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Science, Religion and Amazonia: Education for Sustainability

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ABSTRACT

This article analyzes the relationships between science and religion and the origins of universe and the life in the context of sustainability. It is organized in five stages. The first is a brief retrospective on the importance of the evolution of genesis of the natural sciences to improvement the techniques and humanity. The second articulates science to religion emphasizing its contradictions, ruptures and links with sustainability. The third approach prioritizes the contours and convergences between science and religion to these broader seminal questions. In the fourth stage, the "nature × culture" confrontation is illustrated through scenarios that show the ecological, theological and scientific importance of Amazonia to the current civilizational framework driven by sustainability and complex philosophical issues. It also presents the importance of sustainability for citizenship education, mankind and the planet's future. Finally, the fifth part of this article concludes with important considerations on the insertion of sustainability in social, economic, scientific and religious processes. As proposed by authors, this article has broadened the meaning of sustainability notion and reaffirmed the importance of science and religion for the mankind's future. In this complex panel, this article puts new elements in the dialogue on science and religion, and the education for sustainability.

Keywords: science education, religion, sustainability, Amazonia, culture, nature

METHODOLOGICAL NOTE

The sustainability notion presented in the specialized literature is confusing and controversial. This article considers that the sustainability has as presupposition the central idea of building an "ethical modernity" that will stop the destruction of the material and spiritual self-affirmation and the mankind perpetuity process on Earth. In a perspective in which one has an ethical modernity and not just a technical modernity. An ethics that can be constructed as a radical criticism of the destiny notion intertwining intelligence and freedom in a virtuous liaison with the good. However, such universal ethics posses major issues *vis-à-vis* mondialisation of the technical and scientific culture. Modern science methodologically supposes the distinction between fact and value, and acknowledges itself as ethically neuter, remaining in a strictly extrinsic relationship with the sphere of the good (Ospina, 2000). This notion does not relativize the concepts of financial concentration and innovation, which are the driving force behind the dynamics of production, expansion, reproduction and circulation of capital, an instrument necessary to enhance, sustain and maintain the pillars of development processes, whether sustained or not. It also does not explicitly the necessary inclusion of the social contract, an instrument that gives historicity to economic development. Sustainable development, in the limit, tries to construct strategies, methods and mechanisms that allow to reconcile economic development with ecological stability, in a shared dimension. It proposes to value traditional knowledge by integrating it with scientific and technological knowledge in an ethical perspective that radiates from the singular to universal, from the local to global. The construction1 of a new civilizing ecumenical genesis, based on a process of multicultural

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humanization and integrated with the world's ethnic and political solidarities, constitutes an emblematic reference to imbricate the ecology in development, and vice versa. This critical praxis will enable to construct the technical and political conditions necessary for emergence of sustainability in the brief time of basic human needs and in the long time of environmental preservation of places and the planet. At this conjuncture, sustainability presupposes economic and social development with social inclusion, entrepreneurship and environmental preservation considering ecology as process of production, construction, reproduction of life in all its material and symbolic dimensions, in an Enlightenment perspective that privileges the culture (Freitas & Freitas, 2013a).

RELEVANT ISSUES FOR SCIENCE EDUCATION

The economic development models based on the intensive exploitation of natural resources is now coming to an end. The possibility of the destruction of the human species because of planet ecological destabilization has obliged societies and governments to incorporate an environmental dimension in all public policies. New world cycle for science and technology centered on the sustainable practices is emerging.

The identification of the theoretical and empiric elements of the natural sciences which contributed for this new cycle, can be highlighted in the following axes:

The unfolding of the mathematical physical theory built by Planck to unmask the processes related to the phenomena of transport of luminous radiation. This conception led Einstein to postule the electromagnetic radiation formed by particles without mass and without electric charge, denominated photons. Unlike the foundations of mechanics, reference at that time, this conception establishes that the correct reading of the natural phenomena has to be done on scales, that is, the same phenomenon can be shown in different forms according to the scenarios and the intensities of the constituent elements of the process under analysis. In his studies about radiation, Planck re-introduces in creative and contusing form, the category called 'discontinuity of the matter' while unfolding of mathematical structures designated 'symmetries', rescuing the Platonic's conception in solid and consistent theoretical bases. This study introduced new perspectives to the understanding of the matter's properties. The sophisticated atomic model proposed by Rutherford, the results foreseen by Planck's theory and the Bohr's theory, that emphasized the discreet character of the electronic orbits and of other fundamental physical entities to understand the microscopic properties of matter, let to more advanced and sophisticated theorical and empirical studies at the atomic scale. Heisenberg, Schrödinger, De Broglie, Compton, Born, Gibbs, Dirac, Pauli, Landau, Fermi, and others constructed the following steps, not necessarily in this order.

The first, of the several contributions, established the limits of the classic theories applied to physical and chemical phenomena, known at that time (Heisenberg, 1990). Through the physical relationships denominated 'uncertainty principles', it was possible to establish when physical theories could be applied to the processes on atomic scale or to the world accessible to our senses. Using the foundations of a non-commutative algebra and representing the physical entities by womb structures, Heisenberg substituted the classic concept of orbit by of 'quantum state', associating it with experimental measures. Unlike Heinsenberg, Schrödinger, using the self-function and self-value representations used by mathematicians and physicists during the 18st and 19st centuries, developed a propositive and explanatory mathematical theory for description of 'electron waves' (Heisenberg, 2000; Schrödinger, 1990). Special interest should be attributed to De Broglie's contribution which 'in the same form that to the existence of any particle is associated a wave, every wave state it is associated to the existence of a particle'. Other scientists assumed the difficult task of building the solid basis of the knowledge field that later on would become known as quantum mechanics and applied in valid problems at the atomic scale. The introduction of the concept of probability in the descriptive language of quantum mechanics, sophisticated the reading of the current effects of the natural phenomena as its now have probabilities of occurrence, and therefore of experimental verification, eliminating definitively the causal character and the deterministic nature, at least at the atomic scale. It is also intriguing to understand the unfoldings of the researches developed by Compton, that confirmed the dual behavior of matter. In appropriate conditions, matter can be presented in oscillatory or corpuscular form, depending of scales involving the dynamics of the physical process in subject. Several physical properties and characteristics of the nature were unmasked. The foundations that guide the interaction of light, electromagnetic radiation, with the matter, the conduction of electricity and heat, elasticity, magnetism and other known aspects of the atomic/molecular structure of matter were explained, creating possibilities for technological innovation, in particular, in the electricelectronics industry. This industry would become the main globalization processes's sustentation. Semiconductor industry has expanded on an exponential scale. Advances in optic lithography have made

possible the manufacture of transistorized circuits with greater performance and facilitated the miniaturization of electronic devices. The amplification of microprocessors's power has greatly impacted technological sectors, especially those related to acquisition, storage, processing, and transmission of information. The projection of a promising microelectronics's future had great impact in the technologies and the macro worldwide economy. Another fundamental contribution is that due to Einstein's theory, in which the apparent non-joining of the space and time concepts by all us admitted, is due to very specific and known conditions on space and temporary scales that we are subjected in our daily lives. These two concepts, that are articulated to each other by the means of the speed of light, constitute a space-temporal structure. This structure, in presence of the matter, provokes the curvature of space demanding the use and the incorporation of a new geometric language, a different Euclidean metric in the physical reading of the fundamental laws of nature (Born, 1990; Persson, 1996). Through the theory of relativity, Einstein also showed energy can be transformed into matter and vice versa, indicating that the same is the 'fundamental unit of the universe'.

