

## Critique for environmental education in geography teaching: Theoretical approaches

### **Crítica para Educação Ambiental no Ensino de Geografia: aproximações teóricas**

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#### **Abstract**

This study is driven by theoretical and methodological questions about the current practices and reflections on environmental education, inserted in the teaching of Geography. Are such pedagogical activities built on a critical bias? The objective is to investigate whether the capitalist production of space is considered in the understanding of the processes of socio-environmental degradation in pedagogical activities of this theme. We adopt the bibliographic review of the subject through broad theoretical approaches. As a guiding method, the critique of historical-dialectical materialism permeates and unifies the discussions of the environmental problem, the teaching of Geography, the role of teachers and the essential concept of analysis: the production of the capitalist space. Therefore, environmental education is discussed based on key concepts of geographical education, opposing conservative practices and proposals that are not very clear with possible didactic alternatives of construction in pedagogical spaces. It is essential that the discussions are translated into effective practices, founded on the pedagogical approach in the students' routine knowledge, making it complex, so that, in return they acquire a significant character in the socio-environmental transformation.

**Keywords:** Critical environmental education. Geography Teaching. Capitalist mode of production.

#### **Resumo**

Este estudo é movido por questionamentos teórico-metodológicos acerca das práticas e reflexões vigentes para a educação ambiental, inseridas no ensino de Geografia. Tais atividades pedagógicas são construídas em um viés crítico? O objetivo é investigar se a produção capitalista do espaço é considerada na compreensão dos processos de degradação sócio-ambiental em atividades pedagógicas desta temática. Adota-se a revisão bibliográfica do tema, por meio de abordagens teóricas amplas. Como método orientador, a crítica do materialismo histórico-dialético permeia e unifica as discussões da problemática ambiental, do ensino de Geografia, do papel dos docentes e do conceito essencial de análise: a produção do espaço capitalista. Portanto, a educação ambiental é discutida a partir de conceitos-chave do ensino geográfico, contrapondo-se práticas e propostas conservadoras e pouco elucidativas com alternativas didáticas possíveis de construção nos espaços pedagógicos. É essencial que as discussões

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realizadas se traduzam em práticas efetivas, a partir do enfoque pedagógico nos saberes cotidianos dos estudantes, complexificando-os para que, no retorno ao concreto, adquiram um caráter significativo na transformação sócio-ambiental.

**Palavras-chave:** Educação ambiental crítica. Ensino de Geografia. Modo de produção capitalista.

## Introduction

Environmental issues have been a broad field of debate both in basic education and in academia, especially in the last 30 years, with the escalation of environmental disasters, combined with advances in the technical-scientific-informational milieu; consequently influencing researches at national and international level. It is an increasingly emergent theme in a world of intense transformations, because of the validity of the current mode of economic production. Therefore, it receives a critical approach, which really challenges the conservative appropriation of concepts and actions of a preservationist/environmentalist nature.

Starting from the questioning to the way in which such questions are dealt with, including by pedagogical activities by the so-called environmental education - more specifically in Geography - the following problematic has been elaborated: do the current proposals of pedagogical activities for environmental education, through the Teaching of Geography, under the critical bias, consider the current context of production of the capitalist space?

In this sense, in the scope of geography teaching, this study can contribute to the detailing and deepening of criticism regarding the ways of approaching environmental education in pedagogical spaces.

Due to the inherent involvement of the environmental issue with the main concepts and themes of Geographical Science, it is incumbent upon this science to assume its role as a protagonist in the most diverse aspects of environmental education. By questioning of what has been developed in the growing spaces of debate on this subject, we try to give a new possibility for

environmental education, which will potentiate new actions and enrich the teaching of Geography as a transformative and significant instrument in the reality of the students.

With a different approach from the traditional one, from significant and questioning theoretical and methodological foundations, the objective of this study is to discuss whether the current pedagogical activities for environmental education in the critical scope of the teaching of Geography, consider the contemporary reality of capitalist production of the space.

