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Ecopedagogy in education as the liberating praxis of modern society

Abstract. We consider the problems of anthropocentric pedagogical practices and propose the paradigm of ecological pedagogy (ecopedagogy) as a liberating praxis. It presents a reflection on the environmental crisis in the contemporary society and indicates conceptual ways to deal with the global problem created by modern industrial practices. In the context of European Renaissance, a new world view arose based on the heliocentric theory, while the ground of the anthropocentric science appeared. The Enlightenment was crucial in the battle against tyranny and oppression, but most (natural) philosophers committed their utopias to the development of science and technology for the sake of the economic progress of civilization. Since the 19th century, capitalism became a dominant socio-economical system with the planetary power for the exploitation and devastation of Nature. In the cultural environment of the industrial society, human conditions are modeled according to the anthropocentric pedagogy and the voluntary servitude. With these mechanisms of anthropocentrism and servitude, the modern society is posed to obliterate not only natural ecosystems, but also the First Nations. Ecopedagogy, as a liberating praxis, can become a fundamental tool for the ecological consciousness and for the formation of new society.

Keywords: anthropocentric pedagogy; ecopedagogy; industrial society; ecological catastrophe; anthropocene; biosphere; V. Vernadsky

Introduction: the socio-environmental crisis of modern society

The socio-environmental crisis provoked by the model of development of the contemporary modern society is one of the relentless realities of the 20th century. It is not necessary to be a scientist to perceive and feel the imminent reality of the climatic changes and their causes. We just observe the situation with natural ecosystems we live in: Where are the forests? Where is the wildlife? Where are the clean rivers? What are the life conditions in urban environment?

This study emphasizes the significance of the socio-environmental crisis of the modern society and suggests some conceptual ways to face 'the Pandora's box' opened by the capitalist spirit. This paper proposes ecopedagogy as an educational paradigm for the practice of freedom. The

basic assumptions that explain the production of the imbalance of the planetary ecological system can be connected to some historical events.

The Copernican revolution and the Cartesian and Baconian paradigms

Nicolaus Copernicus created initial conditions for the infinite, universal cosmological paradigm and provoked the organization of the new hierarchy that redefined the place of mankind, institutions, and nature in the new world order. Francis Bacon projected the utopia of technological science and developed dominant principles of the scientific method. From the beginning, he conceived the desire for knowledge and for the power over nature. René Descartes provided the metaphor of the machine universe and reduced the complex reality of an ecological system to a mechanical system similar to a man-made clock apparatus (Capra, 1984). In the context of the creation of this mechanical cosmology the 16-17 centuries, there are at least two historical events that contributed to consolidation of the new paradigm: the emergence of the Renaissance and the politics of the absolutist state. The former provided ideological elements for strengthening of the anthropocentric culture, while the latter offered an objective and material conditions for the conquest of the New World.

The dialectics of Enlightenment

In the 18th century, the Enlightenment movement was fundamental for facing the tyranny and oppression, for consolidating the ideals of freedom, equality, and justice developed by the society. However, the dialectics of Enlightenment also produced the darkness and obscurity (Adorno, 1997). Most philosophers of the Enlightenment built their utopias based the development of science and technology for the sake of the economic progress. Rousseau (1762; 1754; 1750) was one of the uncongenial voices. He identified the corrupting dimension of the science development and wondered about the meaning of human progress. Rousseau reflected on the desire of a civilized man for domination and domestication by arguing that this man does not want the natural, not even himself, for the civilized man can only think of nature as domesticated, as a tamed horse or a tree in a garden (Rousseau, 1762).