Finally, we mention the greatest conquest of cosmology: 'Theory of Big Bang' or 'Great Explosion' proposed by Aleksandra Alexandrovich Friedmann and Georges Edonard Lemaitre, in 1920s. It was developed and later it was confronted with the observations of the astronomer Edwin Hubble, confirming that the light emitted by galaxies is deviated towards the red color of the energy spectrum. In the same way, as the sound of a car horn is each time lower the measure that the same is moved away from an observer, the light is each time more red when its emitting source moves away from the person who observes it (Hurwic, 1990). This theory foresees the origin, the beginning of the universe, through a great explosion, which happened about 13,7 billion years ago. Ever since the universe has been continuously expanding, in all directions, with its average temperature decreasing continually. In spite of the polemics raised by this theory, it has been strengthening with countless discoveries and astronomical observations. The possibility of the 'whole' to emerge from 'nothing', of the unmasking of dynamics of the creation of universe, close to the singularity, being projected real and virtual scenarios from the whole system starting from a part of the same, are emergent issues and of great significance in the current studies of cosmology and in history of life (Silk, 1988; Krauss, 2012; Pārōkumu & Kehiri, 1980).

A paradigmatic case refers to the biology's development. The end of spontaneous generation with Pasteur, Darwin's pretension in unifying the natural history of life (Darwin, 2009), and the emergence of heredity in the DNA physical-chemical-biological structure as proposed by Watson and Crick (1953) have, definitively, imprinted new directions on the history of the universal thought.

From such landmarks, natural sciences have established an incessant and fertile dialogue on all the other scientific fields. It also has created polemic and lasting articulations with philosophy, ethics, religion, and the economic and political processes.

At this conjucture, the hegemony of Western culture has resulted in extensive conquests for a small group of countries. The high level of the quality of life and the full consolidation of man's rights in these rich countries have contributed for the legitimization and irradiation of their models of development on a worldwide scale. However, the rapid social degradation and ecological destruction, putting the mankind's existence at risk, constitute a contradiction of the processes of globalization commanded by these central countries. Its also constitute a restriction to the expansion and limitless reproduction of the capital.

The world economy's integration to the environmental questions, and the control on the planet's ecological future are questions that pressure the current thoughts systems and start to gain contours more transparent in beginning of this century. Emphasis on the technician-structural aspects have contributed to sustainability becoming a knowledge field essential to the solution and understanding of the post-modernity's complex issues. The politicization of sustainability notion encloses questions have articulated since the foundations of Western and East cultures, to the contradictions imbricated in current religious confrontations.

Mankind has been collated with this new social and historical perspective: to construct and incorporate the socioeconomic enterprises to the sustainable development notion. At this conjuncture, the financial market and the science have reaffirmed the importance of ecology to the civilizing processes. The necessity of changes in the economic development models's polluting industrial matrices and in the man's relations with the nature is a mark of this new era. In certain form, the solution of the complex problems at the matrices of occupation, production, and social dynamic of the places and planets, understands a new conformation and socioeconomical insertion of the peoples in the contemporary world. This context has institutionalized the need to build sustainable processes. It also has stimulated the prospective and applied environmental research, specifically the scientific and technological modeling of the atmospheric and hydrological processes, essential to ecological stability and the functioning of the worldwide productive matrices.

In spite of the protection politics of nature, the process of deterioration of worldwide biodiversity has been aggravated with increasing speed. The main causes are the use of fossil fuel; the inadequate use of soils and waters; the commercial super exploration of some species; the introduction of predatory species in determined ecosystems; the increasing pollution of ground, waters and the atmosphere; the intensification of agriculture with predatory techniques; and the reorder of the territories and global climatic changes.

Other diverse factors also contribute for this process, amongst which the speed up of demographic growth; the non-adaptive and non-integrated politics of economic development to the local and regional environment realities; the non-regulation of the rights of access to the natural resources; and the insufficiency of scientific knowledge on the regional and worldwide ecological dynamic.

The promotion of sustainable development depends on solution of complex problems, amongst which consumption, efficiency, and development of non-polluting energy sources; reorganization of the terrestrial transport sector and best management of traffic systems; substitution of the current pollution industrial matrix; protections to marine natural resources and the uses of soils and atmosphere; institutionalization of the mechanisms of measure and control of atmospheric pollution; better management of the impacts of climatic changes; combating the sonorous pollution; better management and protection of hydrological resources; preservation and adjusted management of biodiversity and natural patrimony; development of mechanisms to minimize the risks and protect the human health in insalubrious occupational matrices; control and better management of the eco-toxicology and impacts of fungicides and pesticides; mobilization of theoretical and empirical structures of economic and social sciences; formation of human resources to management of sustainable development; and elimination of human misery.

A set of problems, many of them interlaced, still meet under the focus of research programs on sustainable development. Emphasis on the creation of a consistent methodology to quantify the reflationary effect between the economic and the environment activities; the search for better resolution in the scenarios related to the destination of the sources or the critical capitals (rare, important, non-replaceable); the construction of a language for better discernment on the impact of the ecological risks to the societies; invention of mechanisms to privilege the solution of social inequality's problems and the distribution of wealth for different societies with difficulty of access to the critical sources of natural resources; the construction of systemic methodologies to enable the definition and the application of sustainability notion by a region or certain territory; and the elaboration of strategies to enable the incorporation of the economy and the ecology, in integrated form, to the institutional politics, amongst other factors of lesser relevance.

It is necessary to create new religious, technical and political foundations to put pressure on the structures of the economic models relates to the increasing privatization of the means of production, and the dynamics of the process of capitalist exploration. This "private wave" contradicts the idea of a management of the planet's wealth on the long time. With aggravation, the accelerated growth of the misery in the peripheral countries corroborates to increase the destruction of the main worldwide ecosystems. The condition of sustainability when applied in these countries, in general, strengthens the "biological conception" and/or condemns these populations to a perpetual socioeconomic isolation.

The full alignments of science and technology with industry and the market have brought new perspectives to mankind. Machine world has been prioritized, dissociated from the humanistic ideal. Understanding the man's complexity requires not mutilating the human condition. It presupposes the fusion of the nature processes's symbolic representations to the universal history foundations in the sustainable perspective. Land use, environmental preservation, fight against deforestation, clean development mechanisms, bio-industries, climatic changes, and the construction of new clean technological matrices are the priorities of the sustainable development policies in the humid tropics, strategic regions for mankind, are main for our future.

These issues constitute the central axis of a new natural contract centered in the preservation of human species, and have been articulated by the science education, science, religion and ecology via the processes of construction, production and reproduction of life. A new conception of nature is under development. A technified and humanized nature, intertwined with the symbolic representations of man and humanity (Martin, 2015).