### Geographical Science, Education and Society: necessary theoretical approaches

Essential for the beginning of the discussion, broad, branched and filled with possibilities, it is the contextualization of the current environmental subjects within the Geography teaching of the prevailing educational model and consequently of the model of society that bases the reproduction of such discourses and pedagogical practices. Within this discussion, starting from the dominant modern paradigm, what would be the chances for a new vision of environmental themes? What are the roles and responsibilities of the Geography teacher and the Geographic Science itself supported by the critical method in the desired transformation of traditional education, therefore the society that created it?

The globalized socio-environmental degradation has imposed the need for various academic and scientific disciplines to conform to the dominant ecological and environmental principles in our society (LEFF, 2007). This desired environmental knowledge, which seeks to enter all different types of knowledge, deals with the same environment currently dominated by the economic, technical and scientific rationality of modernity. Thus, it is necessary to build a new rationality, this time environmental, which takes into account the traditional knowledge and historically and culturally

marginalized knowledge, ignored by the positivist method and modern science.

For the transformation of the dominant rationality into an environmental rationality, the ideological and political perspective of its theoretical conception and practical actions are essential. This critical and subversive stance towards the current order will guide epistemological and methodological constructions, as well as technical and social development. Leff (2007) points out that the environmental problem must influence and be influenced by a complex set of knowledge that is truly integrated between the social and environmental spheres.

The effectiveness of this new knowledge depends on the individual and collective posture, in daily actions of the subjects who aim for such transformation, whether from personal or professional / academic / teaching practices. The critical environmental debate can be fostered in all spaces of social and political construction, especially in the educational field. This can be responsible for a new construction of knowledge, democratic and close to the existing reality. As Porto-Gonçalves (2004) indicates, the (socio) environmental debate needs a popular and emancipatory integration with respect to different models of society.

Just as the educational practice – that breeds liberating and dialectic pedagogical paths which transform the traditional method from within – the lifestyles oriented by the economic bias also have their contradictions, and many other lifestyles resist in its interior. These alternatives are configured as concrete possibilities and can be strengthened. It is the next step, after being aware of the abuses that this dominant system imposes.

Determinant of the understanding of everyday socio-spatial conditions that dictate the pace of life and the economic possibilities to which individuals are trapped by the present mode of production, education is still believed to be one of the forms of rebellion towards the established order. The instruments of socio-environmental transformation are connected

to the theoretical-methodological diversity worked in the pedagogical spaces and to the learning of contents significant to the concrete reality, in which essentially, the teaching of Geography is inserted.

Mészáros (2006) is an outstanding author in strengthening the conviction of those who struggle against the capital domination, exploitation and oppression. His work presents the debate about the possibility of overcoming the logic of capital through broad educational processes, or, in his words, "in the genuine and educationally viable sense of the term" (p. 25). The relations between the educational processes and the social processes of maintaining capitalist accumulation are inseparable. In this debate, it is fundamental to understand that only a broad conception of education can ensure the combat for the goal of radical change; and that the role of education is strategic both for the changing conditions of production and for the awareness of the individuals involved.

To break with the logic of capital in the educational field represents, therefore, replacing forms and forces deeply rooted by a concrete alternative possible in the routine of the pedagogical practices. It depends on the willingness and positioning of the teacher to understand the reality that surrounds him/her and seeks to demonstrate it to his/her students. Education, in its broad concept, is an ongoing process of learning. "We must demand a complete education for life, so that its formal part can be put into perspective, in order to institute a radical reform there, too" (MÉSZAROS, 2008, p. 55). Reform means challenging the dominant forms in the formal educational system daily through the construction of the autonomy of both students and teachers in their educational practice.

The position taken here is not of refusal of teaching or of science / economic progress, but rather in search of an untechnified rationality, which would be truly rational. A teaching that, privileging the construction of critical knowledge, considers the socio-environmental dimension; and also the specific inheritances of a historical construct of exclusionary, exploratory

and greedy world. It would be a great step towards opening up other educational possibilities that seem, in the perspective of this study, to be more appropriate to the actual socio-environmental challenges.

