

Weaving the threads of Environmental Education: the subjective and the collective, the thought and the lived

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Abstract

The assumption behind this essay is that, throughout its history, environmental education constituted a narrative of its own. Some conceptually polysemic words such as nature, participation, solidarity, cooperation, autonomy, interdisciplinarity, and, more recently, sustainability, transdisciplinarity, and transversality are fundamental to Environmental Education, and are part of its lexicon or semantic network. The objective is to analyze the fields of meaning produced by some of these terms and the fabric of interrelations between the subjects and their discursive practices, refusing the doctrine of the unity of reason and of a unitary subject aiming at the goal of perfect coherence. Since language is shaped inside a culture, it traverses the individual and the collective, the subjective and the cultural; in the case of Environmental Education, it is teeming with senses and meanings from an emergent paradigm, from new modes of sensibility between utopists and utopias. It is a goal here to understand if, in fact, Environmental Education, in the name of emancipation, opposes the liberal project of an “educating reason”, of a knowledge-regulation, of a universal education based on universal methods, analyzing in a complex way the social function of generalist and/or denouncing narratives. Both the positive potential and the analytic and strategic limits of the narratives that manifest themselves in a self-referential way were considered. The central and conclusive concern is: can the daily practices that demand initiatives and follow-up make sense and create fields of interface to the exercise of an Environmental Education?

Keywords

Environmental education – Narratives – Fields of meaning – Emancipation – Complexity.

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In this essay I intend to reflect on the fields of meaning¹ of environmental education, on its disseminated and diffuse language that creates identities and identifications particular to the educator subjects. As recalled by Larrosa (2003, p. 7), “the dominant pedagogical discourse, divided between the scientists’ arrogance and the good conscience of the moralists, seems to us unpronounceable”.

The common words, frequently employed in the discourses about Environmental Education, begin to feel insipid and to sound as helplessly false and empty. Savor and sapience share the same etymological roots. We need to rescue the savor of knowledge, which lives in the wish to change life. The vague and totalizing languages that permeate the fields of meaning of Environmental Education make the daily life stressing and undermine the practices of the social subjects.

I have thought and observed in several meetings with teachers and environmental educators that this can be the element triggering the feeling of frustration and anguish which they sometimes have about the gigantic ideal of reverting the situation of dissolution of the natural resources, and of rescuing the culture/nature, society/environment relationship. The big issue is not so much the feeling about this huge co-responsibility but the sensation of an unbearable weight in which responsibility and impotence come together, when the outcome of the educative process does not translate into significant daily practices. On the other hand, there are also those who believe in the potential for change of the denouncing and apocalyptic languages.

However, in the lexicon of Environmental Education’s discourse, watchwords such as freedom, solidarity, participation, emancipation, democracy, and environmental justice are given communicative and motivating meanings that in general they effectively do not have because, as Assmann says (2000, p. 22), “they lack the analytical vigor and strategic content for that”. The prevailing meanings of this kind of

language, generalist or denouncing, could not be qualities totally discarded by Environmental Education, since they can fulfill an interesting role in the generic expansion of diffuse semantic fields “whose attractors need to be better characterized and detailed with respect to each specific situation” (p. 23).

We would then have to analyze in a complex way the social function of these narratives², taking into account both their positive potential and their analytical and strategic limits when they manifest themselves in a self-referential way. The question concerning us here is: how can the daily practices that demand initiatives and follow-up make sense and create fields of interface to the exercise of an environmental education?

In the analysis of the senses of language, I am more concerned in understanding what Bourdieu calls the “mode of production of the practices”, that is, that which produces them. Therefore, this is really an essay about an ongoing study. It is a first approximation in which these interfaces should emerge and their limits be suppressed, without any attempt at completeness.

Environmental Education is associated to two vital challenges: the issue of the perturbation of ecological balances, of the wear-out of nature, and the issue of education. The unbalances and the education are legacies of a model of socioeconomic development characterized by the reduction of reality to its economic material level, by the division of knowledge into disciplines that fragment reality, by the reduction of the human being to a rational subject, by the division of cultures, in short. The education and the environmental fields find themselves deeply

1. Field of meaning, an idea extracted from Assmann, is the semantic field constituted by a network of words expressing meaning, affinity, reciprocity. The subjects express themselves through the semantic field in which they are immersed; therefore, they do not always speak in a rational way (Tristão, 2004).