Religion, politics and science also have incorporated the environmental issue in their agendas without ruptures with the economic processes (Schwadel & Johnson, 2017). New contradictions, articulations and utopias to sciences, religions and the sustainable processes are incorporated into this frame, reaffirming the importance of the humid tropics for this world conjuncture.

This time of uncertainties requires the alignment of natural science with religion in the search for solutions of the contemporary world's complex issues. Benz (March 2017) declares the "new physics may still raise provocative issues concerning methodological limits and divine action, but do not answer today's most pertinent questions about the divine.". This framework requires the construction of new explanatory and comprehensive languages articulating science and religion. This assumption potentiates the presentation and analysis of the approaches and explanations about the origin of the universe and the life, towards recent sustainable worldwide perspective.

SCIENCE, RELIGION AND SUSTAINABILITY: CONTRADICTIONS AND RUPTURES

The rationalization of nature processes puts new problems to religion. These problems have reverberated in all mankind's sociocultural dimensions.

Boderie (1571) postulates the reason as the image or the divine ray that shines. He puts a germinal question: the divinization of reason. On the other hand, David Ingram (1993), based on Habermas, philosopher with fruitful studies on reason, speculates that "Since the transition of the mythopoetic vision to cosmological, religious and metaphysical and the modern forms of understanding demonstrates a moral and cognitive decentralization (...). With the transition of the archaic civilizations to the developed occurs a decisive rupture, and narratives are replaced by explanations can be justified with arguments. Monotheistic religions approach the reality under a single unifying principle, demonstrating a strong impulse towards universalism and logical consistency (...). With the advent of modernity, the highest principles (God, Being or Nature) if surrender to the formal principles of discursive reason (...). The objective world of facts should not be confused with nature, just as the social world should not be equated to society and to culture.".

This section privileges the following questions: "What are the convergences and structuring divergences between the approaches and the explanations of science and religion about the creation of the universe?", "What are the ruptures in the explanatory processes about "What is life?", and, "What are the nexus of sustainability with the science and the religion?". There are no definite and consensual answers to these questions; its are complex, controversial and contradictory when analyzed and confronted in religious and scientific representations systems (Bertka & Miller, 2014).

It is speculated on the importance to identify a new central principle to order the inclusion of man in the contemporary world, in a conception that proposes to be sustainable. In this conception, since the man's birth to death, his life and his contradictions as well as his general relations are developed embedded in their interactions with natural and social environments (Heisenberg, 1987). Principle that articulates our physical and ethical existence with our religiosity in a sustainable perspective.

The physical, chemical and biological processes, in general, are not sustainable. The evolution of nature has a tendency of non-sustainability (Dab, 2007). It presents the impossibility of if to reproduce in the future identical replicas of the present's situations. Divine sustainability is opposed to non-scientific sustainability in all historical contexts. Therefore, from the biological perspective, the life is not sustainable, it 'travels' continually towards physical death. The human divinization opens up new alternatives for this process.

The man's origin is intertwined to creation of primordial matter that is imbricated to history of the birth and the evolution of the cosmos, typified as universe. Therefore, the understanding of the history of matter requires to unveil the history of the universe imprinting historicity to its processes of formation and organization (Freitas, 2017).

On the other hand, from the religious perspective, God created the universe, the life that animates it and, simultaneously, all the laws of nature (McGrath, 2005). The presence of God in mankind is very strong, independent of discourse and the reason. Philosophy of religion shows the difficulty and the complexity to conceptualize it. It is molded in scenarios that present it as a personal being, incorporeal, omnipotent, omniscient, omnipresent, creator and maintainer of the universe, infinitely good, eternal and worthy of adoration (Cassé, 1999).

Hugh Gauch Jr. (2006) raises whether science has heuristic reach to explain the existence of God and the Universe. At this conjuncture, he discusses the pretension of science in expand and extend ordinary to worldview questions. There are two broad European traditions about creating the universe. The first, established from the Greek culture, puts the possibility of to understand its formation and its order, from the logic and human reason. The second tradition establishes the creation of the universe from God, in a definite

moment of the past and ordered according to a series of pre-established divine laws (Davies, 2005; Portugal, 2012).

These traditions, the creation of the universe according to material and energetic pre-conditions established in the past, and those associated with the action from God have divergences and convergences of foundations and in their operational mechanisms as will be shown in this article.

Christian de Duve (2005), Nobel Prize in Medicine in 1974, presents fascinating scientific speculations on the creation of the universe. He highlights the thesis of biologist Denton (1988), according to which the universe began to shelter the life. Other experts attribute to creation of the universe at random characteristic of nature. English chemist Peter Atkins (2007) states "the universe may have emerged out of nothing without divine intervention. At random.". For English cosmologist Martin Rees (1997), "the universe is unique, cognoscible as adapted to life, in a gigantic set of universes. Produced at random.". American physicist Lee Smolin (1977) considers this same conception, but in an evolutionist context. Immediately, the creation of the universe poses two new questions: "Where do we come from?", and, "Where are we going?".

The science has accumulated important explanatory contributions, though not conclusives, to these issues. Russian Alexander Oparin was the first to explain, in 1924, the issue of the formation of first living organism. In 1953, American chemist Stanley Miller produced, in the laboratory, a set of experiments have showed the possibility of life's origin to be explained in terms of the laws of physics and the chemistry. Miller showed is possible, through organic syntheses and in adequate physical conditions, to generate the necessary conditions for production of life, without human and divine interventions. Holmes Rolston III (2014) raises that the answers to problems of this kind should be scientific.

The possibility of life to have originated from a single living being, from an initial "protobacterium", or, the hypothesis the living germs have been sent to Earth by other civilizations more advanced than ours, or, finally, the prediction of existence of physico-chemical scenarios less complex but sufficiently sophisticated to enable the formation of the first living being on Earth are controversial and very reductionist theses on the history of mankind. The astrophysicist's thesis the universe contains a large number of planets with conditions similar to those of the Earth and, therefore, with great possibility of existence of conscious life, is still a feasible hypothesis (Jacob, 2002), despite its imponderability.

The evolutionary theory predicts we are descendants of prehuman beings and the life has settled on Earth for at least 3.5 million years. The emergence of life from inorganic matter constitutes a rupture that is still outside the explanatory scope of science. This process, according to biologists, needs to be complemented with new concepts such as integration, pattern, function and system (Murphy, 2014), and also sustainability.

The position of the Earth in the solar system and in the universe, its physical dimension as well as its distance from the sun, the characteristics of its atmosphere, its speed of translation and rotation, its material composition, its geological diversity and its biogeochemical cycles were determining factors to the flowering and evolution of life on our planet, independent of its divine or biological origin.

Another contribution of science to understand these questions was the idealization of time. According to Schrödinger (1992), three thinkers stand out in this process: Plato, Kant and Einstein. Plato was the first philosopher to prefigure the idea of timeless existence and to emphasize it against reason, as a reality more real than our experience. According his theory to forms and ideas, our experience is nothing but the shadow of timeless existence. This theory privileges the total abstraction, the pure logical thought, symmetries and geometries in a timeless mathematical perspective. Kant also idealized the space and time categories. The essential point was to form the idea that the mind or world categories can assume other forms we can not yet understand and which do not imply the space and time categories.

