

Teilhard de Chardin's idea of progress and theory of cosmological evolution

José Eduardo Reis¹

UNIVERSIDADE TRÁS-OS-MONTES E ALTO DOURO

INSTITUTO DE LITERATURA COMPARADA DA FACULDADE DE LETRAS DO PORTO

Citation: José Eduardo Reis, "Teilhard de Chardin's idea of progress and theory of cosmological evolution", *Spaces of Utopia: An Electronic Journal*, 2nd series, no. 3, 2014, pp. 41-52 <<http://ler.letras.up.pt> > ISSN 1646-4729.

The aim of this article is to discuss Teilhard de Chardin and his theory of cosmological evolution. However, such a discussion cannot take place ignoring the notion of progress - established, in the context of Western culture, by French social, political and philosophical thinking of the eighteenth and nineteenth centuries - or without addressing the cultural foundations of this notion, which are rooted both in a Judeo-Christian, apocalyptic conception of time, as well as a belief - which may be rational or fideistic - in the evolving nature of the cosmological process and the course of history. Indeed, it is my view that, in the wake of studies by Ernest Lee Tuveson (1964) and, more recently, Jean Delumeau (1995), no hypothetical history of the notion of progress can begin to consider the origins of this idea without referring to its clear ancestry in the biblical millennial speculations and expectations which, as Norman Cohn (1957) exhaustively demonstrated, fed the imagination of medieval man.

It should be noted that progress is not an ideal Renaissance concept. In the minds of its most illustrious representatives, interpreted in the words of Frances Yates, human history does not arise as mere

evolution from primitive animal origins through ever growing complexity and progress; [in the mind of the educated Renaissance man] the past was always better than the present and progress was revival, rebirth, renaissance of antiquity. The classical humanist recovered the literature and the monuments of classical antiquity with a sense of return to the pure gold of a civilisation better and higher than his own. (Yates, 1978: 1)

It would not be thus in the century of the Enlightenment. In the euphoric rationality found in the writings of its most eminent spirits - from the English empiricists to the criticism of Kant, through the French encyclopedists - the eighteenth century did not feel indebted to the past, and was not so much renovative as strongly innovative. It was then that the notion of progress took shape as an autonomous and distinct chapter in the history of thought. Assimilating the ideas of inevitable development of being and prosperous evolution of society, it became a code word to describe the axiologically upward movement of human becoming towards ever more perfect stages of moral achievement and social coexistence. Moreover, despite the radically innovative intentions of its greatest theorists - the social thinkers that Frank Manuel calls *Prophets of Paris* (1965), namely, Turgot, Condorcet, Saint-Simon and Comte -, the formulation of the notion of progress also saw a resurgence in the general principle of a finalist explanation of the world, by then no longer theological but historical-philosophical, involving the concept of linear time inherent to Judeo-Christian eschatology, as well as a resurgent appreciation of the future dimension of time. The social philosophers of the eighteenth century and the first sociologists of the nineteenth century - *The Ideologists of Progress*, as Krishan Kumar in turn calls them (1978: 13) - viewed the successive ways of thinking and acting evidenced through History as signs of the process of growth and maturation of Humanity, impelled by a desire for continuous intellectual and social progress pointing to the future as the final culmination of its ontic and material fulfilment. Thus, the fundamental idea of progress, as formulated by the free thinkers of the eighteenth century and systematized by their followers in the nineteenth century, is based on four key points, namely: (i) the acknowledgement of a discernible continuity to the evolution of man's social and spiritual history, albeit not without turbulence, hesitations or retrogressive movements, which is divisible into phases or stages, revealing in their sequence an inherent design of maturation and perfection, both ontic and material; (ii) that this continuity is governed by historical laws rationally induced from analysis of the events produced by man and not deduced from belief in a providential scheme of divine ordination, (iii) that through knowledge of these laws it is possible to predict the ineluctable nature of advancement from one particular stage of development to the next; (iv) finally, that this advancement requires the intervention of the will and effort of men to be achievable.

As can be seen, the notion of progress constitutes the cornerstone of secular and materialist philosophies of history, which clearly prolong and provide continuity, in empirically recycled patterns, to the eschatological visions of the becoming of humanity under the providential direction of divine will. It is worth making brief mention here of one of the most stunning theologies of History, that of the late twelfth century abbot Joachim of Fiore, one of the most remote representatives of the lineage of thought which Teilhard de Chardin follows, both in his study of reason (as a paleontologist) and study of faith (as a theologian).