2. Lyotard recovers the idea of narrative as customary, cultural and ethical knowledge, developed at the local and popular level as a “know how”, a “knowing how to live”, and a “knowing how to listen”, in opposition to the totalizing and globalizing trends of the old legitimating master narratives which, although in crisis, continue at the service of big social players (Peters, 2000).

marked by this scientific ideology, which imposes itself on a global scale, in the name of the rationality of modern science. How does the narrative of Environmental Education stand with respect to this scenario? How does Environmental Education subvert this imposed order with the hegemony of its discourse?

Without attempting to answer these questions, for I have more doubts than certainties, the understanding of the multiple and varied threads that lead to a narrative of Environmental Education can make it easier to grasp its manifestation as an individual/subjective/collective development and, at the same time, the power it exerts on this development in terms of emancipation. No doubt, the language is transforming of the action upon nature, of culture, of society, of interactions.

For the present analysis I choose three dimensions that are quite recurrent in this discourse: the ethical dimension (the solidarity), the political dimension (the participation), and the aesthetical dimension (the reenchantment). I consider this analysis as a fragment of those dimensions in view of the perspective I take, which cannot be regarded as absolute. I do not aim at a thorough analysis within this article, and even less at going deeply into those dimensions, which are articulated with each other and extremely wide-ranging in their intersections with other sets of knowledges and doings outside my field of study.

It is a little about all this that I intend to reflect, doing an analysis of this field of Environmental Education under construction, giving priority to the epistemological potentials of its narrative to reestablish the liberating energies of the knowledge that modernity has colonized and allowed to become knowledge-regulation.

First fragment: an ethical environmental education - the solidarity

Paraphrasing Santos (2000) the paradigm of modernity comprises two main forms of

knowledge: knowledge-emancipation and knowledge-regulation. Knowledge-emancipation is a progression from a state of ignorance, which the author calls colonialism, to a state of knowing designated by solidarity. Knowledge-regulation is a trajectory from a state of ignorance called chaos to a state of knowing denominated order. Thus, whilst knowledge-emancipation goes from colonialism to solidarity, knowledge-regulation goes from chaos to order.

The author points to the interdependence between these two models of knowledge, articulating them in a dynamic equilibrium in which the cognitive power of order contributes to the cognitive power of solidarity, and vice-versa. So, a first rupture would be not regarding chaos as ignorance, but as knowledge, and another strategy would be to revalue solidarity as a form of knowledge.

Without proposing any classification, this dynamic equilibrium would occur at the interface, amongst others, of three logics of rationality perceived and sustained in the networks of daily knowledges and doings: the moral-practical rationality, the aesthetical-expressive rationality, and the cognitive-instrumental rationality. This apprehension does not ignore its own complexities and contradictions; what calls attention is the prevalence of the cognitive-instrumental rationality that worsened the environmental situation of the planet, disseminating the idea of the domination of nature and of its use for the benefit of humankind, leading to an excessive exploitation of the so-called "natural resources". Santos (2005) calls attention to the fact that nature transformed into a resource has an excessive logic based on its exploitation up to its exhaustion.

On this point, Maturana (1998) reminds us of a world where the phrase "natural resources" is abolished, in which people understand that all natural processes are cyclical and that, if interrupted, their cycle dies. But we observe cognitive-instrumental rationality still strongly entrenched, translating meanings employed in the environmental field that focus on a transcendence

of the rational domain, giving them a universal validity independent of the daily social practice.

To broaden this discussion I will recall the example of an interview I have done with teachers, in which I questioned them about what is sustainable development. The answer was that it is a form of “rational” use, a “development with reflection about the use without destroying”. In other words, these often-employed interpretive repertoires, apart from confirming the high impasse created by the notion of sustainable development that resignifies the term in the logic of the market, deal with premises previously accepted by the totalizing languages that permeate the fields of meaning of Environmental Education.

Sustainability, however, emerges as subversion of the dominant economic order, and as a result of human dissatisfaction with a bankrupt model of development embedded in the cognitive-instrumental rationality. It inscribes itself in a kind of rationality more open to unpredictability, and that establishes itself in the comprehension of a complex reality, of the interdependence between processes; it would be what Leff (2000) calls *environmental rationality*.

It is worth recalling that the Club of Rome⁴ made public documents about the alternatives of this new approach to development, and about the need to rethink education. Among those, one of the best known within environmentalism was *Limits to growth* (1972). The other, little divulged, redefines the role of education in today's world in a work entitled *Learning without limits* (1979). The latter, containing positions adopted by Unesco, has fostered educational reforms in several countries, including Brazil with the creation of the National Curriculum Parameters (PCNs), which propose regarding the environmental theme, amongst other topics of ethical-humanistic features, as transversal across all disciplines in the curriculum.