Therefore, for Kant, there are other explanatory appearance orders beyond of the space and time. In this perspective, according to Schrödinger, the possibility of occurrence of events guided by the processes of cause and effect can be replaced by timeless alternatives, in which the notions of before and after do not make sense.

Einstein showed that energy can be converted into matter and vice versa, indicating it as the "fundamental physical entity" of the universe, in a cosmological scenario privileges the space-time structures associated with each other by means of the speed of light. The continued presence of energy in the material and symbolic structures moves the realities and the human divinities and opens new perspectives for research on sustainability. Schrödinger also puts another question: "What can exist after death?" The experience forms the conviction that the human survival does not resists the destruction of the body, to whose life, as it is known, is inseparably linked. Therefore, in known experiences - and which necessarily occur in space and time

- there is no possibility of anything occurring after death. However, in an order of appearance in which time plays none role, the notion of afterwards continues to have none meaning. In this condition one can not guarantee there is something after death, but one can remove the obvious obstacles to the conception of this possibility.

In this new epistemological frame, the scientific questions can potentiate full sustainability without contradictions with the possibility of divine sustainability.

The possibility of mankind's extinction due to planet's ecological destabilization is opposed to its absolute divine existence. Maintaining the life's perenniality on the planet, in all its dimensions, requires a new scale of needs and values aimed at building a new existential relationship between man and nature. A new aesthetic conception of world and a civilizing framework centered on structures, systems and sustainables processes. At this conjuncture, the notion of sustainability can be applied, hoc hoc, to the Universe and to Earth in their totalities, considering them as reciprocal extensions of human existence committed to our common future and in a collective process of material and spiritual sharing. Conceptions that will generate historical actions converge towards the construction of a "cosmic ideary" of economic development and has as its central focus the scientific and spiritualized paradigm of sustainability.

Singular aspect refers to reinvention of the myths of immortality, the paradise-world, the spectacle-universe and the fashion-world. These elements move the imagery of this new civilizing frame, and, in order, have as central references the religions, Amazonia, the science and the virtual merchandise as matrices of symbolic meanings and project the ecology as the main sign of modernity.

An important dimension on the "role" of sustainability refers to existence of complex cultural and biological diversities in the world. The construction of a political and religious unity encompassing these cultural and historical diversities in a sustainable perspective puts as great challenge for mankind. However, the operational conditions of sustainability consider the 'nature' category more broader and sophisticated than the 'environment' category, which requires new methodologies e languagens for analysis of a relationship of the type: man-nature-spirit.

The continuous reinventions of sciences and the techniques and the conformation of new occupational matrices have stimulated the metamorphoses of religion, creating new civilizing aesthetics in the sustainability's frame. It is in progress the re-creation and re-signification of a new dialogue on science and religion, permeated by sustainable processes (Eghrari, 2005). Science and religion...

SCIENCE AND RELIGION: CONTOURS, LINKS AND CONVERGENCE

Science and religion accumulate knowledge about the universe and man through different methodologies. Science has the reason as its main basis. It is used to formulate hypotheses, methodologies and to construct theories legitimized by tests, experiments and generalizations. The religions realize its truths through revelation, faith, belief and holiness. Despite these structuring differences, most of the technological innovations prior to scientific revolution were performed by societies organized through religious traditions. Martí (2017) has analyzed the impact of new concepts in the generation of theories for studies of religious innovations and social changes. These approaches that operate through global networks put new scenarios for theist congregational sharing. Max Weber emphasizes that the modern sciences have strong influences from Judeo-Christian traditions. For these reasons its were developed in Europe where these religions flourished, although part of the scientific method was formulated for the first time by Islamic scholars, and later by Christians.

Hinduism has historically embraced the reason and the empiricism, affirming the science builds the legitimate knowledge of the world, even though its scope is incomplete. While Confucian's thinking has presented different points of view on science over time. For most Buddhists, the science is interpreted as complement to their beliefs (Capra, 1986). Although the "sacred" is a social construction it is not reduced to any rational category. It is as if the sacralization process constituted a 'noble' symbolic layer and unattainable by human reason and feelings. Understand the ruptures between the systems that command these processes is a challenge to the specialists.

The universality and the continuous advancement of science enable its growing incorporation into the human and economic development models of different countries, with direct impacts on people's beliefs and religiosities. The literature indicates the benefits of science reach many religious followers: Christianity - 2 billion; Islam - 1.5 billion; Hinduism - 0.9 billion; Chinese religions - 0.4 billion; Buddhism - 0.37 billion; Skiing

- 23 million; Judaism - 15 million; Spiritism - 12 million; Bahá'í Faith - 7 million; and, Confucianism - 6 million (Alexander, 2014).

Two broad explanatory questions instigate the confrontation between science and religion, namely: "What is the origin of the universe?"; and, "What is life?". From these questions emerge numerous contradictions and conflicts between science and religion.

The public acceptance of scientific facts can be influenced by religion. A large segment of American society rejects the thesis of evolution by natural selection, especially in relation to humans being. Although the American National Academy of Sciences defends the principle that the 'Evidence of evolution may be fully compatible with religious faith'. Vision officially endorsed by many world religious groups.

Singular case refers to the symbolic interpretation of Genesis - the origins - in the Bible which shows that God created the world during six days, corresponding to 144 hours, sometime between 6000 and 8000 B.C.. This creationist interpretation also reports that all species of plants and animals were created in this same time interval (Bíblia, Gênesis, pp. 24-25). Creationism is the religious belief that the universe, Earth, life and the mankind are creations of a supernatural agent. This term is also used to refer to the rejection, due to religious motivation, of certain biological processes, particularly the evolution of species.

Martin (2015) has analyzed pertinent questions concerning the emergence of life, the cosmos, and humanity, which may be summarized in her final questions regarding "who we are, whose we are and whom we are for". She suggests including in Religious Education the study of life's origins, for better understanding of the "nature × culture" confrontation.

As already shown in this article, the inclusion of sustainability in this type of study opens new comprehensive perspectives for the dialogue on nature and culture, particularly, from the religion and science. This raises questions like: What are the divergences between the scientific and religious interpretations about the creation of the world? And about the creation and evolution of life?

The histories of science and the religion identify different forms of dialogue on its thoughts. The question of universe's age continues being a controversy between creationism and evolutionism. How old is the universe? Scientific studies indicate the universe, since "Big Bang", there is 13.7 billion years old, and the Earth has appeared 4.5 billion years ago. And the biologists defend the thesis that species evolved over hundreds of millions of years, main or completely, through natural selection processes (Darwin, 2009). On the other hand, the biblical reports project an age of 7,000 years old for this same universe.