To investigate pedagogical practices means to reflect critically on the content to be worked on, what the ways to construct it collectively in a diverse classroom environment are, and what scientific, theoretical, practical, and ideological foundations best fit a particular context for specific objectives. Here, we prioritize the objectives that aim at the reflection on the transformation of the traditional and decontextualized model, centered only on the teaching practice. On a broader scale, we seek to overcome the current mode of economic-political production, which is highly detrimental to the socio-environmental environment from every conceivable perspective.

According to Souza (2011), from a didactic point of view, the traditional teaching model in Geography (and several other sciences) is focused on the consideration of knowledge as truth, which the teacher dominates and transmits it to students in a passive condition. Description and memorization became key pieces, eliminating any space of subjectivity or critical analysis. Unfortunately, those are still present and widespread didactic practices.

We agree with Souza (2011), when affirming that

[...] effective teaching is the one that fulfills the school function in the formation of the autonomous and critical citizen, capable of overcoming the problems that afflict the present society (p. 60).

The role of geography teaching meets this purpose, because it is only in the spatial understanding that we can become aware of the totality of the capitalist logic to which we are subjected. It is necessary to know the various spatialities of the world as places of individual and collective experiences, to also understand that other realities are possible.

## From the environmental problematic to the production of space

It is through the understanding of the phenomena that influenced the socio-spatial production of daily reality that one can better assimilate how to act on it, including the problems of environmental degradation. Thus, Geography teaching and environmental education are provided with important tools - starting from reality, going deeper into theory and then returning to the material - which will be passed on to the lives of learners. The objective is no longer the pedagogical approach of environmental problems in quantitative terms, so as to raise it qualitatively inherently to the fundamental concept of space production.

Models of society prior to the capitalist mode of production also had ways of degrading the material conditions of life they needed through destructive and expansionist practices. The geographer Élisée Reclus (1866), in his text "*Du sentiment de la nature dans les sociétés modernes*", already dealt with the environmental violence throughout human history by successive civilizations that toppled forests, modified water courses, altered the climate and made housing conditions decadent in the cities.

However, there is a rupture between the technical and material conditions of societies before and after the Modern Age. With the historical transformations from the scientific and technological revolutions of the seventeenth and eighteenth centuries, the capitalist mode of production finds its possibility of existence and a means of reproduction expanded, whereas knowledge has its main meaning as "operative knowledge" and domination of nature (MARQUES FILHO, 2016, p. 592), with intense reflections on the construction and the teaching of science. This is how the natural environment starts to be considered distant from the social coexistence between human individuals, and the doors are open to the imminent environmental collapse.

Contemporary data on the global environmental degradation are highly known and widely disseminated. The intense exploitation of natural resources and diverse pollution by the residues of the present economic production are indisputable, as are the impacts on human health and all living beings on the planet. As Porto-Gonlaves affirms, no society escapes nature, and nature must be cared for as an important means for the survival of the human species.

Data from the Institute for the Man and Environment of the Amazon (IMAZON), measured from satellite images, indicate that, in March 2018, deforestation in the Amazon Forest was already 243% higher than in the same period of the previous year. Concomitant to this process, soybean planting in deforested areas was the highest in five years, growing 27.5% in 2018, compared to the crop of 2017 (FONSECA et al., 2018). Estimates indicate that by 2030, about 27% of the original size of the Amazon biome (in eight countries) will no longer contain trees. Marques Filho (2016) uses data from the Global Land Degradation Assessment (GLADA) to state that currently, 42% of forests are being degraded; and something close to 170 million hectares of forests must be lost by 2030. From 1800 to 2010, 10 million km<sup>2</sup> of forests were eradicated (MARQUES FILHO, 2016).

Nowadays, 33% of the world's soils are moderately to severely degraded, either by erosion, salinization, acidification and / or chemical pollution (MARQUES FILHO, 2016). Loss of productive soils will undermine food production and influence prices, exacerbating food insecurity and poverty. "[...] unless the present agricultural practices are abandoned, the amount of arable and productive land in 2050 will be only a quarter of the 1960 level" (Marques Filho, 2016, p. 159). Anually, 50 thousand km<sup>2</sup> of arable soils are lost, according to the latter author; and it is worth remembering: it takes an average of 500 years to form two centimeters of fertile soil.