In his own way, Joachim of Fiore was a kind of philosopher of history seeking to provide a coherent explanation and make logical sense of the world's temporal course. Accordingly, he founded his whole theory about the meaning of historical becoming on a basic principle of reason, able to discern the purpose of the past, present and future order of human affairs. Of course, in twelfth century Europe this principle of reason could neither be sufficient nor immanent but necessarily transcendent, induced from Christian theology and the narrative contents of the Bible, the matrix book which informed all essential truth about the history of the world, the designs of God and his progressive revelation. Devoting all his intellectual energy to the in-depth reading and exegesis of the Holy Book, Joaquim inferred analogies and established correspondences between numbers, events and characters from the Old and New Testament, thus building up an intricate network of symbolic meanings which, according to him, consistently and successively revealed the action of the various attributes of the persons of the Holy Trinity at different stages in the History of the world. In other words, the becoming of time and human History itself was intrinsically linked to the trinity of the Christian God, which was revealed progressively in its paradoxical unity and heteronomy: if the Son proceeded from the Father, and the Holy Spirit proceeded from both, then History, understood as a process in which free human action was subsumed and determined by the will of God, was no more than a reflection of this divine triple avatar. History was thus divided into three phases or three states (*status*): the Father, the Son and the Holy Spirit. Each of these three states was split into seven periods (the number seven, which had already been used by St. Augustine to establish his own chronology of the world, having its biblical basis by analogy with the seven days of the Creation), the *aetates*, each designated by the name of a notable figure from sacred history.

Considering the time span of human history as if it were an unfolding of different divine attributes, as a spiritual progress, Joachim zealously describes it in

biological terms of germination and fructification, of conception and birth. Therefore, the state of the Father was conceived or germinated with Adam, began to bear fruit with Abraham and ended with Zechariah, father of St. John the Baptist. It was a state characterized by the prescription of divine law, by the ordering of commandments aimed at disciplining and instilling fear in Man. The state of the Son germinated with Osias (king of Judah in the seventh century BC), began to bear fruit with Jesus, and would come to an end, according to the calculations of the Calabrian abbot, around 1260. Its fundamental attribute was the humility of God, who became incarnate to redeem His creation. The men of this more civilized / spiritualized age no longer responded with fearful obedience, but with confident concern for the will of God. Nevertheless, His law remained external and did not correspond completely with human will. The state of the Holy Spirit, which germinated with St. Benedict (c.480-547), would begin to bear fruit around 1260 and end in the Consummatio Seculi, at the end of time. It is a condition in which, due to the general illumination of mankind by direct action of the Paraclete, spiritual freedom and compassionate love would reign, human will merging with divine will. This is how Marjorie Reeves describes this sequence:

In a lyrical impulse towards the end of the Liber Concordie he [Joachim] makes use of imaginative sequences to express this supreme movement of history: the first status was subordinate to the law, the second status to grace, the third status, expected soon, was under a still greater grace; the first fell to scientia, the second to sapientia, the third will be that of plenitudo intellectus; the first was lived in the servitude of slaves, the second in the servitude of sons, but the third will be in freedom; the first was the time of punishment, the second of action, but the third will be the time of contemplation; the first was lived in fear, the second in faith, the third will be in love; the first was the status of slaves, the second of sons, but the third will be that of friends; the first was of the elders, the second of the young, the third will be of the children; the first was lived under starlight, the second at the light of dawn, the third will be in full daylight; the first in winter, the second at the beginning of spring, the third in summer; the first is that of nettles, the second of roses, the third of lilies; in the first there is grass, in the second rye, in the third wheat; to the first belongs water, to the second wine, to the third oil. (Reeves, 1976: 14-15)

Joachimist theology of history ultimately reveals a fideistic belief in the measured and benign becoming of History, in the phased rise of Humanity towards theological goodness and happiness. Though on the margins of the official doctrine of the Roman Church, which was firmly Augustinian and Thomistic in essence, it aroused and legitimized expectations of social movement and change among the dispossessed throughout the Middle Ages. Yet it also reveals a conviction that would later come to be secularised in theories of social emancipation and philosophies of progress, heralding a final and perfect time in the course of history. Among many other

concepts postulated by the free-thinkers of the eighteenth and nineteenth centuries, such theories ranged from Auguste Comte's representation of the positivist state to the communist society outlined by Karl Marx, through Hegel's projected Prussian state - the complete consummation of the absolute Idea, according to the idealist German philosopher.