Religion and science constitute different systems of understanding and interpretation of the world. 'Theory of Big Bang' and the 'Christian Doctrine of Creation' have one common goal: the explanation of universe's origin has been qualified as science consolidates itself in Western culture as a specific form of world understanding, and the religious cosmological interpretation continues to have increasing acceptance by the mankind.

The study of the histories of science and the religion opens new perspectives to understand the relations between science and religion in the past and future, and to point out new ways to understand its contradictions and controversies. The symbolic representation of religion concerning cosmic events does not prevent its coexistence with the current theories of astrophysics (Van Leunen, 2002).

It is understood the science should not have a conflictive coexistence with religion, because this preaches kindness, justice, honesty, morality and ethics; references should also guide science as form of explaining, transforming and improvement of human being.

There are two main theological currents about the life's origin and existence: dualism and monism. Dualism attributes two intrinsic characteristics to living matter. The material entity and the spirit, the soul or a non-material and invisible entity. In this conception the living being does not only result from an organized and controlled system by the laws of physics and chemistry, and its relations with the environments and the society. Dualism emphasizes that the living being is endowed of a cosmic sense that is weighted by culture. After death, the soul would pass to supernatural stage, whose structure is integrated to the various beliefs that interpret the dualistic life. In some, the spirit would spend to exist in a free state of the problems of material plane. In others, the spirit would be 'recycled' and would 'animate' an organism, similar or not, to the one who died, among other possibilities.

For monists, the Universe may have been created at any given time, as it may have always existed. Dualists and monists do not differ much about the essential aspects of this discussion. However, the materialists try to

explain the emergence of the Universe and its expansion only through physical forces and the thermodynamic properties of matter.

According to dualism, the Universe, the laws of nature as well as all the forces animate the life were created by a divine entity. A process of creation that has transformed the Universe's chaos into compartments organized in time and in space, with distinct properties, including the appearance of life. By this reason, the concept of creationism is associated with the dualism, which represents an act or event in which God, sacred entity, created matter out of nothing, through of a process of rupture.

Monism interprets the nature strictly from the point of view of physics, chemistry, biology and matter, without the intervention of a spiritual component. In monism or materialism, what is observed, directly or indirectly, is product of physical-chemical interactions and the behavior of biological structures. This scenario also includes the life. The most perceptible difference between dualism and monism is that the latter generalizes certain principles used to study a particular phenomenon, which follow the scientific method.

As consequence of the strong alliance between monism and scientific method, the materialistic view of nature avoids, where possible, appeal to creationism for a reasonable explanation for the life's evolution and the own history of matter.

The scientific method contributed so that evolutionist ideas replaced the creationism. However, there are still difficulties. It is verified that the cosmology, in one of its versions for the Universe's origin, appeals to creationism. But it is not exactly the creationism from the religious doctrines.

This physical entity from Theory of Big Bang that the cosmology calls "singurality" is simply a device, a resource invented by scientists, which is an physics's empty file. An instant of total opacity, a type of insanity of 'zero time'. Logically, 'zero time' is an instant within a time that does not yet exist. From the physical point of view it is a conceptual catastrophe. The laws of physics or chemistry are not fully applicable at this point, where the initial conditions and boundary conditions of mathematical equations become problematic due to the infinite (very large) values assumed by temperature, mass, density, pressure and gravity, with 'time and space' assuming null values.

String Theory puts other scenarios for Big Bang. One is the pre-Big Bang scenario through which there is possibility of an earlier phase of the universe before the Big Bang. The transition and the rupture between these phases, pre and post-Big Bang, put new difficulties to understanding of the history of universe (Stoeger, 2014), which are still beyond the explanatory scope of science.

The world's creation from a 'single point', in itself, constitutes a rupture with the reason and the human sensibility. Physicists work to scientifically legitimize this diffuse and confused physical entity. The advances of the natural sciences will be important to eliminate the ambiguities between creationism and evolutionism in the context of the discussion from the life's origin. At this conjuncture, questions 'Did life come to Earth?', and, 'What is life?' put complex speculations for the sciences and religions.

These questions reflect the possibility of a fruitful interaction between scientific and religious ideas (Einstein, 1930). There is also possibility of a total separation between them, depending of the degree of rupture in the explanatory processes and the concrete and subjective realities of people and the institutions. On the other hand, the eternal knowledge and power that God has in his actions do not prevent us in doing our own plans within the limited sphere of our power.

For thousands of years astronomers have visited the skies in search of information about the universe. In 1912, the American astronomer 'Vesto Slipher' found galaxies moved away from the Earth at great speeds. These observations were the first evidence the universe is expanding. In 1929, the Theory of Big Bang was confirmed through the observations of astronomer 'Edwin Hubble'. This scientist also found, through physical forces, the galaxies were moving away from the Earth and simultaneously moving away from each other. This means the universe is expanding in all directions, in the same form a balloon expands when filled with air. Posteriorly, the physicist 'Leon Lederman' (1985) showed, through his book 'The God's particle', that physics and religion share ideas: both project the mono-creationism, according to which the universe was created and remains animated for a single powerful force. Similar to thesis defended by monotheistic religions.

According to Grandy (2008), in 1930s, the physicist 'Niels Bohr' generalized the notion of intrinsic uncertainty to other fields of knowledge. In his article 'Light and Life', Bohr states that "(...) In each experiment in living organisms an uncertainty is generated in relation to the physical conditions under which they are submetted. The idea suggests the minimum freedom allowed to the organism in this respect is large enough for that the same hide its ultimate secrets from the observer. At this point of view, the existence of life

must be considered as an elementary data can not be explained, but taken as starting point in biology, in form similar to the quantum of action in modern physics, which appears as an irrational element in the point of view of classical mechanics, and together with the existence of elementary particles, constitutes the basis of atomic physics." (Grandy, 2008, pp. 202-210).

Just as Bohr interpreted the contradictory manifestations (particle and wave) as complementary opposites, one completes the other, he conceived that life and non-life also complement each other. In the context of the controversies at the time, in the preface his book "Bohr's Atomic Theory and the Description of Nature" published in 1929, he states "(...) the quantum mechanics is applied to the statistical behavior of a given number of atoms in very well defined external conditions. This prevents to define the state of a living being in terms of physical measures." (Bohr, 1929).

Like Kant, Bohr believed the life can not be reduced to mechanical, molecular, or genetic structures. At this conjuncture, the convergence of new scientific and religious approaches in studies of this nature is also a challenge for the specialists.

William Lane Craig (2009) presents six scenarios in which science and religion are mutually relevant: "The Religion provides a conceptual frame in which the science can flourish; The science is capable of both challenging and confirming the affirmations of religion; The science finds metaphysical problems that the religion can help solve; A religion can help to decide between scientific theories; The religion can expand the explanatory capacity of science; and, The science can establish a premise in an argument that has conclusion of religious significance.". Ankur Barua (March 2017) presents that "The key challenge in the theological investigations into the foundations of the natural sciences is to spell out the relations between scientific inquiry and Christian doctrine in such a way that the latter illuminates the former without violating its cognitive autonomy and methodological integrity.". Wildman (2014) raises important issues about religious naturalism. Issues that reaffirm the inseparability between nature and culture. He puts the importance of naturalism into religion, presents the conceptualization of religious naturalism, and analyzes the impacts of religious naturalism on human symbolic representations, morals, and political life. He also does a survey of its importance for our future. In this projection he indicates civilizational commitments with the planetary ecology, and therefore, in our understanding, with the sustainability, in all the natural and cultural dimensions.

