Chapter 100

The cosmology of transformation as a new ethical-environmental paradigm in Leonardo Boff

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ABSTRACT
This work deals with the third phase of the production of the philosopher and theologian Leonardo Boff, located from 1990, characterized by its change to the ethical-ecological paradigm, or cosmology of transformation as an element of proposal of a world ethos, focusing on the context in which such change occurs. The proposal to create a world ethos will be explained in the works of the thinker Leonardo Boff, in which the author advocates a minimum planetary consensus among humans, in order to combat not only the social injustices, historically defended by liberation theology, but expanding the struggle, by prioritizing the defense of all forms of life, more precisely the defense of Mother Earth (Gaia) and its ecosystem, deciphering and combating the relationship of exploitation and degradation of the poorest and the environment. The study focuses on the context in which Leonardo Boff makes the shift to the ethical-ecological paradigm; in the analysis of what the ethical-ecological paradigm consists of Boff's thinking; and finally, in the essence of the ethical-ecological paradigm, which he will also call the Cosmology of Transformation, as a proposal of universal ethics, materialized mainly, according to him, in the proposals of the Earth Charter. As a methodology, we seek to analyze the works of Leonardo Boff, from the 1990s; briefly discuss the concept of paradigm; its first two phases of intellectual production are briefly addressed; we study the change to the ecological paradigm in Leonardo Boff's thinking; it is explained how liberation theology has been reformulated and expanded, unfolding and influencing the new ecological paradigm; the theoretical bases and influences as well as the characteristics of the new ecological paradigm in Leonardo Boff are observed. It is verified the presence of the two antagonistic ethical projects of contemporaneity, that is, the Western paradigm called by Boff of cosmology of domination, of linear anthropocentric characteristic, reductionist, based on instrumental reason, which submits nature and destroys it indiscriminately, in contrast to the new ecological paradigm, or cosmology of transformation, of holistic characteristic. The paths and practices of the current ecology are observed: environmental, political and social ecology, mental and integral. It also analyzes the ethics of essential care, poetically described in the fable-myth of care, which are embodied in the Earth Charter. It deepens in the various elements that will constitute its proposal of world ethos: (1) sustainability; (2) Boff's scathing criticism of the capitalist system; (3) the description of the incompatibility of capitalism and ecology; (4) Capitalism, which is self-destructive, suicidal, and may also be ecocidal and biocide; (5) its alternative to capitalism, ecosocialism, or "solar communism".

Keywords: Boff, Cosmology of Transformation, Earth Charter.

1 INTRODUCTION

Considered the greatest living Brazilian intellectual, Genézio Darcy Boff – traditionally known by the name of Leonardo – has written more than 80 books throughout an intense and prolific theological, philosophical and academic career. He is a consecrated author, but also a religious whose importance in Latin American theological thought must remain for decades to come.

It is his own the masterpiece Jesus Christ Liberator (BOFF, 1972), a milestone in the establishment of the so-called Liberation Theology, a genuinely Latin American theological movement that acquired a
profound influence on Christian thought from the 1970s onwards, based on the seminal work of theologians such as Boff himself and as Gustavo Gutierrez, Juan Luis Segundo, José Comblin, Hugo Assman and Rubem Alves, mainly.

But Leonardo has changed. In spite of being recognized by much of the intellectuality as an active theologian, the acidic and harsh stance that the Vatican began to adopt on him and his work from the mid-1980s was acquiring such conformation that he finally came to distance himself from the Catholic Church from 1992 and has since taken on the challenge of building a new set of propositions and theories in the field philosophy and more specifically ethics, which catapulted him as a new defender of a paradigm that reconciles the existence of humanity on planet Earth without having to destroy and exhaust the environment.¹

In the last twenty years, Leonardo has produced a vast literature related to the ecological issue and related topics, such as planetary ethics; coming in his most recent works to propose what he calls the "new World Ethos", or Civilizing Paradigm, also called the "Ecological Paradigm", or more recently "Cosmology of Transformation", in which humanity no longer establishes relations of exploration with nature or with other human beings.