Industrial Revolution and capitalism

Since the 19th century, capitalism has become the dominating system of the social organization and production of material and symbolic goods. The Industrial Revolution emerged and developed under the impulse of the capitalist spirit. In this context, the sense of modernity received more visibility, as far as the industrial society completely changed the traditional way of life and inaugurated the era of technological civilization. Under the rule of the capitalist society, the logic of capital intrudes and the whole meaning of life is reduced to the commodity and consumption. In the capitalist cultural environment, the “normal subject” is a consumer and nature is reduced to a mere set of “natural resources” to be explored in order to feed the irrationality of permanent economic growth. While in the other ages and places the historical evidence reveals the existence of great civilizations that expanded their empires over vast neighboring territories, in the globalized world of the 21st century the capitalist empire reached the entire planet. Since the 19th century we are directly or indirectly contributing to the “creative destruction of the Earth”. That is, the modern society is systematically devastating all the ecosystems on the planet and setting up the artificial nature, modeled according to the interests and needs of the modern human beings (Harvey, 2011).

Anthropocentric pedagogy and voluntary servitude

The anthropocentric pedagogy is omnipresent in modern education. This is a pedagogical action that teaches the anthropocentric world view (Felipe, 2009; Singer, 2010). Thus teaching practice represents the human species as the most superior and rational, it teaches that the world was created in order to be dominated and governed by man. In the capitalist society, the anthropocentric pedagogy has the invaluable support of the “voluntary servitude” (Boetie, 1997). Boétie asks: Why millions of the inhabitants of the population subdue to the power of a tyrant? The “wish of serving”, comments Unger (2001, p. 32-33), “dissimulates the wish of participating in tyranny, of also being a tyrant”. Servitude, stresses Unger, “is based on the excessive, undue wish of, arising above the others, possessing and controlling everything”. Compared to other civilizations that try to control *hubris*¹, “dominating and controlling all that exists, breaking with the cosmopolitan dimension of man, searching more and more power over nature, over everything and everybody, that is, valuing anthropomorphism, this is the axis around which we gravitate as civilization” (Unger, 2001, p. 33). In the context of the absolutist monarchy the “voluntary servitude” comes into being in the relationship with the tyrant king. In the bourgeois republic, servitude is realized with the internalization of the capitalist society values, which glorify economic progress, servile work, and consumption.² Adorno (2000; 1997) dealt with the problem of servitude by reflecting on the alienating devices of the mass culture industry in the society. H. Arendt (1998; 1968) approached the problem of the servile violence rationally planned by the educated citizens socially well positioned, with the support and complicity of the majority of the population. Paulo Freire (1994) discussed the problem of servitude reflecting on the contradictions of the relationship between the oppressors and the oppressed. For Freire, the relation ‘oppressor-oppressed’ is characterized by the use of power that dehumanizes both the oppressor and the oppressed. He affirms that no man can free himself, but only the oppressed have the conditions to set free both from this dehumanizing system. In his book *Pedagogia do Oprimido* (1994), Freire says that the first pedagogical action of the liberation is to create conditions for the oppressed to discover how they “lodge” the oppressor.

The great problem is how the oppressed, who “lodge” the oppressor in themselves, could participate in the elaboration of the pedagogy of their liberation. As soon as they discover that they are lodgers of the oppressor, they can contribute to the birth of their liberating pedagogy. While they still experience duality in resembling the oppressor, it is impossible for them to succeed. The pedagogy of the oppressed constitutes one of the instruments for the discovery of the oppressed the manifestations of dehumanization (Freire, 1994).

Banality of the evil and the “final solution” for Nature

After the tragic experience of Nazism, Hannah Arendt (1998; 1968) turned to the study of this human condition and asked: “What are we doing?” In her study, the most shocking finding was that the Nazi violence was not the work of pathological individuals, who felt pleasure in exterminating people. The ‘final solution’ (extermination) of the ethnicities deemed ‘inferior’ and the society stratas considered ‘a burden’, was thought and planned by normal and well established people of the Nazi state’s society, by the legal authorities, military and civil servants. How the legitimization of the Nazi violence became possible? For Arendt, the banality of the violence grew and spread in the culturally impoverished environment, in which people lost the capacity for

¹ Greek word that characterizes what goes beyond the measure, like excessive violence, arrogance, pride, among other aspects of the human behavior. *Hubris*, according to Unger (2001, p. 37), “indicates disproportion and transgression, for it is the human aspiration to be like gods”.