In this century, the fictional and mechanical language of science is intertwined with the divine and sensitive representations of religion, to form a new universal frame. From these references, the sustainability of the people, at physical, psychic and spiritual levels, as well as the sustainability of the places, cities, regions, nations, continents, planets, cosmos and the utopias, would certainly cease to be a utopia; and because it does not affirm, it would cease to be an illusion. There is, therefore, something to be gained by initiating a dialogue on sustainabity and religious education, in its structures, languagens and praxis. This civilizing frame will be moved by sustainability requires the presence of ecology and Amazonia.

SUSTAINABILITY: AMAZONIA, THE MYTH OF IMMORTALITY AND THE SACRED

The human condition is imbricated to the nature. In paradise, after God had finished his work ... "He took the man and placed him in the garden of Eden, to cultivate the soil and keep it. He gave to man this precept: 'You may eat of the fruit of all the trees of the garden, but not eat of the fruit of the tree of science of good and the evil, because in the day you eat, you will undoubtedly die." (...) The serpent said to the woman, "Has God really said, 'You shall not eat fruit of any tree of the garden'?" "You won't really die, for God knows that in the day you eat it, your eyes will be opened, and you will be like God, knowing good and evil." The woman said to the serpent, "We may eat fruit from the trees of the garden, but not the fruit of the tree which is in the middle of the garden. God has said, 'You shall not eat of it. You shall not touch it, lest you die.'" "Oh, no! - said the serpent to the woman, 'You won't really die, for God knows that in the day you eat it, your eyes will be opened, and you will be like God, knowing of good and the evil.'" (Bíblia, Gênesis). Possessors of the knowledge of good and the evil, Adam and Eve, lost the divine secret of eternal life.

From this Western matrix of the "nature × culture" confrontation from Judeo-Christian's origin, emerged one of the main foundations of the Western civilizing process: the search for the new, the innovation, the different, the plurality, the singular and universal, the other. These elements are important for studies of religion, citizenship education (Liljestrand, 2015) and the sustainable processes. Many researchers make critical analyzes on the science of nature's scope also imbricating the culture in nature. This question is controversy and complex (Freitas, 2014; Gregersen, 2014).

A singular issue refers to theological significance from Amazonia. Judeo-Christian culture has a matrix, a world's genesis or origin centered on the lost perfect condition, the Paradise. The fictional location of life's tree, immortality, and the science's tree, good and evil, in Amazonia reserves a special role to worldwide symbolic and material representations in this region.

The Amazonian peoples's mythical representations are very complex and are encrusted in nature. The Quichua and Aymara peoples, descendants of the Incas, who inhabit the regions of the western Amazonia located in Ecuador, Peru, Colombia and Bolivia, believe that the spirit of their ancestors continued to exist to guide them. They saw the Sun and the Moon as divine entities to which they begged their blessings, whether for better harvests or for success in combats with rival groups. The Sun God (Inti) was the male God and they believed that his King descended from him.

The Dessana people, inhabitants of the upper Rio Negro in the Brazilian West Amazonia, describe that in the beginning there was nothing and the darkness covered everything. One woman, Yebá bëló, made herself from six invisible things: benches, pan holders, gourds, gourds of ipadu, feet of maniva and cigarettes. (...) She chewed the ipadu again and smoked cigarette, then invisible, took the ipadu from her mouth and turned it into men, the five thunders, immortal, and gave each of them a compartment in the sphere. (...) These compartments became houses, and only in them was light, as in the compartment of Yebá bëló. This recommended the thunders to make the world, to create the light, the rivers and the future mankind (...). (Melatti, 2008; Pãrõkumu & Kehiri, 1980).

The myths presented have some common characteristics. Highlight the environments in which these people lived, and that, of course, have conditioned the scenarios of the narrative of their creations. Water, fire, earth, air, animals, plants and sky prevail in these mythologies. Another notable influence is the anthropomorphism, that is, the deities exhibit behaviors, forms and thoughts characteristic of the human being. This is extensive to Christianity, Islam, and Judaism. Similar to science, the myths and the religions are human creations in close relation to nature.

The Amazonia's sustainability depends of the preservation of its nature and its cultures. Its importance is enlarged as the models of economic development based on the depreciative use of nature are in the process of collapsing. In this sense, the world's role in Amazonia is also related to the symbolic links weld this region to the Western culture's foundations (Freitas, 2010).

There is a national and international consensus regarding the importance of Amazonia for Brazil and the world. Amazonia is in South America, characterized by high temperatures, humidity and pluvial-metric precipitation. Amazonia covers parts of Brazil, Peru, Ecuador, Bolivia, Colombia, Venezuela, Suriname, Guyana and French Guyana, and is approximately 6.5 million km^2 of which 4.5-5 million km^2 is forest.

This region supports the area of greatest social diversity and biodiversity in the world and is home to one-third of rain forests and one-fifth of the Earth's surface fresh water. Amazonia also plays an important role in the mechanics, thermodynamics and chemistry stability of the world's atmospheric processes. The Brazilian party, known as Brazilian Amazonia, is formed by Amazonas, Acre, Pará, Amapá, Roraima, Rondônia and Tocantins states.

Brazilian Amazonia covers a total of 4,987,247 km^2, 58% of the total area of Brazil and 40% of South America (5% of the Earth's surface) (Soares, 2000). Approximately 3.5-4 million km^2 is primary forest or without significant anthropogenic disturbance. These nine Brazilian states are home to approximately 25 million people, 0.35% of the world's population. There are 163 different indigenous peoples, which equates to 342 thousand people, or 38% of the Brazilian indigenous population.

Brazilian Amazonia has approximately 1,000 rivers and around 22,186 isolated communities. It also has 75,000 km of navigable rivers, a fleet of 350,000 boats and 11,280 km of borders with 7 neighbouring countries. In addition, there are 12 million hectares of wetlands, and 150 million hectares of protected forests in federal and state conservation units (data 2012). It plays an important role in the planet's climate and thermodynamic stability.

Brazil is ranked first in the world in terms of its diversity of plants, fish, fresh water and mammals, second for amphibians, and third for reptiles. It possesses 55,000 different vegetable species (22% of all plant species) and 524 different species of mammals, 517 amphibians, 1,622 birds, 486 reptiles, 3,000 fishes, 10-15 million insects, and millions of microorganisms. The majority of this Brazil's patrimony is located in Amazonia, further emphasizing its importance to the world economic mega-processes (Cruvinel, 2000).

Currently, every two days, a new animal or plant species has been discovered in Amazonia. Scientific literature also confirms that scientists are only aware of less than 10% of all existing biodiversity on Earth. It has been stated that 40% of current medications in modern medicine were developed from natural sources; for example, 25% come from plants, 12% microorganisms and 3% animals. Further, a third of the most prescribed medications worldwide come from those sources. If anti-carcinogen drugs and antibiotics are considered separately, this percentile increases to approximately 70% (Calixto, 2000, pp. 36-43), which reaffirms the geopolitical and economic importance of Amazonia.