Regarding global warming, Marques Filho (2016) shows in his vast work, “*Capitalismo e Colapso Ambiental*”, that 2015 was the year that marked the increase in average surface temperature of the planet by 1 °C compared to the 1850-1900 historical mean. The northern hemisphere saw a 2 °C increase for the same period. In global terms there will be a 2 °C increase above the 19<sup>th</sup> century average temperatures as early as 2036 – if greenhouse gas emissions remain at 2013 figures of around 32 gigatons per year (MARQUES FILHO, 2016). Besides,

[...] there is more. We are also breaking records of retraction of high altitude glaciers, soil degradation, scarcity of water resources (surface and groundwater), acidification, eutrophication and plastic pollution of the oceans, sea level rise, overfishing and coral bleaching (MARQUES FILHO, 2016, p. 16).

Such socio-environmental impacts are directly related to the development of trade and the capitalist mode of production, and one cannot aim to approach them pedagogically only quantitatively without elucidating the essence of social and productive relations that make such environmental problems urgent. Aiming for a critical posture in the classroom, the approach to environmental themes from the teaching of Geography must consider, as it is characteristic of this science, multiple socio-spatial visions, dialoguing with several scales of analysis and enabling students to view such questions in their daily life, relating them to the scientific knowledge systematized in global environmental data and analysis.

It can be stated that the environmental question brings together a multitude of ethical and political principles, according to the worldview that is considered ideal, and not only indicates a path of practical solutions. In addition to technical and immediate actions, the in-depth debate, involving epistemological aspects of teaching geography and environmental education, is essential (CAVALCANTI, 2011).

Environmental problems do not have an absolute technical solution, and this thought is part of the problem to be addressed within educational and learning spaces. As stated by Porto-Gonçalves (2004), the unwavering belief in the role of technique is the result of the modern-positivist ideology, which also supports the traditional paradigm in education. In order to modify it, we try to overcome this superficiality, as well as the easy terms of "sustainable development" and "sustainability". The critical environmental debate goes through the overcoming of this homogenization of lifestyles and the current political-economic model. It is also necessary to consider the planetary environmental system as inscribed in a dynamic balance of flows and exchanges of matter and energy.

With the advent of modernity and domination of science by the positivist-scientific paradigm, the expansion of the capitalist mode of production masqueraded itself as a civilizing mission, absorbing genocide, ethnocide and domination / degradation of the natural environment and traditional peoples - thus justifying such atrocities (PORTO-GONÇALVES, 2004). It promoted the idea of development based on the inconsequent exploitation of natural resources.

When detailing the technification of the environmental debate, one cannot lose sight of the fact that any technical system brings its intention to create and mainly its use. A critique of technique, therefore, is always a critique of the intentions contained in it. As an exponent in studies based on the materialistic method that deepens the critique of technical-instrumental reason, Herbert Marcuse is quoted by Marques Filho (2016, p. 597), in an indispensable passage for this discussion:

The concept of technical reason is perhaps also ideology in itself. Not only its application, but the technique itself is methodical, scientific, calculated and calculating domination (over nature and man). Certain ends and interests of domination are not granted to technique only "afterwards" and from outside - they are already inserted in the very construction of the technical apparatus.

As an example, Porto-Gonçalves (2004) identifies that for the technical domination of nature, society must also be dominated, to make it believe in such actions. All this is put into practice by intellectual and pedagogical systems, so that modern relations of domination can grow and develop.

Thus, development is to take away the involvement (autonomy) that each culture and each people maintains with its space, with its territory; it is to subvert the way in which each people maintains its own relations of men (and women) among themselves and of these with nature; it is not only to separate men (and women) from nature but also to separate them from each other, individualizing them (PORTO-GONÇALVES, 2004, p. 39).