The "spiritual posterity" of Joachimist thought - to paraphrase the title of a voluminous work by Cardinal Henri de Lubac (1978) - is indeed varied and profuse, and one of its most illustrious and rightful heirs is the Jesuit paleontologist Pierre Teilhard de Chardin (1881-1955), who produced, in the mid-twentieth century, a fascinating evolutionary and prospectivist theory of the world.

His thought combines science, religion and prophetic utopianism. He offers a rational explanation of the origin of life and the emergence of human intelligence, founded on empirical observations and logical axioms (which is basically summarised in the first three chapters - "La prévie" (Pre-Life), "La vie" (Life), "La pensée" (Thought) - of his foremost book *Le Phénomène Humain (The Human Phenomenon)*, written in the late 1930s and early 1940s and which sums up his essential and original lines of thought as a paleontologist). In addition, he strives metaphysically to substantiate the cosmic fact - *Le Milieu Divin (The Divine Milieu)* - as well as outlining prophetically, from his scientific theses and theological speculations, the becoming of man and the world - *L'Avenir de l'Homme (The Future of Man)*. In simple terms, it may be said that de Chardin's theory of evolution is a modern substitute for Joachim's concept of the progress of history towards a stage of general illumination of mankind. However, while Joachim understood such illumination as an effect of the descent of the Holy Spirit and as an imminent event, enunciated cryptically by God's Book, de Chardin sees it as a collective and convergent ascent to the divine, as an ultimate product of cosmic evolution: its future occurrence - which he predicts to be in a few thousand years - is certain and pre-heralded in the very framework and laws governing the structure of nature. It is an illumination that will signal and coincide with the final stage in the evolution of conscious life, a stage to be determined by the principle of full solidarity and total union among men, that is, determined by the same synthetic principle that governs the essential activity of nature, and which can immediately be witnessed in the congregating movement of the molecular particles constituting inorganic matter, the "lithosphere" - the first layer, we could say, of the composite and diverse structure of the world.

As opposed to the Darwinian idea that life is a process subordinated to the principle of separation and division, a ruthless selective struggle for survival and assertion of the fittest, de Chardin's core theory is that the primary and radical condition of life is precisely union: evolution does not separate but rather becomes more complex through increasingly more elaborate, focused and structured syntheses of matter, in an *élan*, or life-force, that continues to manifest and determine the progressive increase in consciousness. In *Le Phénomène Humain*, Chardin proposes the following equation: *Evolution = Rise of Consciousness. / Rise of Consciousness = Effect of Union* (Chardin, 1955: 243); and in *L'Avenir de L'Homme* reiterates it, slightly altering the terms: "*Progress = Rise of Consciousness. / Rise of Consciousness = Effect of Organization.*" (Chardin, 1959: 93)

For Chardin, the "rise of consciousness", synonymous with the idea of progress, in turn an effect of the tendency towards general synthesis to which the different states of matter obey, is thus the central term of the equation that represents one of the fundamental tenets of his thought, namely: that consciousness - being revealed at a higher level with the advent of reflection, with the phenomenon of knowing what we know, that is, with the "homanisation" of the planet - is a kind of entelechy already present in less elaborate forms of matter in primordial life - even before that, in pre-life - and remarkably, in its most complex original form, with the formation, the 'awakening' of the cell. In this perspective, the cell is simultaneously regarded as the 'natural grain of life', i.e. as the first vital corpuscular manifestation, but also as a kind of minimal unit containing psychic energy - this energy being relatively higher than that of the molecular 'grain' - which prefigures or prepares a series of psychic transformations that will subsequently lead to the emergence of the human phenomenon. This relatively crude psychic energy that the cell is made to carry is what de Chardin designates the interior, the *Dedans* of matter itself, coextensive to its exterior, its *Dehors*, its granular form, its mechanical quality. The very substance matrix - *L'Étoffe* (The Stuff) - of the Universe, which participated in the formation and continues to participate in the evolution and transformation of the world, is bifacial, at once internal consciousness and external matter. This leads de Chardin, therefore, to concede that even before the awakening of cellular life, i.e. before the formation of the "biosphere", "a certain mass of elementary consciousness was originally imprisoned in terrestrial Matter." (Chardin 1955: 62)