² In the academic context and in the scientific community, servitude is seen in the subservience to the economic and political power, productivity of scientific publications attending to the international ranking statistics only and in the attitudes of alienation or indifference to the sociology-environmental reality of the contemporary world.

reflection, lost or never had understanding of the free, dignified, equal human conditions. Regretfully in many countries, similar ‘final solutions’ were planned for the pristine forests and with their animals as well as for the indigenous peoples. This inhuman practice has been condemned and banned in regards to humans, but it still persists, even though at the lower level, in regards to the nature. Only the spiritually healthy and well educated individuals can be the liberated subjects of the modern society, and the spiritual world of an individual is created primarily through education (Guseva and Buzunova, 2014). Therefore, we are compelled to focus on the education as a primary way in forming the society that can save itself and the planet.

Ecopedagogy as the liberating praxis

In the industrialist environment, school was designed to serve the predominant interests of the consumption and the labor market. The students (children and adolescents) used to learn and assimilate the dominant values of the anthropocentric culture and were ecologically illiterate. The school system together with the local communities and independent organizations started to organize the ecological education within and outside the formal teaching system.

What does it mean to understand the ecopedagogy as the liberating practice? It means developing a pedagogical theory that starts with reforming the thought (Gadotti, 2000). It means adopting the Gaia hypothesis as a new paradigm. This is it, understanding the planet Earth as a living, complex, and ecologically balanced super-organism (Lovelock, 2000; Gadotti, 2000; Carola, 2010). Ecopedagogy as the practice of freedom understands Nature as the master that has experience and wisdom about the most important things in life. It teaches us a new identity, the identity of a planetary being, the inhabitant of Gaia (Gadotti, 2000; Schneider and Boston, 1991). Ecopedagogy is based on the ecological science in order to develop the ecological literacy teaching. The educational practices are developed in the direct contact with the natural environment, as proposed by Rousseau in “*Emile, or On Education*” (Carola, 2010). In its pedagogical praxis, the ecopedagogy promotes “conscientiousness” (Freire, 2008), which means the consciousness that teaches us that human beings are free subjects (neither objects, nor colonizers) that share and take care of the world together with all forms of life on the planet (Palmer, 1998). It means developing the “ecological conscientiousness” in order to escape from the anthropocentric colonizer that abides us.

The modern condition of our planet can be described as the biosphere, where all components of life, including humans, are interrelated and interdependent. This was envisioned and predicted by the great Russian scientist and philosopher Vladimir Vernadsky (Vernadsky, 2007). Let us exemplify the concept of biosphere. The first revolutionary act was to recognize that Earth is a self-contained sphere that inevitably brought up the realization of limited resources available for the growing human race. In the concepts of Vernadsky, the life is the geological force of the planetary scale. All geological features on the surface of Earth are affected by the life; therefore, they are parts of the biosphere. The influence of living matter is only getting more intensive with time. The rate of the use of chemicals by living matter is ever increasing, and more and more parts of Earth are being incorporated into the biosphere.

Currently, it is generally accepted by the scientific community that the humankind entered the age of Anthropocene (Steffen, 2011). This is the geological epoch when human activities play the global role on the planet. This is it, humans are shaping the mere world we live in, and people’s actions are comparable to those of the forces of nature. In order to deal with this fact we have to adjust not only industrial practices but also social, including educational, aspects of our society (Anderies, 2015).

Eco-education in Canada

In the view of the general concepts above, let us consider the example of environmental education of school students in the province of British Columbia (BC), Canada. Canada maintains the leadership among industrialized countries in protecting the Nature and environment. This is reflected in a significantly higher level of environmental education. The province of British Columbia in Canada is especially well known for its environmental activities. Even though there is no special course at schools on environmental education, it is integrated into all subjects taught at elementary and secondary school, from Science to English language. Teachers in Canada usually have significant freedom to shape courses they teach, so the provincial Ministry of Education only issues a guide leaving the details up to teachers (MEBC, 2007). School students are taught seeing the Nature's beauty, understanding the importance of sustainability and reducing of the pollution.