In this way, the critique of the technical-scientific paradigm is also the critique of the traditional model of teaching, the emptying / distancing of meanings of the contents and the oppressive posture of the teacher in the classroom. All those elements reflect the dialectic between the current socio-productive relations in the current society and the traditional educational practices that are perpetuated in it.

Power relations have been transformed from technology and science, but they can also transform themselves once again. As Porto-Gonçalves (2004) affirms, there is no relation with nature without socially constructed significations, which can be re-signified within different historical and geographical contexts. Whitacker (2013) understands that the discussion on society-nature relations today results in simplistic and inefficient considerations, which points to the need for a resumption of such debates from the social base, in housing, work, and education environments.

It is the role of critical knowledge to elucidate these processes, proposing new forms of intervention and understanding of the global socio-environmental panorama, highlighting the fragmentation of the positivist science that does not question the reasons behind certain technical and

scientific progress. As well as elucidating concepts and terms that are apparently environmentally friendly, they should be studied further and demystified, if necessary.

One of these terms is "sustainable development", the protagonist for contemporary environmentalism, in several aspects. Its reproduction, without due critical discernment of the present ideological / epistemological essence can lead to the reproduction of a truly conservative term allied to the perpetuation of massive environmental exploitation.

Such a debate becomes crucial for the teaching of Geography and its teachers responsible for fostering pedagogical activities that can go beyond the dominant rationality, constantly reproduced in the students' daily lives. It is believed that the sustainable label is only one more affixed to the traditional concept of development. The dialectic of the environmental issue has produced its opposite, the neoliberal discourse of sustainability, which preaches the alliance between environment and development by market mechanisms, which supposedly can incorporate environmental values. Sustainable development, therefore, is appropriate for the business logic, inherent in the concept itself (MONTIBELLER, 2004).

Its polysemic principles were accepted without further questioning and widely disseminated in several pedagogical spaces of Geography teaching through ideas related to environmental "conservation". Precisely by addressing, vaguely, universal and poorly formulated desires for economic growth for all, better living conditions and social equality. In this context, they have little or no influence on the relations of exploitation, incapable of questioning the status quo, since they are created by it. But at the same time, the environmental discourse of fear is widespread, blaming people on the individual scale and not very impacting, since they do not organize themselves collectively.

As maintained by the historical-dialectical materialist method, one can perceive a form of social control exercised by the market ideology, made

effective in educational spaces, which distances societies from nature (WHITACKER, 2013). This ideology can be considered as present in all the relations of power performed by the dominant interests and perpetuated by its class:

The ideas (Gedanken) of the ruling class are, in each age, the dominant ideas; that is, the class which is the dominant material force of society is at the same time its dominant spiritual force. The class which has at its disposal the means of material production disposes at the same time the means of spiritual production (MARX and ENGELS, 2005, p. 78).

This ideological "work" is done in the sense of keeping social organization unequally based on social exploitation and environmental degradation. Oliveira (1999) tells us that in order for this to happen, a function of negativity or illusion is assumed, provoking a false general awareness of individuals. Chauí (1982), however, states that the main intention of ideology is to hide the forms of reality, taking the dominant ideas as unquestionable truths. For that reason, both the control of material and immaterial conditions is done. One example of a fundamental immaterial condition for the formation of the ideals and postures that shape contemporary society is science and its teaching, which must be considered as essential battlegrounds in the pursuit of concrete socio-environmental changes.

As claimed by Bourdieu (2010), ideology is reproduced by the symbolic power of words, which, organized in the form of well-articulated discourses, are disseminated, loaded with intentions. Words fulfill their role of imposition or legitimation of domination, corroborating the dominance of some individuals over others. According to this author, it can be considered as a type of violence - the symbolic one - that bases the inequality by submission. It may even be better perpetuated through the traditional

teaching model, in which the teacher is considered to be the holder of the knowledge to be passed on to students, who are kept in a passive state.