Among the main works of this phase, the following stand out: Ecology, Globalization and Spirituality: the emergence of a new paradigm (1993), Dignitas Terrae - Ecology: cry of the Earth, cry of the poor (1995), Knowing - ethics of the human: compassion for the earth (1999), Ethos consensus among humans (2003); Caring for the Earth, protecting life: how to avoid the end of the world (2010); The Tao da Liberation: exploring the ecology of transformation (2012a); Sustainability: what is – what is not (2012b) and finally, The Four Ecologies (2012c).

This article - presented partially at the VI Seminar on Research and Extension of the Extreme South of Bahia, in 2012; and at the VIII North Northeast Congress of Research and Innovation, in 2013 – aims to present, in the context in which Leonardo Boff makes the change from Liberation Theology to the Ethical-Ecological Paradigm, an analysis of what Boff thinks this paradigm, called cosmology of transformation, as a proposal of universal ethics materialized mainly in the proposals of the Earth Charter.²

The text is divided into five sections, the first this introduction, the second containing a brief analysis of the ethical-ecological paradigm in Leonardo Boff, soon after the third in which it is the World Ethos as an Ethical Proposal, followed by the final considerations and, finally, by the references.

¹ Boff argues that the 1982 publication of his book *Church: charism and power*, in which he applied the conceptions of Liberation Theology to the internal conditions of the Church, it was the fuse that led him to be prosecuted by the congregation of the doctrine of the faith, and finally brought his condemnation to obsequious silence, to intervention in the publishing house Vozes, and even to the burning of books of liberation theology, at which time the persecutions of Boff became unbearable, and he asked for officially dispensation from the church (BOFF, 1998).

² Document of great historical relevance, compared to the UN Universal Declaration of Human Rights of 1948. Leonardo Boff was a Brazilian representative on the committee of notables that drafted him.
2 THE ETHICAL-ECOLOGICAL PARADIGM IN LEONARDO BOFF

Initially, here is a contradiction of substantive importance in boffinian environmental discourse, the basic difference between ethics and morals, which for the author lies in the fact that the former is part of Philosophy, while the second is part of concrete life. If, on the one hand, ethics considers fundamental conceptions about life, the universe and the human being to stact principles and values that guide people and human groups, morals, on the other hand, is founded on nothing more than culturally established customs, habits and values (BOFF, 2009).

Leonardo Boff departs from the two original meanings of the word ethos (from ancient Greece) to point out the differences between ethos and ethics. The Greeks wrote the word in two different ways, "ethos" with the "eta" (and long), meaning the human abode and also character, mode, being and profile of a person; and "ethos" with "epsilon" (and short), meaning customs, habits, habits and traditions (BOFF, 2009).

Boff states that today there is a powerful return to nature and the universal logos, which he calls a new ecological paradigm, paradigm of cosmology or cosmology of transformation – conceptions thought of in the horizon of new knowledge accumulated by earth sciences and ecology (BOFF, 2003).

From the analysis of Boffinian perceptions, it is observed that the origin of the problems and crises arising from the current civilizational model based on liberal capitalism, consumerism and unbridled individualism, is that this entire economic system survives exclusively at the expense of the systematic and virulent exploitation of the poor and nature (BOFF, 2010).

In fact, recent data from the United Nations Environment Programme (UN/UN, 2010) warn of an almost complete depletion of natural resources found on planet Earth in the coming decades, as the human race, with its seven billion members in 2015, has so far knocked out half of the existing forests in the 1950s and will have until the 2030s extinguished from the earth's mineral crust vital for the current capitalist industrial production mode, such as copper, bauxite, zinc, phosphorus and chromium, in addition to oil that according to the same estimate will last a maximum of 40 years (UN, 2010).

Also in this line, according to UN/UN, more than 70% of the grains produced worldwide are used to feed beef animals such as pigs, poultry and cattle, and not to feed men (UN, 2010), aggravating the aforementioned depletion through the artificial decrease in food supply and the reduction in the availability of arable land. The scarcity of vital natural resources is also associated with an unprecedented increase in the disposal of human waste in nature, and only the population living in the world's major cities generates 2.2 billion tons of solid waste annually – a direct result of the capitalist mode of production that uses natural resources intensively and stimulates exacerbated consumption – in addition to waste discarded by billions of rural residents (UN, 2010).