The ability to see the beauty of the Nature causes the inner desire to preserve it unspoiled. These feelings can be nurtured in the classroom and extracurricular activities. One of the methods to enrich and educate young children about the environment conservation is to teach them depicting the Nature at the arts lessons in public and special schools (Guseva and Maljuk, 2015).

British Columbia is famous for its wild and unspoiled nature. Its mountains, forests and rivers are full with wildlife. Since cities are literally surrounded by forested mountains, special type of environmental education is required. Raccoons, coyotes and black bears regularly come to city parks and house backyards. For personal safety and in order to keep the wildlife wild, people should not attract animals to their houses. Children are instructed how to behave when encountering animals, not to feed any animals, even squirrels. All garbage, because it attracts wildlife, should be disposed of properly to the special bear-proof containers.

In Canada, it is also common for parents and schools organize outdoor adventure trips for children (Henderson and Potter, 2001). Such trips can be daylong or overnight. This is an opportunity to show children the world outside the walls. Depending on the level of preparation, the trips are accompanied by short excursions with environmental discussions. They teach kids how to live in harmony with nature.

In BC, there are many environmental organizations beyond the schools. Enough to say that the grassroot movement 'Greenpeace' began in Vancouver in 1969 from the first mass protest against the nuclear bomb test in the Pacific. There is also another known organization, David Suzuki Foundation (DSF). Dr. David Suzuki is a renowned biologist who was a professor of the University of British Columbia before becoming an environmental activist. He is a prolific author of popular articles and many books about the nature and the protection of the nature, as well as a broadcaster. DSF was founded with the goal of educating people about environmental issues and protecting the environment. Therefore, education is one of the core directions of the David Suzuki Foundation. One public initiative introduced by the Foundation is called "Nature Challenge". This is a set of specific and practical actions that anyone can undertake in order to reduce environmental pollution and energy consumption. A person should take these obligations and fulfill them.

The BC organization called "EcoEducation BC" was founded in 1990, and it had its goal of the reduction waste amount in BC cities. With the time it became mainly education focused. "EcoEducation BC" prepares and conducts workshops at provincial school on topics ranging from grizzly bears to waste reduction. Saving the population of grizzly bears is one of the province's problems, since its mountains present the habitat of this endangered species. Children are explained how human activity such as logging, farming, and construction threatens the grizzlies by destroying this habitat. Following the BC government guidelines, "EcoEducation BC" develops its curriculum by separating educational materials to different school subjects, while keeping the integrated view of the topic. Workshops have the range of activities from slide shows and games to story telling and

theatre. EcoEducation created on its Web site interactive quizzes that educate kids on every day life situations with the impact on our environment. The most recent activity is the 'BC Green Games' as the province-wide competition for K-12 school students from kindergarten to grade 12 (K-12) in British Columbia. As a result of these combined efforts, young Canadians of this West coast land grow up environmentally conscious and pro-active in saving our planet for future generations.

The theme of the colonization that in North America was accompanied by the large decline in population of the First Nations (Aboriginal People) is used to be one of the 'dark pages' of history. Without fully revealing the truth about them and reflecting on how colonization affected the modern society is crucial for liberating the generation of young people in Canada (Henry, 2014). This process has been going for decades. Its positive effects can be seen in the harmonization of the multicultural Canadian society.