Chapter 6 of that document is entitled “Summons to solidarity” in response to a growing and mistaken situation about how global problems are being faced. The insistent

repertoires around the fields of meaning of the word solidarity circulate as “a decisive element for mankind's future”, “something entirely new”, “something beyond everything that could have been imagined a decade ago”, “the future of mankind remains promising if it has the wisdom to face the problems” (Assmann, 2000, p. 57). In this sense, solidarity can be translated as a set of principles or as the source of criteria perceived as a decisive knowledge to guarantee mankind's future. In my view, it is the possibility of expansion of rationalities, of a knowledge-emancipation that carry the threads in all directions, weaving the networks of solidarity in a constant becoming of the spaces/times of daily practices.

Without trying to make a normative analysis, the discourses of Environmental Education, particularly the prescriptive ones in their emblematic documents, end up “re-semanticizing” the meanings to accommodate the prevailing scientificity of a knowledge-regulation. For this reason, sometimes, it is a discourse that fails to achieve the wanted rupture with scientific, formal and instrumental rationality, with chaos as ignorance. Words such as “training”, used in Chapter 36 of the Agenda 21, which talks about “the promotion of education, of political conscience, and of training” as a form of expressing the need for an education in environmental issues, are still a clear signal of the predominance of knowledge-regulation. It means that there is some much reason that there is no possibility of an opposite stance.

Apart from that, solidarity, social justice, as well as sustainable development, are terms that belong to the official discourse of the International Monetary Fund (IMF) and of the World Bank. I do not intend to analyze any of those documents, but Assmann (2000) draws attention to the meaning given to social solidarity in those documents and

4. The Club of Rome is an international association composed of famous intellectuals, created at the end of the 1960s. It has become well known for seeking solutions to global problems.

in the official discourses, a meaning reduced to economic efficacy. That is, the only way to achieve it would be by overcoming poverty, through the mechanisms of the free market, and through the efficiency in/of the market.

But solidarity is far from being a unified field of meaning. Paraphrasing Assmann, there is a spreading of partially disconnected, even opposed, semantic fields. My attempt is to analyze its insertion in the narrative of Environmental Education as a form of valuing the knowledge-emancipation.

Even if it means just the opposite, Environmental Education reproduces a linear and homogeneous language as the standard of ecological good conduct, as the art of working for the common good, in the name of solidarity, of a “preaching” that comes close to a dogmatic and traditional education beyond a mere common sense. Now, we know that one cannot secure a safe method or direct way to seek the truth about oneself, to reach the “being being itself in the world” (Tristão and Pinel, 2005). Instead of the conscientization inside a behavioral approach to education, Environmental Education needs to think about promoting the self-consciousness for an action-reflection on solidary knowledge.

Within the line of explanation of this objectivity-between-brackets, and making use of a concept by Maturana (1998), the references I have of reality, in the case of my analysis of a socio-environmental reality, are not independent from me. This path recognizes the inseparability between observer and observed, and a profound connection between theory, reflection, action, emotion, values, individual, collective, nature, culture.

The environmental ethics is not founded upon an anthropocentric and individualistic ethics following a dissociative concept of subject and object, of nature and culture, and some many other dualities that permeate the fields of meaning of modern thought. This movement of ideas, which is being expressing in social practices, trying to create new

sensibilities and rationalities, is manifested in a different ethics and in some tendencies of environmentalism that, since the 1970s, have exerted direct influences on Environmental Education.

But, in the name of an instrumental rationality, an *objectivity-without-brackets* of the word solidarity is stated, in which the path to explanation takes on the meaning of that which we say that is independent from us. In this way, these languages with absolute, objective, and universal truths incite the production of meanings of truth in any observer, independent of what he/she does. This rational subject that starts from the threads of these promises, already constituted, only knows nature as “the other from oneself”.

Thus, the narrative of Environmental Education, often pervaded by these previously accepted premises, comes to legitimize a colonized rationality that controls, constructs and destroys the environment. This epidemiological culture of universalistic systems seems to be at a dead end. As Najmanovich (2001, p. 31) says “the old recipes intended to cure all illnesses only made them worse”. Therefore, the way out is for us to reflect upon the explicative paths we have been following, upon the dangers of the exhaustive standardization of our discourses, and to try and find other possible paths to walk, more solidary strategies with respect to the environment, and new directions that allow us a voyage into the unknown.

Since the environment is inscribed in a hybrid problem, of multiple intersections and dimensions, solidarity is a strong ethical-political ingredient in the search for solutions and in the promotion of significant daily practices concerning the solidary sensibility.

Environmental Education moves inside a discourse of increased appraisal of solidarity as a process in which the knowledge gained can be regarded as “always unfinished, that we become capable of reciprocity through the construction and recognition of intersubjectivity. The emphasis on solidarity turns the community into

the privileged field of emancipative knowledge” (Santos, 2000, p. 81).