It is no coincidence that the ideological discourse of sustainable development is reproduced globally in pedagogical, commercial and leisure spaces since the capitalist economy is also global and dominant (mainly in its financial scale). Going further, Foucault (2001) tells us that every society controls and selects what can and cannot be said at a given time. Thus, socially and economically accepted discourses are delimited, and those that are possibly subversive to the prevailing order are excluded. Power relations are intrinsically embedded in these discourses:

[...] there is no relation of power without a correlative constitution of a field of knowledge, nor knowledge that does not suppose and does not constitute relations of power at the same time (FOUCAULT, 2001, p. 72).

Therefore, all the limitations and contradictions of a discourse appear such as sustainable development, when exercised in market-oriented societies. The polysemy of the term itself contributes, simultaneously and paradoxically, to its acceptance and questioning of its true origins and purposes. This is the true spirit of a critical environmental education that is urgently sought to be emphasized in all pedagogical practices.

The obvious emphasis on economic and technological aspects of natural issues also contradicts the promises of a pluralistic and complex approach to development; it also suggests the predominance of the market sphere in driving the idea of sustainable development to the detriment of civil society and the State. For those sectors interested in a project of wider changes, this sustainable market development, which has guided recent actions and debates, denounces the fallacy of this ideology and its discourse (WHITACKER, 2013, p. 86).

We concur with Whitacker (2013) when this author affirms that without the structural debate based on this system, it will be difficult to effectively advance the environmental theme, especially in gaps considering the reality of learners and their concrete needs for understanding the real motivations for the perpetuation of domination and exploitation relations, printed on daily social-environmental forms and practices. The mechanisms of domination are the ones that de-characterize reality and impose unequal production relations - including space - as universal.

Although some themes and authors constitute complex elements for a reduced approach in the classroom, great ideas can be built and materialized in pedagogical activities applicable in the field of environmental education. From key concepts of geography, several transitions and correlations can be made among curricular contents, current socio-environmental problems and the critical method of knowledge construction; represented by the guiding principles of dialectical materialism that influences the concept of space production.

As Lefèbvre (2000) states, it is the role of the critique of space to question the social relations sacrificed for the exploitation and degradation of the natural environment and the production of artificial and oppressive spaces. In this sense, the basic reproductive needs of the current mode of socioeconomic production are also the conductive and driving force for drastic changes in geographical spaces, making the capitalist mode of production itself one of the inevitable themes for research and discussion.

Not realizing the true essence in the production of capitalist spaces, we end up seeing reality without conceiving it. The current system passes on the idea of a "neutral", "objective" space, while the environmental issue is masked and surrounded by an insufficient and alienated debate, full of particular interests. Concepts such as "sustainability" and "eco-development" can be considered as a set of illusions. They have a limited and questionable utility close to the reality of which they are put as

solutions. Such discourses are conservative and do not seek the transformation of the prevailing order. They function as deviations from the critique of space, and "substitute critical analysis for schemes that are at the same time less rational and very reactionary" (LEFÈBVRE, 2000, p. 86).

The spaces become marketable, quantified by their correspondent in money. It is another product that can be produced repeatedly in different locations. All human societies have gradually built their space throughout their existence, but the mode of production based on technical rationality produces it in an accelerated rate, without precedent or consideration by other forms of life and the species itself. And, like any other commodity, space hides its formation intentions. Trade values become the final word on a commodity planet, in which production is, above all, producing space (LEFÈBVRE, 2000).

In the production of its space, capitalism is rest on the private ownership of the means of production, on a social structure that does not rely solely instruments or machines used, but on the exploitation of the labor force and the relations of production. It is from the process of space production, as a practice of capitalism, that Smith (1988) elaborated his conception of uneven development. He criticizes those who consider this unequal process of producing space as "a universal law of human history", for it thus assumes a metaphysical character with its meaning reduced to a lowest common denominator.

Lefèbvre (2000) grounds the importance with which the capitalist mode of production actually produces mobile and immovable concreteness, (re)organizing space in its own way and from its interests of accumulation and reproduction. The pursuit of profit becomes increasingly voracious, irrational and degrading to the survival of all living beings on the planet and the complex dynamics of its integrated systems.