REFERENCES

1. Anderies, J.M. Managing variance: Key policy challenges for the Anthropocene // Proc. Natl. Acad. Sci. USA, v. 112, n. 47, pp. 14402-14403, 2015.
2. Adorno, T.W. Educação e emancipação // São Paulo: Paz e Terra, 2000.
3. Adorno T.W. Dialectic Of Enlightenment // USA: Verso Press, 1997.
4. Arendt, H. The Human Condition. 2nd ed. // Chicago: University of Chicago Press, 1998.
5. Arendt, H. Eichmann in Jerusalem: A Report on the Banality of Evil // New York: Viking, 1968.
6. Boétie, É.L. The Politics of Obedience: The Discourse of Voluntary Servitude // Montréal / New York / London: Black Rose Books, 1997. <https://mises.org/rothbard/boetie.pdf>.
7. Capra, F. The Turning Point: Science, Society, and the Rising Culture // New York: Bantam, 1984.
8. Carola, C.R. História, Ciência e Educação Ambiental: Contribuição para uma Proposta Educacional para Sensibilidade Ecológica // Revista Eletrônica do Mestrado em Educação Ambiental da Universidade Federal do Rio Grande, Rio Grande-RS, FURG/PPGEA, v. 25, p. 79-94, jul. / dez. 2010.
9. Felipe, S.T. Antropocentrismo, sencientismo e biocentrismo: perspectiva éticas abolicionistas, bem-estaristas e conservadoras e o estatuto de animais não-humanos // Revista Páginas de Filosofia, n. 1, jan. / jul. 2009. <https://www.metodista.br/revistas/revistas-ims/index.php/PF/article/viewFile/864/1168>. Acesso em 10 abr. 2014.
10. Freire, P. Pedagogia do oprimido. 17. ed./23. reimpressão. Rio de Janeiro: Paz e Terra, 1994.
11. Freire, P. Conscientização: teoria e prática da libertação. 3. ed./2. reimpressão. São Paulo: Centauro, 2008.
12. Freire, P. Educação como prática da liberdade. 32. reimpressão. Rio de Janeiro: Paz e Terra, 2009.
13. Gadotti, M. Pedagogia da terra. São Paulo: Petrópolis, 2000.
14. Guseva, L.G. and Buzunova, L.G. Education and spiritual world as a basis for the healthy life strategy. In: "Social sciences and public health: theoretical approaches, empirical researches, practical decisions" // Prague: Sociosfera-CZ, pp. 42-49, 2014.

15. Guseva, L.G. and Malyuk, O.A. The arts and the ecological education of younger students. In: Kolokoltsev, V.M. (ed.), "The actual problems of modern science, technology and education. The Proceedings of the 73rd international conference" // Magnitogorsk: NMSTU Press, 2015. V.3. – 162 pp., pp. 77-80.
16. Harvey, D. The Enigma of Capital And the Crises of Capitalism // Oxford: Oxford University Press, 2011.
17. Henderson, B. and Potter, T. Outdoor Adventure Education in Canada : Seeking the Country Way Back In // Canadian Journal of Environmental Education, v. 6, n. 1, pp. 225-242, 2001.
18. Henry, E.R. A Search for Decolonizing Place-Based Pedagogies: An Exploration of Unheard Histories in Kitsilano Vancouver, B.C. // Canadian Journal of Environmental Education, v. 19, pp. 18-30, 2014.
19. Leff, H. Racionalidade ambiental: a reapropriação social da natureza // Rio de Janeiro: Civilização Brasileira, 2006.
20. Lovelock, J. Gaia: a New Look at Life on Earth // Oxford: Oxford University Press, 2000.
21. MEBC (Ministry of Education of British Columbia), Canada. Environmental Learning and Experience: An Interdisciplinary Guide for Teachers // Victoria, BC: Provincial government, 2007. http://www2.gov.bc.ca/assets/gov/education/kindergarten-to-grade-12/teach/teaching-tools/environmental-learning/enviro_learning_exper.pdf
22. Palmer, J.A., Environmental Education in the 21st Century: Theory, Practice, Progress and Promise // UK: Routledge, 1998.
23. Rousseau, J.-J. Emile, or On Education // 1762. <http://oll.libertyfund.org/titles/rousseau-emile-or-education>
24. Rousseau, J.-J. The Social Contract, or Principles of Political Right // 1762. <http://www.gutenberg.org/ebooks/46333>
25. Rousseau, J.-J. A Discourse Upon the Origin and the Foundation Of The Inequality Among Mankind // 1754. <http://www.constitution.org/jjr/ineq.htm>
26. Rousseau, J.-J. A Discourse on the Moral Effects of the Arts and Sciences // 1750. <http://oll.libertyfund.org/titles/638/71079>
27. Schneider, S.H. and Boston, P.J. (eds.) Scientists on Gaia // Cambridge, MA, USA: MIT Press, 1991.
28. Singer, P. Liberdade animal // São Paulo: Martins Fontes, 2010.
29. Steffen, W., Grinevald, J., Crutzen, P. and McNeill, J., The Anthropocene: conceptual and historical perspectives // Phil. Trans. R. Soc. A, v. 369, 842, 2011.
30. Stone, M.K., Barlow, Z. (eds) Alfabetização ecológica: a educação das crianças para um mundo sustentável // São Paulo: Cultrix, 2008.
31. Unger, N.M. Da foz à nascente: o recado do rio // São Paulo: Cortez; Campinas, SP: Editora Unicamp, 2001.
32. Vernadsky, V.I. Geochemistry and the Biosphere // Sante Fe, NM: Synergetic Press, 2007.