The transition from inorganic to organic, from pre-life to life - the "cellular revolution" - is but the realization of a particular form of synthesis, a higher form of

the organization of matter, of the integration in a minimal space of a great organic multiplicity (albuminoids, proteins, water, phosphorous, different kinds of minerals), together with an increase in interiority, a qualitative change in the psychism latent in inorganic matter. This “rise in psychic temperature”, this increase in interiority correlates with the increased interiority of the Earth itself. Essential to de Chardin is the idea that matter - regardless of its degree of magnitude - complexifies through folding, and that consciousness - regardless of its level of participation - arises from the supportive interconnection of different energy centres. Accordingly, from there, he emphasizes the importance played by vectors of compression and agglomeration in the arrangement of higher forms of human organization and socialization: at whatever stage of the world’s evolution, what prevails is always the same tendency towards synthesis and realization of the fundamental condition of “unity of diversity”. Once the “step of life” is taken, it has but to expand and rise, and with it consciousness. Following the birth of thought, of reflection, and the fact that consciousness, “folding back” on itself, has acquired the ability to observe itself, another sphere has begun to expand, conditioned by and organically related to the lithosphere and biosphere, and becoming coupled to both in the evolutionary process of the constituent complexification of the world: the noosphere.

In the view of Teilhard de Chardin, the world thus appears to consist of three different layers or strata, which correspond to three different stages in its evolutionary formation: the lithosphere or inorganic layer, the biosphere or living layer and noosphere or layer of thought. In all of these layers, psychic energy operates in a more or less latent and indelible fashion, and although their configuration is one of relative constituent autonomy, they retain between them nexuses of organic and functional interdependence.

With due recognition of the theoretical differences in play, some analogical connections can be established between Joachim of Fiore’s theory of history and Teilhard de Chardin’s theory of cosmic evolution; the same hermeneutic scheme at once ternary and unitary for deciphering the progress of the world is in some way common to both: whereas the former saw divine action as the driving force of history and full spiritualization of man, the latter sees the action of cosmic time - which his religious sentiment interprets as a manifestation of God’s will - driving the process whereby matter becomes conscious, the condition of its future full spiritualization. Joachim saw the action of the *Unus Deus* throughout time and divided the course of history in accordance with the discrete and successive predominance of each of the

essential attributes of the three Persons of the Trinity. De Chardin, meanwhile, sees the action of the substance (*L'Étoffe*) of the universe, at once material and spiritual, folding back on itself and being succeeded ternarily by ever more complex strata of material synthesis, endowed with increasingly intense, focused and differentiated consciousness.

According to de Chardin's evolutionary theory, all of this growth, expansion and elevation of life is naturally subject to a temporal process, a *Durée*, which marks the rhythm of creative action and closes an intention of sublimation. The world is essentially a continual manifestation and transformation of energy; any element of nature, any corpuscle is animated by energy, which manifests itself in two distinct ways: tangentially - that is, by mechanical, physical, associative energy, which acts by drawing together all elements of the same natural order and making them mutually supportive -, and radially - that is, by psychic, boundless, dynamic energy, which acts by boosting elements to states or levels of organization that are more complex, more "folded" and "focused". The first of the two forms of energy is reproductive and its main function is to operate the synthesis between the elements considered individually; the second is transformative in nature, generating the intrinsic and qualitative changes to which matter is subject. From one fold to another, each synthesis to the next, metamorphosis to metamorphosis, time promotes the elevation of life, until the appearance of the "Human phenomenon". This is the highest existing level of consciousness and the perfected product of the combined action of tangential energy with radial energy, which animates the élan of the cosmic substance (*l'Étoffe*). It is a hyper-complex biological phenomenon that on another scale of synthesis and organization of matter cannot cease to reproduce the same principles and laws that led to the awakening of the cell: the socialization of human history prolongs the vital organic movements and the social phenomenon is the culmination of the biological phenomenon. The social evolution of man itself is nothing more than a progressive, integrative unification of differences (consummation of unity of diversity) that tends towards a critical stage of overcoming. It is the forces of confluence that arise in the very process of branching and differentiation between species, races, peoples and nations, as though the level of conflict inherent in the evolution of life could play only a secondary role in relation to the objective of the final cohesion. Teleology and the idea of future govern de Chardin's evolutionary thought and cosmic-eschatological hope; his scientific research as a paleontologist, as a reader of the distant signs of the origins of life on Earth, as a speleologist of the past, allows him to preview and make a forecast of the future, and legitimizes his prophecy of a "mega-