Gaia - Mother Earth calls for help. Pollution of large urban centers, lack of basic sanitation in emerging countries, rampant deforestation, incessant burning, and frightening and continuous pollution of water resources are problems that are the source of the self-destructive and bankrupt model of industrial development that increasingly causes the increase in the greenhouse effect and climate change. According
to several researchers, this environmental crisis can cause, among other several problems, such as the scarcity of drinking water and food in a relatively short time.

In this scenario, according to Boff (2010) there are two wounds that burn: the sore of the immense poverty through which more than one billion people pass through, caused by the exploitation of the poor by the rich, and the countries underdeveloped by the developed, and the environmental wound by which hundreds of species are extinguished each year, caused by the exploitation of nature and life forms by the consumerist health of humanity (BOFF, 2010).

For Boff, this scenario is clearly founded on a cosmology that is about to be briefly overcome, what Boff calls the Cosmology of Domination, based on an anthropocentrism founded on the instrumental-analytical reason of mechanistic, deterministic, and materialistic cutting, and which relies on rationalist philosophers such as Descartes, Francis Bacon, etc., who see nature as an object of conquest and domination of man (BOFF, 2010).

According to Boff, this Cosmology of Domination will be dialectically replaced by the Cosmology of Transformation, founded on a post-anthropocentric, ethical-ecological paradigm in which nature appears no longer as an object, but as the same territory and fabric of man, but as his own home and matter from which he draws his sustenance, and the beings of nature – plants and animals – appear no longer as objects of man, inferior to him, but rather as his planetary brethren (BOFF, 2003).

Boff thus shows the need to expand the conception of the term "ecology" to the urgent demands of the 21st century, and in this sense the author in his recent work "The Four Ecologies: Environmental, Political and Social, Mental and Integral (BOFF, 2012c)", points out new paths and practices of ecology.

According to Boff, in environmental ecology, in order to understand this concept, it is necessary to overcome the reductionist view on ecology and perceive a more integrative view of the entire environment, with its specificities and its biomes with its unique particularities, mainly that the planet Earth is a living superorganism (Gaia theory), which regulates itself since the anthropic action does not hinder Gaia, which is what is currently happening (BOFF, 2012c).

Thus, according to Boff, political and social ecology deals with social inequalities, the importance of sustainability, inclusion and social justice. Mental ecology addresses prejudice and aggressiveness towards nature and the importance of planetary consciousness for the preservation of all species. Integral ecology seeks to awaken in human beings the holistic and integrating worldview of the universe, and that the human being must awaken his consciousness for his mission of caring for the Earth, our common home (BOFF, 2012c).

For Boff, a new civilization is gradually beginning to chart a new civilizational paradigm, more focused on the benevolent dimensions of humanity towards Mother Earth and the poor. The human being begins to feel awakened and reconnected to the mystery that makes up the universe. The moment, according to Boff, is to join forces to find solutions (BOFF, 2003).
It is necessary, according to the author, the emergence of a planetary civilization, which prioritizes ethical principles and care relations for the whole cosmos. The ethics of essential care aims to rescue life and conceive broad justice for all victims of our current culture of violence, exclusion, domination and exploitation (BOFF, 1995).

The current situation will then be overcome by a new humanity, committed to building a new civilizational standard. Thus, the "ecological paradigm" beckons to a nobler destination of the human being and the planet Earth (BOFF, 1995).

Boff states, in this context, that the "phenomenon of Globalization and the corresponding planetary consciousness will give rise to this new civilizational paradigm" leading the planet to the Ecozoic Era (BOFF, 2002, p. 115).

The new paradigm will be characterized by a redefinition of the way of relating to nature and peoples, by a redefinition of human subjectivity and work; for, as planetary consciousness grows, there is also a growing conviction that the issue of the environment, ecology, is contextualized in everything, in public policies, industry, education and international policies. Due to the exhaustion of non-renewable resources, humanity will have to change its pattern of behavior towards nature or it will meet enormous cataclysms (BOFF, 1995).