There have been a number of phytogenetic accomplishments in the Ducke Forest Reservation, a preservation area (100 km^2) located close to Manaus, the capital of the State of Amazonas. Researchers from the National Institute of the Research of Amazonia-Brazil verified the existence of 5,000 individual trees and 1,200 tree species in the reservation (Ribeiro et al., 1999). This is equal to the total number of species in Europe, reaffirming the great biological diversity of that area, where new species are still being discovered. The research also indicates that Amazonian forest has 350 tons of biomass per hectare and produces annually, 7.5 tons of vegetable litter (branches and leaves) per hectare, one of the largest sources of renewable biomass in the world.

According to Luiz Antony (1997), in a forest in the Archipelago of Anavilhanas, Central Amazonia, and subject to periodic flooding, a population of microbes with 116,409 individuals per m^2 was found in a superficial layer 10 cm deep. Recent studies also reveal the existence of approximately 300 species of trees with a diameter of more than 10 centimeters, in each hectare of Brazilian Amazonian forest, exceeding the total number of species in Europe.

Amazonian region is crossed by the Amazonas River, which drains more than 7 million km^2 of land, and has an average annual outflow of approximately 176,000 m^3/sec (176 million liters/sec). This makes it the world's largest river by volume of water, approximately 4 times bigger than the Congo in Africa (second largest) and 10 times bigger than the Mississippi River. At low tide, the Amazonas River runs to the sea, at about 100,000 m^3/sec and at more than 300,000 m^3/sec in the flooding season (Sioli, 1991). Amazonian basin constitutes a region with low demographic density and one of the highest rainfall indices on the planet, with an average of 2,200 mm/year. This represents an annual total volume of water of 12×10^{12} m^3, resulting in the world's largest rainforest (Salati et al., 1983).

The Amazonian and Congo basins, and the tropical area around Borneo are important to Earth's ecological stability and efficient in the absorption of solar energy and its redistribution via the atmosphere (Crutzen et al., 1990). The humidity conversion process (via rain) in Amazonia's atmosphere liberates heat equivalent to approximately 400 million mw, similar to the explosion of 5,580,000 nuclear bombs per day.

Amazonia also plays a special role in the essential processes of ensuring the chemical stability of Earth's atmosphere. Experts speculate that it contributes on regional and international scales, to control the levels of carbon dioxide (main greenhouse gas), nitric oxide and nitrogen dioxide, key agents responsible for the degree of oxidation of the atmosphere, and nitrous oxide gas (approximately 200 times more harmful than carbon dioxide). The degree of importance of the two first nitrogenized gases in the chemical stability of the atmosphere, and of the other two in the climatic stability is a complex problem and still subject to scientific speculations (Freitas et al., 2017).

Together, the four countries that emitted more carbon dioxide in 2014, with about 62% of the total global emission of this gas, were China (30%), United States of America (15%), European Union (10%) and India (7%) (Olivier et al., 2015, p. 16). From 1990 to 2014, total aggregate greenhouse gas emissions of CO_2 with emissions/removals from land use, land-use change and forestry decreased by 15.8%, from 18.98 billion tons CO_2 to 15.98 billion tons CO_2 (Framework Convention on Climate Change, 2.11.2016, p. 7). It is important to emphasize that there are still great uncertainties in the methodologies of greenhouse gas emissions measurements as well as emissions of CO_2 from China.

Amazonian ecosystems behave like a gigantic vacuum cleaner, absorbing, for photosynthetic effect, 250-500 million tons of CO_2 per year (Gash et al., 1996), which represents an annual absorption rate of up to a ton per hectare in the 500 million hectares of those ecosystems. Niro Higuchi (2007) estimates, based on an average of 160 tons of carbon per hectare, that Amazonia's ecosystems store approximately 90 billion tons of carbon, 13% of the total carbon in the Earth's atmosphere.

Amazonia brings a number of important issues to the world, with an emphasis on the following matters: the construction of a new aesthetic concept for mankind; the sustainable development for Amazonia as an extensive living world library; worldwide symbolic and ecological processes; a worldwide and Brazilian

strategic space; a means to renew the planet; the thermostat of the planet; and as the Earth's climatic stability mechanism (Freitas and Freitas, 2013a, b).

Euclides da Cunha, an important Brazilian's writer, says that "Amazonia is the page that God did not write in 'Genesis - the origin of life'." (Cunha, 2006).

The intensive exploitation of natural resources is now coming to an end. The possibility of the destruction of the human species because of planet ecological destabilization has obliged societies and governments to incorporate an environmental dimension in all public policies. Brazil as main reference for biological diversity from the 21st century, and Amazonia as main centre for sustainable development are important in this process which raises new challenges for mankind. Considered an ecological symbol, Amazonia presents innumerable assumptions on an international scale and is an imposing presence in the new worldwide natural contract.

Its sustainable develepment is a challenge for science and technology. Since 2003, universities and other educational institutions in Amazonia have implemented various programs directed at sustainability. The institutions's environmental policies to its forest reserves and protected areas focus the management of the forest systems as the cycles of nature; the biogeochemical cycles's stability in its ecosystems, especially the cycles of carbon (carbon sequestration), hydrology (conservation and social use of water), and nitrogen (cycling and recycling processes); the use and conservation of biodiversity; and the preservation of mechanical structures, the architecture and scenic beauty of its biomes. Programs that have the environmental education of their populations as fundamental to a science education committed to building peace and the mankind's future and the planet.

In general, these programs are thematic and articulated with research projects centred on regional and global demands. Its include prioritizing the relations of the populations with the Amazonian ecosystems; physics, chemical and tropical atmospheric modelling; the dynamics of biomass and the planning for conservation of tropical ecosystems; the dynamics and the effects of changes in land use in Amazonia; culture and nature in the humid tropics; deforestation, climate changes, and emissions of greenhouse gases in Amazonia; technologies applied to the humid tropics; and biosphere atmosphere interaction processes, among others. Most of them have been developed in partnership with international institutions.

Highlight the Program "Large Boundary Amazonia, LBA". Coordinated by Brazilian and German research institutions since 1990s, the LBA constitutes a large-scale experimentation of the biosphere-atmosphere in Amazonia. This initiative is emerging as the world's largest ecological experiment, of scientific and technological nature, on Amazonia. This experiment aims to understand the functioning and to integrate the advanced research on the functioning and the impacts of these biomes at the regional and global scales. It assesses the use, occupation and preservation of these biomes and the socio-economic effects of the different forms of intervention of the regional populations through the development process of this important region. LBA currently has the world's largest data bank on Amazonia. It also interacts with major institutions and researchers and over 500 research projects on Amazonia. LBA carries out research associated with measuring the importance of Amazonia on the socio-ecological stability of the planet, accelerating a process of sustainable development of this region and improving the quality of life of its populations. Basic research programs and their human dimension are guided by the central question: How do changes in land and climate use affect the biological, chemical and physical functions of Amazonia, including the socio-economic sustainability in the region and its influence on regional and global climate stability?