synthesis” of humanity and its metamorphosis in a higher ontic state into what he calls survival (*Survie*). “The future is more beautiful than all of the pasts, this is my faith” - (*apud* Onimus, 1968: 153); but faith in what future, it could be asked? A future that will prolong the constructive ingenuity of the forms of organization of matter until its final consummation, and which will take to an ultimate end the synthesis of the highest organization of intelligent matter, human society. This will be transformed into a super or ultra-humanity, consciously awakened and in global solidarity, “super-personalized” and with each turned to the other; in short, a future super-conscious. This survival or subsequent state in the evolution of life will be characterized by the triumph of totality over individuality, without implying the annihilation of the singular human being. Each individual, despite or as a result of the natural propensity to unite, will gain greater personality; not being mistaken in the whole, nor disassociated from it, but participating in it with his irreducible difference (an organic network of centres of conscious energy cooperating between themselves and achieving the aforementioned “unity of diversity”). It will be a state attainable not by forced processes outside the intelligent will, but by the effect of the “conspiracy of love” and as the inevitable result of the “great option” - the convergence - that will be arise in the becoming of essential, vital evolution. De Chardin is in no doubt, therefore, that humanity has reached a phase of accelerated collectivization. It is a world converging on the increasingly intense union of individual consciousnesses, in which each thinking element realises his own purpose not in the consummation of himself, but by exceeding himself, by virtue of radial energy, and incorporating himself onto a higher plane of consciousness that extends beyond there from individuality to universal substance; a world witnessing the formation of the 'grain of thought', the whole scale, as in the distant past it witnessed the formation of the cellular 'grain of life'; a world that is seeing an unprecedented development of the noosphere and a collective synthesis, which is a demonstration of the potential of the fundamental energy of life, of the love that in solidarity deepens the relativity of the individual sense of existence. In such a world, the future appearance of another state must be considered, beyond the collective, beyond socialization and co-reflection, beyond the noosphere, and beyond the ultra-human. Teilhard de Chardin thus considers that the present indications of increased global awareness, the result of the phenomenon of socialization, far from being representative of a final stage in the evolution of conscious matter, correspond rather to a transition to a new and final phase that will be defined by its spatio-temporal transcendence, by the spiritualisation of matter and finally by the extinction of the planet as a physical, material entity. The present well-being, sign of a general improvement in forms of

social organization (but whose empowerment without spiritual elevation could ultimately only lead to a life of tedium), will be sublimated in a future of increased being, and the excessive compression of the noosphere will transform psychic qualities into spiritual qualities: humanity will then be set to converge on what Chardin calls the Omega point. As a corollary of the mechanism of planetisation, we have then to admit the existence

ahead of, or rather in the heart of, a universe prolonged along its axis of complexity, [of] a divine centre of convergence. That nothing may be prejudged, and in order to stress its synthesizing and personalizing function, let us call it the point Omega. Let us suppose that from this universal centre, this Omega point, there constantly emanate radiations hitherto only perceptible to those persons whom we call "mystics." Let us further imagine that, as the sensibility or response to mysticism of the human race increases with planetisation, the awareness of Omega becomes so widespread as to warm the earth psychically while physically it is growing cold. Is it not conceivable that Mankind, at the end of its totalisation, its folding-in upon itself, may reach a critical level of maturity where, leaving Earth and stars to lapse slowly back into the dwindling mass of primordial energy, it will detach itself from this planet and join the one true, irreversible essence of things, the Omega point? A phenomenon perhaps outwardly akin to death: but in reality a simple metamorphosis and arrival at the supreme synthesis. An escape from the planet, not in space or outwardly, but spiritually and inwardly, such as the hypercentration of cosmic matter upon itself allows (...). The more I think about this mystery, the more it appears to me, in my dreams, as a "turning-about" of consciousness - as an eruption of interior life - as an ecstasy. There is no need to rack our brains to understand how the material vastness of the universe will ever be able to disappear. Spirit has only to be reversed, to move into a different zone, for the whole shape of the world immediately to be changed (...). It is then, we may be sure, that the Parousia will be realized in a creation that has been taken to the climax of its capacity for union (...). Within a now tranquil ocean, each drop of which, nevertheless, will be conscious of remaining itself, the astonishing adventure of the world will have ended. The dream of every mystic will have found its full and legitimate satisfaction. (Chardin, 1959: 155; 402)