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Экопедагогика в современном образовании как средство создания свободного общества

Аннотация. Рассмотрены проблемы антропоцентрической направленности педагогической практики и предложено сменить ее парадигму на экологическую педагогику (экопедагогику). Эта парадигма представляет собой отражение экологического кризиса в современном обществе и позволит адекватно решать глобальные проблемы индустриального общества. В контексте европейского Возрождения, новый взгляд на мир возник на основе гелиоцентрической теории, явившейся основой современной антропоцентрической науки. В 18-ом веке Просвещение имело решающее значение в борьбе против угнетения, но философы того времени создали социальные теории в согласии с идеалами развития науки и техники на благо экономического прогресса цивилизации. Начиная с 19-го века, капитализм стал доминирующей социально-экономической системой на планете, созданной для эксплуатации человека и природы. В индустриальном обществе образование было смоделировано в соответствии с императивами антропоцентрической педагогики. Научно-техническое развитие породило антропоцентризм и обрекло на исчезновение биологические экосистемы. Сейчас человечество живет в эпоху антропоцена. Это современное состояние, когда человек стал силой, меняющей биологический и геологический мир планеты Земля, было предвидено и описано В. Вернадским. Одним из возможных средств сохранения Земли, как ареала человека, может стать экологическая педагогика (экопедагогика), призванная формировать экологическое сознание субъектов общества.

Ключевые слова: антропоцентрическая педагогика; индустриальное общество; экопедагогика; экологическая катастрофа; антропоцен; биосфера; В. Вернадский

ЛИТЕРАТУРА

1. Anderies, J.M. Managing variance: Key policy challenges for the Anthropocene // Proc. Natl. Acad. Sci. USA, v. 112, n. 47, pp. 14402-14403, 2015.
2. Adorno, T.W. Educação e emancipação // São Paulo: Paz e Terra, 2000.
3. Adorno T.W. Dialectic Of Enlightenment // USA: Verso Press, 1997.
4. Arendt, H. The Human Condition. 2nd ed. // Chicago: University of Chicago Press, 1998.
5. Arendt, H. Eichmann in Jerusalem: A Report on the Banality of Evil // New York: Viking, 1968.
6. Boétie, É.L. The Politics of Obedience: The Discourse of Voluntary Servitude // Montréal/New York/London: Black Rose Books, 1997. <https://mises.org/rothbard/boetie.pdf>.
7. Capra, F. The Turning Point: Science, Society, and the Rising Culture // New York: Bantam, 1984.
8. Carola, C.R. História, Ciência e Educação Ambiental: Contribuição para uma Proposta Educacional para Sensibilidade Ecológica // Revista Eletrônica do Mestrado em Educação Ambiental da Universidade Federal do Rio Grande, Rio Grande-RS, FURG/PPGEA, v. 25, p. 79-94, jul. / dez. 2010.
9. Felipe, S.T. Antropocentrismo, sencientismo e biocentrismo: perspectiva éticas abolicionistas, bem-estaristas e conservadoras e o estatuto de animais não-humanos // Revista Páginas de Filosofia, n. 1, jan. / jul. 2009. <https://www.metodista.br/revistas/revistas-ims/index.php/PF/article/viewFile/864/1168>. Acesso em 10 abr. 2014.
10. Freire, P. Pedagogia do oprimido. 17. ed. / 23. reimpressão. Rio de Janeiro: Paz e Terra, 1994.
11. Freire, P. Conscientização: teoria e prática da libertação. 3. ed. / 2. reimpressão. São Paulo: Centauro, 2008.
12. Freire, P. Educação como prática da liberdade. 32. reimpressão. Rio de Janeiro: Paz e Terra, 2009.
13. Gadotti, M. Pedagogia da terra. São Paulo: Petrópolis, 2000.
14. Гусева Л.Г., Бузунова Л.Г. Образованность и духовный мир человека как основа его здоровой жизненной стратегии / Social sciences and public health: theoretical approaches, empirical researches, practical decisions: materials of the IV International scientific conference on April 20-21, 2014. – Prague: Vedecko vydavatelske centrum «Sociosfera-CZ». - 124 p. - ISBN 978-80-87966-24-2. pp. 42-49.
15. Гусева Л.Г., Малюк, О.А. Изобразительная деятельность и экологическое воспитание младших школьников. / Актуальные проблемы современной науки, техники и образования / Материалы 73-ей международной научно-технической конференции. // под ред. В.М. Колокольцева. Магнитогорск : Изд-во Магнитогорск. гос. техн. ун-та им. Г.И. Носова , 2015. Т.3. – 162 с. С.77-80.
16. Harvey, D. The Enigma of Capital And the Crises of Capitalism // Oxford: Oxford University Press, 2011.