For this reason, 21st century society will consume with more responsibility, constituting a new alliance of respect and devotion to nature (BOFF, 1995).

For Boff, the new development will be done with nature and not at the expense of it, as it has been for centuries.

Boff states:

There will be a global social pact between peoples, based on three fundamental values that all will assume: 1) safeguarding the conditions for the planet to continue to exist and co-evolve; 2) to guarantee the future of the human species as a whole and the conditions of its further development; 3) preserve perpetual peace among peoples as a means for the solution of all conflicts that will always exist (BOFF, 2002, p. 115).

Boff prevails the sense that, instead of dominating nature in this eternal relationship of exploration, humanity must place itself within nature in tune with it and always open to new transformations.

Moreover, there is also the sense that all nature constitutes an open system and that therefore it can always welcome new interactions and energy flows, unlike the closed view of anthropocentric modernity, which lives as in a walnut shell, closed in itself and immune to external influences, therefore, universal dialogue (BOFF, 2003).

The expression "ecozóIca" was created by two Americans, one Cosmologist Brian Swimme, and an anthropologist, Thomas Berry, co-authors of the most aforegone History of the Universe, according to Leonardo Boff. The Age Ecozoic is in this conception the culmination of the human age, of globalization whose basic characteristic lies in the new agreement of respect, veneration and mutual collaboration between Earth and Humanity. It's the age of integral ecology, hence the name ecozóIca. Humanity is now in a web of vital relationships of the co-responsible. After so many interventions in the rhythms of nature, without taking care of the with the harmful consequences, humanity finally gives itself that the revolution consists in preserving the most one can the legacy of nature and use it responsibly (BOFF, 2002).
According to the author, among other things, what would characterize this new cosmology of transformation would be "respect for every form of life and the dignity of nature and not its exploitation by humanity" (BOFF, 2003). In a point, "put care in the place of domination, to place spirituality as a data of human reality, and not just an expression of a religion" (BOFF, 2003).

3 THE WORLD ETHOS AS AN ETHICAL PROPOSAL

Initially, the common platform from which one can conceive, according to Boff, a first conception of the World Ethos, on which all humanity can dialogue, as in a great conversation, and understand itself in the emergence of the social, economic and environmental problems that are placed (BOFF, 2003).

In this sense, for Boff, such a platform makes it necessary to create an agreement with minimum ethical and moral requirements, aiming at a peaceful coexistence in order to preserve our planet and its rich biodiversity in order to guarantee a future for all (BOFF, 2003).

Boff also presents the concept of "true sustainability" as an ethical proposal. He exposes his criticism of the capitalist system, which, according to the author, is incompatible with ecology and sustainability, and can be "ecocided" and "biocided" (BOFF, 2010). He reviews his alternative proposal to the predatory capitalist system, called "Ecosocialism" in the same direction as Löwy (2005).

Boff exposes some forms of universalization of ethical discourse such as: social utilitarianism, the ethics of communicative discourse and justice, ethics based on nature, ethics rooted in the many and various religious traditions of humanity, ethics founded on the poor and the excluded, ethics founded on the dignity of the earth, Dignitas Terrae and finally an eco-centered ethic (BOFF, 2003).

Boff opts for the project of the Earth Charter as the guiding axis of his ethical project, using the principles and values of this project for the constitution of a world ethos, presenting some ethical projects of modernity, which served as a paradigm for centuries, criticizing the logocentrism of these models. Finally, according to this thinker, there is an ethos and many morals: the ethos is our mother Terra (Gaia) and the morals are the result of the development of distinct conviviality projects (BOFF, 2003).

It exposes how the Earth Charter can be considered and synthesized as the inspiring text of Leonardo Boff's ethical-universal-ecological project, called the "new ecological paradigm" or "Cosmology of Transformation", and how it presents itself as a necessary reflection and even indispensable to the coexistence between human beings and nature, towards the defense of Sustainability and the Great Mother Earth (BOFF, 2003).