With respect to the identity and to the reciprocity in this field, Santos (2000) highlights the reciprocity that can be constructed independent from an anthropocentric concept of the so-called non-human nature, which “not being identical to ourselves, is reciprocal to us, for its destruction means our own destruction”. In this case, our subjectivity is incomplete without the existence of reciprocity, and the search for its essence.

The repertoires shared by educators, environmental educators, and teachers, or embraced by institutions and disseminated in educative materials and media in general are full of meanings and ideologies. How can we change a paradigm if we do not change the language?

To Assmann (1996) the paradigms are not just scientific. They regain the stability and security of research methodology, but they also involve the power relations (organization). Thus, knowledge deals with sociocultural and value questions. For this reason, it is important to inspect the referential context in which the notion of paradigm is inserted, since knowledge-emancipation is a local knowledge produced and divulged through reasoning discourse.

These two dimensions of knowledge, local and reasoning, are indissociable, given that the reasoning discourse emerges out of interpretive communities. The communication in these communities or in a given social group circulates around common languages, possible to understand and produce new knowledge, to enrich the narratives inherited, to create concepts and notions that give support to ideologies, beliefs, and values of the networks in which the subjects take part in a given socio-environmental context. Thus, there are distinct paradigmatic conceptions that establish interfaces among themselves.

In the coming century Environmental Education as knowledge-emancipation presupposes a different ethics, based on a different

principle, other than that of the social practices ensuing from the determinisms of science and technology, “for all they have done is to increase the powers of man over nature and over themselves” (Atlan, 2004, p. 7). Along with Santos (2000), I believe that this principle is the principle of responsibility. This principle of responsibility cannot be instituted by linear intellectual marks, because we live in a time in which it becomes increasingly difficult to be linear. From these observations, it is impossible to base a narrative of Environmental Education on preestablished truths, on preconceived or deterministic ideas, as on any enclosure of theories, as well as on paradigms or specific epistemologies (Tristão, 2004).

The ethical dimension involved in this responsibility principle invites us to understand our conduct as respectful of the other as a legitimate other in the living together, be it a human being, or be it a social group or the nature. This ethics is part of a responsibility towards the future.

Second fragment: political environmental education - the participation

To Santos (2000), solidarity confers to knowledge-emancipation its ethical dimension, and to participation its political dimension. By that I mean that, as human beings, we depend on solidarity, which in its turn presupposes participation.

Participation belongs to the rhetoric of the pedagogical discourse, of documents and legislations on Environmental Education. The *Treaty on Environmental Education* for sustainable societies and global responsibility calls attention in its principles, proclaiming that “environmental education is not neutral, but ideological. It is a political act, based on values for social transformation”.

I would like to highlight here the importance of the interpretation of politics in its wider sense, broadening the areas of intervention

of the citizens in the social practices. Knowledge-emancipation presupposes a re-politicization of collective life. Environmental Education aims precisely at invigorating collective actions, and strengthening associativism to recover the meaning of re-politicization in collective life. There is strong resistance, particularly in the Brazilian society, which has gone through a long period of regulation of its practices, assimilation acritically a hyperpoliticization of the government. This becomes clear in socio-environmental issues, where communities often attribute total responsibility for their problem to the government. This only contributes to weaken the creation of interpretive communities that would put an end to the monopoly of interpretation, and would not give up other forms of interpretation.

In this sense, the wider is the command of politics, the greater is the freedom and, consequently, the participation. Participation is a polysemic concept, because it involves society, citizenship, ethics, justice, as well as popular education and social movements, inequality and social exclusion. If we fail to consider this whole semantic field, we run the risk of not recognizing its main emphasis, which, just as with solidarity, is ethical-political.

Participation is a goal for teachers and educators who work at schools, NGOs and, especially, for those who are engaged in the promotion of a political Environmental Education, of a knowledge-emancipation. However, we still notice in our meetings of teachers' continuing education their huge need for mastering techniques to stimulate the participation of students. Seen from this viewpoint, the idea of the discourse of participation is isolated neither from a cognitive-instrumental rationality, nor from the principle of community.

Santos (2000) believes that the principle of community was one of the principles that have resisted being taken in by the automatic utopianism of modern science, causing it to be

partly forgotten. This became positive in the sense that such distancing kept it different, open and contextualized. Participation and solidarity contribute as two fundamental dimensions of this principle of community. As for participation, it was not totally colonized by modern science, except by liberal political theory, which defines it *grosso modo* in a restricted manner (citizenship and representative democracy). Likewise, other rationalities have also resisted total assimilation, as in the example of the aesthetical-expressive rationality, which "by its nature" is so open, flexible and unfinished as any work of art, nature itself, or some domains of social life.