Environmental degradation is totally imbricated in the logic of the (re)production of space, as an inherent process. By the same token, by



questioning the current environmental education practices and treating the environmental issue as a whole, one cannot work in isolation or in a reductionist manner.

The possibilities of change in environmental degradation are restricted when they do not consider the functioning of the current mode of production, exactly because they do not consider the core of the problem and have a limited range of the current power relations. The real issue is the impossibility of adapting capitalist reproduction to sustainable development. For this, the consideration of a transnational and transescalar environmental space is essential; an idea is to be built on the material and immaterial plan of the classrooms, together with students and through their concrete experiences and everyday examples.

From all sources comes the same message: environmental collapse is inevitable if the current model of production and development persists. This only increases the importance of environmental study from a comprehensive approach that considers the totality critically, realizes the impacts at local scale associated with broad capital movements, and seeks alternatives for more tolerable socio-productive relationships; starting with the teaching and learning environments. Environmental educational practices, and consequently the teaching of geography, can play important roles in this discussion.

It is understood that the most urgent movement is the union of social and natural patterns and claims, which have essentially never been apart. As stated by Marques Filho (2016, p. 670), "[...] today, the political program is to fight for a society capable of re-fitting into the biosphere". This is a revolutionary idea, consistent with all attempts at socio-economic rupture over the last two centuries. In order to reverse the problematic environmental framework, economic, social, political, ideological and especially educational revolutions must also be embraced. At the moment of greatest urgency, the hope that such movements are possible is reinforced.

In this sense, Löwy (2013, p. 19) appreciates us with the thought of Walter Benjamin:

Marx had said that revolutions are the locomotive of the world history. However, things may be quite different. It is possible that revolutions are the act, by the humanity that travels in this train, of pulling the emergency brakes.

The gradual construction of an emancipatory imaginary, both individual and collective, is best achieved by the advancement of critical reasoning in pedagogical spaces, which can offer the opportunity for a better connection between abstract contents and concrete reality. This amplifies the meaningful knowledge to be used by the learners throughout their lives, and, based on the critical method, they are able to understand, question and possibly transform the socio-environmental conditions of their living spaces.

## Final Considerations

Throughout the work, discussions were held between authors and lines of thoughts pertinent to the subject and method chosen. In this context, the importance of the critical method as motivator and guide of socio-spatial, abstract and concrete transformations is highlighted of Geographical Science as a field of teaching, research and action in the environmental themes; and finally, the role of teachers, who can modify pedagogical activities through an engaged and combative posture, making them more meaningful by bringing them closer to students and relating them to their experiences.

The movement not only inform about socio-environmental inequalities and degradations, but also contextualize them against the modern paradigm of science and technique, the capitalist system and its forms of space production - was one of the main elements of the theoretical

discussion. The focus given to the evidences of the contemporary environmental collapse and its main causes by means of understanding the functioning of the capitalist mode of production becomes fundamental for the academic and school environment, challenging and impelling teachers to the construction of integrated knowledge that should be close to concrete and critical. For this, the environmental education addressed in Geography class is essential, as well as the search for theoretical-practical changes in this theme that are directly associated to the paradigm changes of the traditional teaching still in force.

Bringing up the motivating problems of the work, it is considered that this can be answered accurately, according to the theoretical-methodological research presented. Currently, there are innumerable limitations to the thought and practices of current or traditional environmental education. They are activities that disregard and make impossible the in-depth questioning of the processes that cause degradation and socio-environmental inequality, linked to capitalist production, accumulation, and consumption. In this way, they play the role of conservatives of the prevailing order, blaming individual practices and disregarding socio-productive relations and economic domination as a whole, which directly influence the production of unsustainable and degraded spaces.