It is noted, therefore, that Boff establishes objective criteria for the choice of Ethos that should govern socio-environmental coexistence in a truly sustainable way. This criterion, for him, is the poor, the oppressed and the cry of the earth (BOFF, 2003).

The author presents emphatic criticism, describing the incompatibility of the globalized capitalist system, which generates environmental destruction and promotes social injustice. And their concern with the design of alternatives that enable the stability of the Gaia system and, consequently, avoid more
cataclysms, enabling the move towards the true ideal of sustainability. Thus, Boff proposes a critical resumption of socialism, he called ecosocialism, which would propose harmony with Mother Earth and with all humanity (BOFF, 2010).

Boff says that between successes and mistakes, immense perplexities and discreet achievements, every ethical concern must give centrality to the common destiny of all who participate in the terrenal adventure, which means a simple participation in the mysterious sense of the whole universe of which humanity is inhabitant and also integral (BOFF, 2003).

The world ethos proposed by Leonardo Boff goes beyond the scope of merely human, to the planetary sphere, understood as the interrelated whole, having as virtue: the ethics of care (pathos). According to Boff, if life arose in the context of care, it is by care that it is maintained, reproduced and coevolving. And, as care also belongs to the minimum dimension of the human being, it "can serve as a minimum consensus, on which one can found a planetary ethics, ethics understandable by all, and feasible by all" (BOFF, 2003).

This care must be extended to all ecosystems, so that understanding, compassion and love for the Earth is practiced, conceived as "Gaia", "Magna Mater" or "Patchamama" of the Amerindians. And this must be done in such a way that, vitality, integrity, health and beauty can be ensured, because only care will preserve the sustainability of the Earth system in harmony with all life forms (BOFF, 2012b).

In this way, Boff himself concludes that the function of humanity is to be the gardener, to take care of the garden of Eden and to make it fruitful and beautiful. And the Earth Charter will awaken humanity, in due course, to the effectiveness and affectivity of this mission, very important, essential and urgent (BOFF, 2012b).

4 FINAL CONSIDERATIONS

This work aimed to show how Leonardo Boff proposes a universal ethics in order to establish a fraternal coexistence between man and nature. The main ethical problems faced in contemporary times and how they affect the planet Earth were addressed here in an initial way, putting humanity before an imminent socio-environmental catastrophe, which Boff calls "ecocidal".

Throughout the work, in the second section, some ethical issues were addressed in Leonardo Boff's view, initially the differences in the ethical and moral issue of this thinker, perceiving the two antagonistic ethical projects of contemporaneity.

The first ethical project is the Western paradigm, also called by Boff the "cosmology of domination", of linear anthropocentric, reductionist characteristic, based on instrumental reason, which submits nature and destroys it indiscriminately.

In contrast to the first ethical project, there is the new ecological paradigm, or cosmology of transformation, of holistic characteristic; where one perceives the relationship between nature and logos in contemporary ethics.
This is the post-anthropocentric paradigm, which will mark a new era, just as the anthropocentric paradigm has underscored the ideas and actions of men during the last five hundred years, after Descartes and Bacon's propositions.

The paths and practices of ecology were presented in the Boffinian route; eco-technology, eco-politics, social ecology, ecological ethics, mental ecology, eco-spirituality for the advancement of the ecological issue today, which were systematized in his recent work "The Four Ecologies" (BOFF, 2012c). We also addressed the ethics of essential care, poetically described in the "fable-myth of care", which is embodied in the Earth Charter (BOFF, 2012).

Also in section 2, it was seen that the basic difference between ethics and morals lies in the fact that the former is part of Philosophy, while the second is part of concrete life. If, on the one hand, ethics considers fundamental conceptions about life, the universe and the human being to state principles and values that guide people and human groups, morals, on the other hand, is based on culturally established customs, habits and values.

And other things, what would characterize the new cosmology of transformation would be "respect for every form of life and the dignity of nature and not its exploitation by humanity. In sum, putting care in the place of domination, placing spirituality as a data of human reality, and not just expression of a religion" (BOFF, 2012a).