We can then say that knowledge-regulation leaves openings for emancipation, just like knowledge-emancipation can be regulator of consciences. In the proliferation of these social processes it is good to keep sight of the tension between them. In this case, participation can happen as emancipation, but founded on the instrumental management of its emotions, as Sawaia (2003) remarks.

Sawaia (2003) explains that, until the 1980s, emphasis for participation was centered on ideals of collectivity, objectivity, and rationality. Here predominates the idea of the quantitative, that is, to participate is "to bring together the largest possible number of people for different collective objectives, such as to demand right and benefits, to create developmentalist or revolutionary projects, to exert the right to vote, to strike" (p. 117). That is, participation is limited to the space of citizenship, in the sense of the social rights, without taking subjectivity into account.

In the 1980s participation takes on a less structuralist and more subjective meaning, recuperating the importance of individuality and of affectivity. In lieu of equality and freedom, ethical values such as autonomy, emancipation, and respect for difference and for diversity appear as the background to this scenario. Thus, today, for a political Environmental Education the dimension of social participation goes

beyond boundaries, has no delimited spaces or times, immersing into the networks of doings and knowledges of daily life.

The author warns, however, against the eulogy of subjectivity that risks exalting free will and individualism, which reduce subjectivity to subjectivism, in other words, the de-politicized and de-subjectivated subjectivity, propelled by a thinking that wants to justify everything by making everything relative.

So, the narrative about the sometimes pragmatic, sometimes romanticized participation of Environmental Education is dissociated from the daily social practices when the emotion, intimacy, and temporality of political action are not considered within their fields of meaning. The potentials of action, politics, emotion, and formation of self-conscience are woven in the meetings, exchanges, relations and connectivity of the network relations in which true interpretive communities are formed.

Here we are smashing boundaries previously so rigid between the public and the private, the collective and the individual, between emotion and reason, so necessary to create interpretive communities and to accept chaos as knowledge in Environmental Education.

It is worth remarking that the meaning of chaos employed here is that coined by Morin (2003, p. 293) when he says:

Chaos is not a matrix word, for it expresses not a dominant principle, but at most a matrix principle. We are not dealing here with a supreme name; it is indeed the opposite, a name in the elementary level; that of the contradictory character, irregular and mixed of the constitutive elements of reality. The word chaos does not illuminate: it situates the central focus of the world, below order, beyond disorder, beyond nothing, below being, at the same time in the irrationalizable and in the rational, in proliferation and in regulation.

This approach to chaos suggests an underlying interconnectivity in events that

apparently occur in a random fashion. That is, we are interconnected to nature, to society and to thought (paradigms) surrounding us. Understanding this in a complex way widens the notion of interdependence that appears in the socio-environmental context.

Complex thinking is still very little explored in constituting the fields of meaning of Environmental Education. Although it carries the threads of reenchantment of education in general, Environmental Education in its years of existence has chosen to include in the fabric of its narrative terms like “new paradigm”, holism, and totality.

Third fragment: aesthetical environmental education - the reenchantment

The aestheticization of daily life is undoubtedly one of the notable phenomena of the contemporary era, seeking to challenge the boundaries between art and contemporary life. The concept of nature of a given era exerts great influence upon intellectuals, artists, painters, poets and musicians. Although I recognize the importance of a historical survey about aesthetics, both in the arts and in culture, which would amount to nothing less than a history of the idea of nature, my concern rests with the influence of this dimension to the society/nature interaction, and to what I shall refer to as the “sensitive forms of daily life”.

We, human beings, feel always attracted to natural beauty, and the aesthetic exploration of nature can be a means of rescuing its intrinsic value over and above a mere contemplation or sacralization, or even above the predominance of reason in the birth and spread of opinions. The esthetical meanings of nature are part of the narratives of art, of culture, and of Environmental Education, and can be a transmission mechanism for feelings and for emotions experienced in common. This aesthetical-expressive rationality is one of the

carriers of sensibilities, utopias, and new metaphors to re-enchant education in general.

Carvalho (2004) argues that the bases for aesthetical feeling are the new sensibilities, studied as a cultural trait by Keith Thomas in the 18th century. The author reminds us that keeping gardens in the house, having pets, establishing a closer contact with nature, watching birds, are all habits observed in the 18th and 19th centuries. The large degradation of society experienced in the 19th century, accentuated by the environmental degradation brought about by the Industrial Revolution, brings forth the modern myth of untouched nature, reinstating the value for society of natural landscapes and of nature.