Science education in Amazonia has several worldwide intersections. Priority has been given to programs that link the economy with social inclusion and ecological preservation, particularly those integrated to the basic sciences and fields of knowledge in the areas of forestry, botany, zoology, water resources, fisheries, systems coastal and marine environment, and biotechnology, as well as health and engineering. Anthropology, sociology, art, paleontology, linguistics, and geography are strategic focus for multicultural science education.

Finally, the new technologies for education and the training programs for science teachers in the tropics propose to build research on new methodologies and approaches to the processes of nature and man's relationship with the natural environments at the various levels of education and management. Its can encourage innovation, entrepreneurship, and sustainability as mechanisms for improving the quality of science education, especially for graduate programs in Amazonia. Special attention is devoted to the processes of scientific training the 150 indigenous peoples of the region.

Highlight the Program "Science education of the indigenous peoples in Amazonia and sustainable development". This innovative proposal proposed the deployment of the course for teacher training in indigenous education in science teaching, with the offer, simultaneously, of 2,000 inscriptions for 70

indigenous peoples from 62 municipalities of Amazonas State, since 2010. These teachers will work in teaching and management of production arrangements of specific vocation and scientific educational processes, in elementary and secondary education, in indigenous schools from Amazonas state. The course operates in modular form, through a technology platform for distance learning, mediated, on responsibility of the University of Amazonas State at the Brazil. This multidisciplinary proposal introduces new elements to the research programs in science education, creating new articulations academic in Brazil and internationally. Its curriculum pedagogical organization have been highlighted the following structural innovations: reaffirmation of the formation of a profile of indigenous teachers committed with the reality of science education integrated to the region's ecological and cultural complexity; interdisciplinary nature of the pedagogical project privileging the participation of indigenous teachers in teaching of the disciplines of this program; incorporation of themes on the borders of philosophy with the natural sciences and the human science; inclusion of approaches and technical innovations that will enable to interlace the contents of Western science with the traditional knowledge; formation of a great platform for scientific inclusion of indigenous peoples, and the access of students to the contemporary educational issues, strengthening their cultural formations and the confrontation with the capitalism. This science education program has already trained more than 1,000 indigenous teachers in Amazonia.

Amazonia's role in the world is rooted in their ecology and cultural diversity, which has transformed the area into the world's largest living library. Brazil's role in Amazonia has been reaffirmed as an inductor agent of structures, systems and processes fuse Amazonia's culture to the foundations of the new frames of universal thought. It also reaffirms the possibility to design and construct a new ethical, multicultural and ecumenical project (Freitas & Freitas, 2016a).

Amazonia is definitely encrusted to the futures of mankind and the planet. Its status as largest living library on the planet, and its contributions to the thermodynamic, chemical, and physical stabilities of the planet's atmospheric processes, with direct impacts on global climate change, reaffirm its important participation in the cycle of life on the Earth (Freitas et al., 2016b).

The depreciative use of nature, science and the technology conspires against the perenniality of the human species, although these are indispensable to construct the feasible solutions against this tragic picture. The tree of knowledge subsumed the tree of life, destabilizing man's relationship with the nature. The myth of well-adventurous: prodigal nature, health, harmony, unity and immortality is being deconstructed by the rupture of the axis of communication between the "heavenly" and "earthly" dimensions. Caudatory of the option for wisdom and not for immortality, the human condition currently finds itself hostage to the economic systems use scientific and religious processes in a nihilistic and privatist perspective.

In this sense, it is also important to investigate the articulations of religious phenomena with ideological processes (Durkhheim, 2003). This perspective when placed in the fields of sociology, anthropology and the natural sciences applied to different conceptions of sustainability puts new approaches and forms of intervention in reality.

Judeo-Christian and Islam tradition have common origins; share many concepts, values and teachings. In the conception of these religions the human being occupies a dimension separated from the rest of creation (Lecteur de Pic, 2005). It has a beginning and an end. It is the guardian of 'world', including nature. Oriental religions, such as Buddhism and Hinduism preach peace, defend the principle that the man is a constituent part of nature. These relationships of religions with nature and the man potentiate their perenniality, which also can be translated as their sustainability centered on man-nature-God-culture.

In the context of religions, nature is a sacred entity must be protected of extinction. In this civilizing frame, the Amazonian peoples have reaffirmed their intrinsic fusions with nature and their commitments with the perenniality of life and the planet. Religions do not regard nature as an obstacle to the improvement of man; on the contrary, they presuppose the human condition as an extension of it (nature). Create the nexus and the operational mechanisms between the material and symbolic representations and articulate science and religion among themselves and to sustainability in post-modernity are challenges for "all".

Science, religion, sustainability and Amazonia are definitely incrusted in mankind's history; past, present and future.

COMPLEMENTARY CONCLUSION

Science and religion are social constructs. Both are articulated to the diverse material and symbolic dimensions of our life and propose to improve the man and mankind. They are incrusted in the "nature x culture" confrontation in asymmetrical and non-systemic form. When a retrospect is made on the elements and impasses from the Western culture that permeate the "nature × culture" confrontation, the existence of eight great problems of post-modernity emerge: racism, poverty, war, structural unemployment, ecological destruction, infantile labor, moral crisis, and AIDS. These problems constitute a beam of impasses for mankind in 21st century. The construction of peace, the integration of the world economy to the environmental questions, the politicization of the worldwide forums of debates, the control on the planet's ecological future, the reinventions of new ethical utopias for mankind, the universality of the participative democracy, and the construction of the new natural and social contracts on a worldwide scale, are questions that pressure the current systems of thoughts and start to gain contours more transparent in beginning of this century. The political interventions of organized societies on local, regional and national scales can play an important role in the modulation and modeling of the degree of asymmetry of these processes, pondered and relativized by the historical conditions from each people. Emphasis on the technician-structural aspects have contributed to the worldwide symbolization of Western culture, and the opposite, on an exploratory study, on a world scale, on aspects of Western civilizing processes have collaborated to sustainability becoming a knowledge field essential to the solution and understanding of the post-modernity's complex problems (Lockie, 2016). The politicization of the sustainability notion encloses questions have articulated since the foundations of Western and East cultures, to the contradictions imbricated in worldwide racial and religious confrontations. Americans, Africans, Europeans, Asians, Blacks, Whites, Yellows and miscegenation alike have been collated with this new social and historical perspective: to construct and incorporate socioeconomic enterprises and symbolic representations to the sustainable development notion. Sustainability does not only involve environmental issues. As proposed by Tucker (2008) and other experts, this article has broadened the meaning of this notion and reaffirmed the importance of science, religion and education for the mankind's future. In this complex panel, this article puts new elements in the dialogue on science and religion, and the education for sustainability. Contrary to reductionist theses (Kellert, 2007), the religions, science and technology, philosophy, arts, economics and politics are not inscribed in our genetic code. They are social constructions directed to the improvement of mankind and the common good.

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