Section three described the various elements that will constitute the proposal of "world ethos", dealing with sustainability and realizing that for Boff care and sustainability they go together and are inseparable because they support each other. In this section we analyzed Leonardo boff's blunt criticism of the capitalist system and, more specifically, the description of the incompatibility of capitalism and ecology, capitalism that is self-destructive, suicidal, and may also be ecocidal and biocidal. In this perspective, it is observed, as a natural and logical alternative to the capitalist system, for Boff, the "Ecosocialism", or "Solar Communism".

Finally, we have been concerned about Boff's proposal of world ethos, which is mainly centered on the ethics of care, formally expressed in the Earth Charter. This rescues the dimensions of pathos (structure of sensitivity) and care, with the proposal of true sustainability, based on Ecosocialism - an alternative to predatory capitalism.

It was noticed that Boff is a thinker rich in ideas and diverse influences, and that he demonstrates, in his intellectual activity, a certain practical intention. At various times, he points out the concern that his texts are inspiring a new position in front of the world.

This has as a consequence the use of a pleasant, clear and intelligible literary style to the general public. Such a style sometimes clearly prevails over the formal rigor of a conceptual structure along the lines of the traditional academic modus operandi. From the reading of Leonardo's works, a theologian and a philosopher sui generis were identified, who merges supposedly distinct fields with information and data.
from various other sciences, be it physics, quantum physics, geology, archaeology, history, political science, etc.

It was noticed that there is no linear architectural *strictu sensu* in Boffinian thought. In this trajectory, a certain prolixity was also perceived in some of the author's works, which is not a problem at all; in the case of an analysis of the third phase of the author, since it refers to innovative considerations and on current topics.

For this reason it was decided to use, also his last works published in 2012, in which it was noticed certain considerations, which lead to a sintering, a bottleneck and, consequently, a greater clarity of his thinking, in his third phase.

Thus, it is perceived that the author is situated in a teleological and universalist perspective, but that, at the same time, he is a philosopher of praxis, that is, an adept of the Marxiological tradition⁴.

In a period like this, taken by the lack of concrete postures of the authorities in the face of the environmental and social crises that arise. In addition to the possibility of political setback and loss of social rights, Boff's thinking is a light that can guide ideas and, especially, practices. We tried to demonstrate the central aspects of Leonardo Boff's thought, under a philosophical background. Boff is, in this understanding, one of the Brazilian thinkers who most enriches the people of knowledge, for being thought provoking and current. And the breadth of his open, free, dialoguing and plural thinking, a precious tool for analysis and action in the world of the 21st century.

As Libanio (2008, p.9) states in his article "Leonardo Boff's Thought", he is among today's thinkers "for his volcanic personality" and concludes that it is a "difficult task to critically fly over Leonardo's monumental work, which covers an arc of more than 30 years with consistent texts".

Despite the serious problems and challenges facing humanity today, this malaise in civilization will pass, according to Boff, thus prevailing the common sense and survival instinct of *homo sapiens demens*. Common sense that will call into check the modern paradigm of domination and destruction of nature and humanity, thus enabling its replacement by the paradigm of care and planetary responsibility for all forms of life.

It is concluded here that for Boff men are originally beings of cooperation, solidarity and that, with environmental awareness and unity, the current serious crisis that is configured will be overcome. This is because, increasingly, research shows that people believe in this maxim and, thus, slowly, the new ecological paradigm described by Boff, although not fully, is being constituted step by step. It is still being developed and will be configured towards the "ecozoic era", which will be characterized by the fact that all human efforts in science, politics, economics and the arts should be "eco-centered" on the environmental issue, sustainability, in order to avoid what Boff calls *announced ecocide*.

⁴ Joseph Chasin, one of the greatest Brazilian philosophers, referred to the tradition left by Karl Marx as Marxiology. Towards Chasin, "there is no socialism without science. That is, there is no socialism without the knowledge of the class itself that can build socialism and all other classes with which the revolutionary class coexists in contradictory harmony. Or rather, in contradictory articulation" (CHASIN, 1988).
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