For Diegues (1996) such myth assumes an incompatibility between human actions and the conservation of nature. This means that human societies should distance themselves from these natural areas in need of protection, there included the traditional cultures that developed their husbandry systems through their age-long interaction with nature and their action upon the environment. The meanings produced about myths and symbols are different, just like the cultures, and they allow building a narrative that exerts, basically, an influence over the daily practices.

In a manual produced in its second edition by the Secretary for the Environment of the State of São Paulo (1997) – *Cadernos de Educação Ambiental: conceitos para se fazer educação ambiental* – one of the concepts presented is that of the sacralization, viewed from the perspective of the basic human need, both material and non-material, for a beautiful and healthy environment.

Apart from this argument of the beautiful and the sacred, which might lead us to a generalist discourse without creating many meanings, the aesthetic Environmental Education can point us towards the heterogeneity and the tensions between the different forms of systems of life, towards multiple interpretations of local daily practices, and towards a greater

appreciation for regional narratives. These principles of knowledge-emancipation have been taken aboard by some studies that employ methodologies such as bioregionalism and ethnoecology. Sato (2001), for example, in studies conducted with marshland communities, focuses on their narratives, stimulating and intervening to help them conquering their autonomy in the processes of natural husbandry and in the implementation of Environmental Education programs.

The culture of reappraisal of nature, considered as the carrier of the contemporary interest in nature, was strengthened in the 19th century by the Romantic Movement. At that time, the new sensibilities were at the basis of aesthetical feeling, opposing to the order and to the human intervention that which is natural, wild, and uncultivated. Such romantic sensibility, opposed to the Illuminist vision, advocates a universal nature, uniform and mechanical, in which society and nature are ruled by determinisms and laws, resulting in a narrative that incorporates utilitarian and selfish concepts of nature itself. Environmentalism is born from within the counterculture that opposes precisely this kind of rationality.

Perhaps in an optimistic and non-naïve conception, human beings improve ethically through a slow and effective transformation of the human sensibilities, and not so much through arguing on rational or abstract ethical principles.

This is an argument by Rorty (apud Assmann, 2000) with respect to the sensibility acquired from the liberals against some forms of cruelty, violence and brutality that endured along the history of human civilization. This should be understood as a promising ethical development towards the increase of solidarity.

It is worth clarifying that my position is far from defending a uniformity of the values for the aestheticization of nature; I defend the freedom from individualism, from oneself, to understand the chaos as knowledge in the creation of a collective body, of a sensitive or

affective community that replaces the purely utilitarian “society”, an idea of nature still strongly present in schoolbooks, in the media, and even in the fields of meaning of environmental narrative. Santos (2000) tells us of an aesthetical-expressive rationality that is so permeable and unfinished as a work of art and, for this reason, cannot be enclosed in the “prison of a technical-scientific automatism”. This unfinished character of the aesthetical-expressive rationality is placed at the revaluation of satisfaction, which, in Western modernity, has been colonized by the industrialization of pleasure and of free time, by the culture industries, and by an ideology and practice of consumerism.

This focus of aestheticization on consumerism could be shifted in the creation of what Meffesoli (1998) calls a “kind of aura”, a collective sensibility that goes beyond the individual atomization, that brings up the conditions for possibilities of a given era. It seems that, in this time of uncertainties, we are also experiencing an “aesthetical aura”, meeting again, valuing in different proportions, but in an organic manner, the “community impulse”, “the mystical propensity” or the “ecological perspective”.

Environmental Education can rescue the valuing sensations so that the individual and collective subjectivities can create a feeling of belonging to nature, of a close contact with nature to perceive life in a movement of balance/unbalance, organization/disorganization, life/death, the beautiful and the good present therein. These sensations have been subdued by the dominance of the cognitive-instrumental rationality of the prevailing paradigm.

The appreciation of scientific determinism, the rationalization of nature, disregards the utopian thinking creating, through the discourse practices, a conformist subjectivity in face of the environmental depletion, of social degradation and of cultural homogeneity; a feeling of inevitability of what is happening, no matter how bad it is. This is what we could call solidary

insensibility. As Santos (1997, p. 324) tells us “as a new epistemology, utopia refuses the narrowing of the horizon of expectations and possibilities, and creates alternatives; as a new psychology, utopia refuses the subjectivity of conformism”.

Holism, which impregnates the narratives of Environmental Education and has become a rhetoric in the teachers’ fields of meaning, appears as a resistance against non-integrating or reductionist approaches. But imagining to overcome reductionism, holism operated a reduction to the whole.