It is understandable that writings of this tenor, though written by a devout Jesuit, were regarded as suspect and were subject to admonition by the Vatican. The truth is that such a scientific conception of the world, more scholarly than sceptically creative, necessarily also has the equally heretical theory that consciousness manifests itself, albeit in a rudimentary way, in inert matter or in its non-intelligent organic form (plant, animal), i.e. that matter is inseparable from spirit². De Chardin's evolutionary theory is based on his duly reasoned work as a paleontologist, worthy of the greatest scientific credit. He boldly explains the process of how the transformation of matter follows a transcendent plan but requires the immanent to become manifest in increasingly complex and refined ways. These explanations aim to demonstrate that time is providentially benign in creating new levels of consciousness and strengthening the bonds of affection between beings. Ultimately, future time will

redeem all creation and ceasing to be time, will be dissolved into another dimension. The evolution of conscious matter will eventually see the expansion of love on a universal scale. Without apocalypses or transient stages of grace, the world will be extinguished by the effect of “psychic (over)heating”, by the metamorphosis of the unitive state of mystical consciousness - in a return to the most perfect synthesis of all, the indivisible origin of the universe or, in religious terms, the integration of the divine whole. All will fatally end well - that is Teilhard de Chardin’s fedeistic message of hope. Everything will end up blessed.

Works Cited

- Chardin, Pierre Teilhard de (1955), *Le Phénomène Humain*, Paris, Éditions du Seuil.
- - (1959), *L' Avenir de l' Homme*, Paris, Éditions du Seuil.
 - - (1964), *The Future of Man* trans., Norman Denny, New York, Harper and Row.
 - - (s.d), *O Lugar do Homem no Universo*, trad. Manuel Versos de Figueiredo, S.J, Lisboa, Presença.
- Cohn, Norman (1957), *The Pursuit of the Millenium*, London, Secker and Warburg.
- Delumeau, Jean (1997), *Mil Anos de Felicidade*, trad. Augusto Joaquim, Lisboa, Terramar.
- Kumar, Krishan (1986), *Prophecy and Progress: the Sociology of Industrial and Post-Industrial Society*, London, Penguin Books.
- Lubac, Henri (1978), *La Postérité Spirituelle de Joachim de Fiore*, Paris, Éditions Lathielleux, Le Sycomore, 2 vols.
- Onumus, Jean (1968), *Pierre Teilhard de Chardin ou la Foi au Monde*, Burges, Desclée de Brouwer.
- Reeves, Marjorie (1976), *Joachim de Fiore and the Prophetic Future*, London, SPCK.
- Santos, Boaventura de Sousa (1993), *Um Discurso Sobre as Ciências*, Porto, Afrontamento.
- Tuvenson, Ernest Lee (1964), *Millennium and Utopia. A Study in the Background of the Idea of Progress*. New York: Harper Torchbooks.
- Yates, Frances (1979), *Giordano Bruno and the Hermetic Tradition*, Chicago, The University of Chicago Press.

Notes

1 The author would like to thank Jonathan Lewis for his qualified English modelling of this essay.

2 The latest theories of physics and biology appear to reiterate and confirm Teilhard de Chardin's theories of evolution and expansion of consciousness, particularly when they undo traditional ideas about the structure of matter and the distinction between the organic and inorganic world, as well as differences in behaviour that separate the human from the nonhuman. In this regard, read the Oration of Sapience given by Boaventura Sousa Santos at the University of Coimbra in 1985. It reads as follows: "The characteristics of self-organization, metabolism, and self-reproduction, previously considered specific to living beings, are now assigned to pre-cellular systems of molecules. And in both are recognized properties and behaviours previously considered specific to human beings and social relations. [...] all these theories [of eminent contemporary scientists] introduce to the field concept of historicity and process, freedom, self-determination and even consciousness before man and woman had reserved it for themselves. [...] in a certain return to the panpsychism of Leibniz, there begins today to be recognized a psychic dimension in nature, "the broader mind" that Bateson speaks about, of which the human mind is only a part, an mind inherent to the global social system and to the planetary ecology that some call God" (Santos, 1993: 37-38).