promote dominance over the otherness, human and non-human, for the sake of their control-exploitation. The modernizing impulse of modernity was built on the basis of segmented and excluding ontology, economic rationality, ethno / anthropocentric ethics, the alchemy of the thermal machine, of the capitalocene; to reproduce a way of being in the world that destroys life by exchanging it for capital. That is why EE is accompanied by ways of thinking about the world from the externality of modernity; from its ontological, epistemological and axiological externality. EE proposes to rethink the way of being, the same way of inhabiting the world; the world is an existential, not a machine whose laws obey the illusion of knowledge; the construction of a complex thought is required that allows humanity to preserve life as well as to overcome the global risk it faces.

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