This global (holistic) approach defending the idea of the whole is one of the basic principles of any methodological proposal of Environmental Education. It was within this conception that the environmentalist maxim “think globally, act locally” was created. Afterwards, this phrase has been re-signified to “think and act globally and locally”.

This philosophical concept seems to appeal with the possibility of apprehending totality, doing away with the specificity and historicity of human dimensions, making way for generalizations and analogies, a kind of argumentation that does not fit the idea of complexity.

We can say that this discourse has not broken with the conservative, mystified and mystifying common sense, for it creates an isolated and autonomous form of knowledge that participates in a self-referential, superior and unfounded narrative, that fosters the creation of interpretive communities for emancipation.

But, without going into that issue, there are several interpretations and representations of holism. Some authors associate holistic thinking to the post-modern trends due to its organic, systemic, integral nature; for its capacity for encompassing. It is in the sense of the solidarity and organicity of all things that the term contaminates the narrative of Environmental Education. There are, however, other theorists adherents of complexity who have a different view of it.

Undoubtedly, holism has made a desperate attempt at overcoming the reductionist approach. In the words of Morin (1997), both explanations, the reductionist and the holist, try to simplify the problem of the complex unit. The former reduces explanation to the parts, conceived in isolation; the latter reduces the properties of the parts, also conceived in isolation, to the whole. Thus, the holistic (or globalist) explanation has operated a reductionism based on the whole by not considering the essential properties of the parts, by not considering the organization, the complexity that exists inside the global unity.

This ideal of unity and totality assumed by holism, as Leff says, seduces mankind and can unfold into a homogeneous world based on an instrumental rationality, repressing other rationalities, the meaning of difference, of the diversity of culture, in short (Tristão, 2004).

Complex thinking recognizes the need for this totalization, for the unification and synthesis, but at the same time it recognizes the impossibility of achieving such level of knowledge and conclusion of all thought in view of our helpless limitation.

Environmental Education draws inspiration from the utopia of a solidary world. Clearly, we have to dream with the force of our wishes, because as educators we are creators of possible worlds, of ideas to be fulfilled. As a processual dynamics of life and living processes, this reflection is based on the conception of an elastic world, in a constant movement of expansion and retraction, and the utopia is part of the exploration of new human possibilities and wills, drawing attention to what does not exist in integrating contraposition to what exists.

Concluding

The “concluding” in the gerund suggests a continuity of this action, because the argument of this analysis of the complex thinking allows us to consider the incompleteness as a characteristic. Therefore, it is not the case of concluding, but of coming to an almost

inevitable closing. The final considerations pose the opportunity of highlighting a few threads and knots of the network of knowledge woven here, which lead to other questions to keep open the flow of ideas.

In the case of such a hybrid issue as the educative dimension and the environmental dimension, it is enough to feel that we are in crisis, that the public policies do not answer to our expectations and that the mercantilization dominates the world; it is necessary to find reasons to believe in a possible change. This involves the subject being him/herself in the world and acting in the collective to join forces to make that happen, to create interpretive communities. A great effort is needed to prevent using our previous fields of meaning to attribute meanings and interpretations to what others want to say, that is, to avoid any monopoly of interpretation.

To overcome the feeling of frustration among educators and teachers, it is convenient to analyze and understand the educative experiences in living times-spaces, with contextualized, local and reasoning discourse practices, with spatial and temporal narratives that maximize the available human energies. Thus, in everyday life, at schools and communities, what we see as mere repetition is due to the fact that, as Alves and Garcia (2002) say, we do not have “eyes to see” the creation that exists beyond the simple repetition.

Still, it is interesting to think about educative approaches that demand less of a “rational conscience” in the socio-environmental interactions and everyday social practices. In this case, the creation of interpretive communities could initiate an approach rationally less demanding and more expressive in the field of human communication, and less dogmatic when collectively analyzing the reason why societies act in certain ways and not in others with regard to the environment, developing an educative work of sensibility towards a solidary knowledge-emancipation.

How can Environmental Education as an education process escape the control of the dominant methodological and ideological rules of the pedagogical discourse? This is one of the questions to which I do not have an answer, and that actually raise more doubts than certainties long ago forsaken by the acceptance of complex thinking, as suggested by Alves and Garcia (2002).

In this sense, knowledge is beyond the eternal truths, and becomes a result of interactions established with the socio-environmental context in its multiple dimensions, which include the aesthetical, the ethical, and the affectivities. And so, Environmental Education embodies the becoming, as put by Larrosa (2003), of a relation among the man-to-become, the word-to-become, and the time-to-become, escaping from the totalitarian dream based on a cognitive-instrumental rationality, from a future fabricated through the production of individuals that embody it, from an education compatible with the new and predictable becoming beyond the results of what we know, want and expect. This means that it is possible to start from

empirical sensibilities and abandon the argument of universal ethical obligations, and invest in the expansion of the field of responsibility.