17. Henderson, B. and Potter, T. Outdoor Adventure Education in Canada : Seeking the Country Way Back In // Canadian Journal of Environmental Education, v. 6, n. 1, pp. 225-242, 2001.
18. Henry, E.R. A Search for Decolonizing Place-Based Pedagogies: An Exploration of Unheard Histories in Kitsilano Vancouver, B.C. // Canadian Journal of Environmental Education, v. 19, pp. 18-30, 2014.
19. Leff, H. Racionalidade ambiental: a reapropriação social da natureza // Rio de Janeiro: Civilização Brasileira, 2006.
20. Lovelock, J. Gaia: a New Look at Life on Earth // Oxford: Oxford University Press, 2000.
21. MEBC (Ministry of Education of British Columbia), Canada. Environmental Learning and Experience: An Interdisciplinary Guide for Teachers // Victoria, BC: Provincial government, 2007. http://www2.gov.bc.ca/assets/gov/education/kindergarten-to-grade-12/teach/teaching-tools/environmental-learning/enviro_learning_exper.pdf
22. Palmer, J.A., Environmental Education in the 21st Century: Theory, Practice, Progress and Promise // UK: Routledge, 1998.
23. Руссо, Ж.-Ж. Эмиль, или О воспитании // 1762. <http://oll.libertyfund.org/titles/rousseau-emile-or-education>
24. Руссо, Ж.-Ж. Об общественном договоре // 1762. <http://www.gutenberg.org/ebooks/46333>
25. Руссо, Ж.-Ж. О происхождении неравенства // 1754. <http://www.constitution.org/jjr/ineq.htm>
26. Руссо, Ж.-Ж. Беседа на Моральных Эффектах Искусств и Наук // 1750. <http://oll.libertyfund.org/titles/638/71079>
27. Schneider, S.H. and Boston, P.J. (eds.) Scientists on Gaia // Cambridge, MA, USA: MIT Press, 1991.
28. Singer, P. Liberdade animal // São Paulo: Martins Fontes, 2010.
29. Steffen, W., Grinevald, J., Crutzen, P. and McNeill, J., The Anthropocene: conceptual and historical perspectives // Phil. Trans. R. Soc. A, v. 369, 842, 2011.
30. Stone, M.K., Barlow, Z. (eds) Alfabetização ecológica: a educação das crianças para um mundo sustentável // São Paulo: Cultrix, 2008.
31. Unger, N.M. Da foz à nascente: o recado do rio // São Paulo: Cortez; Campinas, SP: Editora Unicamp, 2001.
32. Вернадский, В. И. Биосфера и ноосфера // М.: Айрис-пресс, 2012.