In this sense, it is understood that because they are not significant to the desired transformations - despite being considered as such - current environmental education practices need other approaches, which often happen sporadically. Through the spaces of degradation and possibly of transformation, they are the object of study in Geography, the teaching of this science can take a step forward and assume for itself the scholarly discussions and school practices so urgent in the socio-environmental context. To this end, teachers and academics need to deepen this issue, fostering more studies and consequently the practice, always oriented to the critical construction of knowledge.

## References

- BOURDIEU, P. **O poder simbólico**. São Paulo: Bertrand Brasil, 2010.
- CAVALCANTI, L. de S. Ensinar Geografia para a autonomia do pensamento: O desafio de superar dualismos pelo pensamento teórico crítico. **Revista da ANPEGE**, Dourados, v. 7, n. 1, n<sup>o</sup> especial, p. 193-203, 2011. Available in: <<http://ojs.ufgd.edu.br/index.php/anpege/article/view/6563>>. Accessed in: 20 abr. 2018. <https://doi.org/10.5418/RA2011.0701.0016>
- CHAUÍ, M. **O que é ideologia**. São Paulo: Brasiliense, 1982.
- FONSECA, A. et al. **Boletim do desmatamento da Amazônia Legal** (março de 2018). Belém: IMAZON, 2018. Available in: <<http://amazon.org.br/publicacoes/boletim-do-desmatamento-da-amazonia-legal-marco-2018-sad/>>. Accessed in: 29 de jun. 2018.
- FOUCAULT, M. **A ordem do discurso**. São Paulo: Loyola, 2001.
- LEFÈBVRE, H. **A produção do espaço**. Tradução de Doralice Barros Pereira e Sérgio Martins. 4. ed. Paris: Éditions Anthropos, 2000. Tradução de: La production de l'espace.
- LEFF, E. Saber ambiental: do conhecimento interdisciplinar ao diálogo de saberes. In: LEFF, E. **Epistemologia ambiental**. 4. ed. São Paulo: Cortez, 2007. p. 151-190.
- LÖWY, M. **Introdução a Walter Benjamin: O capitalismo como religião**. São Paulo: Boitempo, 2013.
- MARQUES FILHO, L. C. **Capitalismo e colapso ambiental**. 2. ed. Campinas: Editora da Unicamp, 2016.
- MARX, K.; ENGELS, F. **A ideologia alemã**. São Paulo: Martin Claret, 2005.
- MÉSZAROS, I. **A educação para além do capital**. Coleção Mundo do Trabalho. São Paulo: Boitempo, 2006.
- MONTIBELLER, G. F. **O mito do desenvolvimento sustentável: meio ambiente e custos sociais no moderno sistema produtor de mercadorias**. 3. ed. Florianópolis: Editora UFSC, 2004.
- OLIVEIRA, V. M. de. Ideologia: atualizando a reflexão. **Concinnitas**, Rio de Janeiro, v. 1, p. 145-153, 1999.
- PORTO-GONÇALVES, C. W. **O desafio ambiental**. Rio de Janeiro: Editora Record, 2004.
- RECLUS, E. Du sentiment de la nature dans les sociétés modernes. **Revue des Deux Mondes**, [S. l.], n. 63, p. 352-381, 1866.
- SMITH, N. **Desenvolvimento desigual**. Rio de Janeiro: Bertrand, 1988.
- SOUZA, V. C. de. Fundamentos teóricos, epistemológicos e didáticos no ensino da Geografia: bases para formação do pensamento espacial crítico. **Revista Brasileira de Educação em Geografia**, Rio de Janeiro, v. 1, n. 1, p. 47-67, 2011. Available in: <<http://www.revistaedugeo.com.br/ojs/index.php/revistaedugeo/article/view/15>>. Accessed in: 13 mar. 2018.
- WHITACKER, G. M. Sobre o discurso ideológico do desenvolvimento sustentável e a reprodução do modo capitalista de produção. **Boletim Goiano de Geografia**, Goiânia, v. 33, n. 1, p. 73-89, jan./abr. 2013. Available in: <<https://revistas.ufg.br/bgg/article/view/23633>>. Accessed in: 12 mar. 2018. <https://doi.org/10.5216/bgg.v33i1.23633>