It is about a rupture with the moral and moralizing discourse of Environmental Education and with its narrative conventions, in a reflection about its seriousness, bringing with it an ironic conscience that escapes any firm and stable identification with the world and with ourselves. It is important that solidarity prevails as knowledge-emancipation, but on the other hand, it is important to accept chaos as knowledge and not as ignorance.

To that end, one of the possibilities is the idea of the non-linearity of complex systems, and that therefore, contrary to the linear conception, a small cause can produce a large effect in its organizational recursiveness.

It is thus necessary to adhere to the open and unpredictable educative processes that accept the differences, that consider the subjectivities, the differences in styles of the cultures, to produce and understand new knowledges, to enrich or transform the narratives inherited.

Bibliographical references

- ASSMANN, Hugo e SUNG, Jung Mo. **Competência e sensibilidade solidária**: educar para a esperança. Petrópolis: Vozes, 2000.
- ATLAN, Henri. **A ciência é inumana? Ensaio sobre a livre necessidade**. São Paulo: Cortez, 2004.
- _____. **Metáforas novas para reencantar a educação**: epistemologia e didática. Piracicaba: Unimep, 1996.
- CARVALHO, Isabel. **Educação ambiental**: a formação do sujeito ecológico. São Paulo: Cortez, 2004.
- GARCIA, Regina e ALVES, Nilda. A necessidade de orientação coletiva nos estudos sobre cotidiano – duas experiências. In: BIANCHETTI, L.; MACHADO, Ana Maria Netto. **A bússola do escrever**: desafios e estratégias na orientação de teses e dissertações. Florianópolis/ São Paulo: Editora da UFSC/ Cortez, 2002, pp. 255-296.
- LARROSA, Jorge. **Pedagogia profana**: danças, piruetas e mascaradas. 3. ed. Belo Horizonte: Autêntica, 2003.
- LEFF, Henrique. **Complexidad ambiental**. Méico: Siglo XXI, 2000.
- MATURANA, Humberto. **Emoções e linguagem na educação e na política**. Belo Horizonte: Ed. UFMG, 1998.
- MAFESSOLI, Michel. **O tempo das tribos**: o declínio do individualismo nas sociedades de massa. 2. ed. Rio de Janeiro: Forense Universitária, 1998.

_____. A sociologia como conhecimento da socialidade. In: BARBOSA, Joaquim (org.). **Reflexões em torno da abordagem multirreferencial**. São Carlos: EdUFSCar, 1998, pp. 98-105.

MORIN, Edgar. **X da questão**: o sujeito à flor da pele. Porto Alegre: Artmed, 2003.

_____. **O método**: a natureza da natureza. 3. ed. Portugal: Publicações Europa-América Ltda., 1997.

NAJMANOVICH, Denise. **O sujeito encarnado**: questões para pesquisa no/do cotidiano. Rio de Janeiro: DP&A, 2001.

PETERS, Michel. **Pós-estruturalismo e filosofia da diferença** (uma introdução). Belo Horizonte: Autêntica, 2000.

SANTO, Boaventura de Sousa. **A crítica da razão indolente**: contra o desperdício da experiência.

_____. (org.). **Semear outras soluções**: os caminhos da biodiversidade e dos conhecimentos rivais. Rio de Janeiro: Civilização Brasileira, 2005.

SATO, Michele. Apaixonadamente pesquisadora em educação ambiental. **Educação: Teoria e Prática**. Rio Claro: UNESP, vol. 9, n. 16, jan.-jun. e n. 17, pp. 24-33, jul.-dez. 2001.

SAWAIA, Bader Burihan. A participação social e subjetividade. In: SORRENTINO, Marcos (org.). **Ambientalismo e participação na contemporaneidade**. São Paulo: Educ/ Fapesp, 2003, pp. 115-134.

TRISTÃO, Martha. **A educação ambiental na formação de professores**: redes de saberes. São Paulo/ Vitória: Annablume/ Facitec, 2004.

_____. Os contextos da educação ambiental no cotidiano: racionalidades da/ na escola. In: **Reunião Anual da Anped**, Caxambu 27, 2004.

TRISTÃO, Martha e PINEL, Hiran. **Sujeito, identidades e as relações com o meio ambiente**. Universidade Federal do Espírito Santo, 2005. mimeo.

Manuscript received 03 May 2005

Revised 31 June 2005

Accepted 06 July 2005

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