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Ecological Conscience and Peace in the Social Doctrine of the Church

Sumienie ekologiczne i pokój w społecznym nauczaniu Kościoła

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Abstract: In a time when wars emerge again with their devastating effects, both material and spiritual, there is an indispensable need to build a peace-making culture based on ecological conscience. After highlighting the transdisciplinary process of emergence and development of an ecological conscience through the prophetic insights of scientists, philosophers and theologians, the recent contributions of the Social Doctrine of the Church are summarized with their content of innovation and faith in both a peaceful human society and a sustainable planetary community. Suggestions for ecolinguistic developments and improvements in favor of ecological conscience and peace-bulding attitudes are both recognised and advanced as meaningful tools for positive "framing" in a communication society. Innovative conceptual terms, like natural capital, biosphere, noosphere, anthropocene, ecosystem services, sustainability, integral ecology, ecological spirituality and ecological conversion are recognised as typical eco-linguistic emergences arisen within a context of holistic framing of reality. They constitute the eco-linguistic cascade that has innovated the recent development of the social doctrine of the Church such as that expressed in the Encyclical Letters and in The World Days of Peace Messages for building a culture of peace based on ecological conscience. The Church's contribution to the advancement of ecological conscience has been exemplary for providing human beings with the necessary spiritual energy to become "peace operators."

Keywords: Ecology, sustainable development, ecotheology, ecolinguistics, environmental ethics, religion and ecology, Christianity and ecology

Streszczenie: W czasach, gdy ponownie wybuchają wojny niosące ze sobą zniszczenie, zarówno w sferze materialnej, jak i duchowej, pojawia się potrzeba budowania kultury pokoju, opartej na sumieniu ekologicznym. Po podkreśleniu transdyscyplinarnego procesu powstawania i rozwoju świadomości ekologicznej poprzez prorocze spostrzeżenia naukowców, filozofów i teologów, autor podkreśla wkład Doktryny Społecznej Kościoła w rozwój pokojowego społeczeństwa ludzkiego, jak i w zrównoważonej społeczności planetarnej wskazując na treści dotyczące innowacji i wiary. Sugestie dotyczące rozwoju i ubogacania ekolingwistyki w kierunku rozwijania świadomości ekologicznej i postaw propokojowych są postrzegane jako istotne narzędzie pozytywnego "ramowania" w społeczeństwie komunikacyjnym. Innowacyjne terminy pojęciowe, takie jak kapitał naturalny, biosfera, noosfera, antropocen, usługi ekosystemowe, zrównoważony rozwój, ekologia integralna, duchowość ekologiczna i konwersja ekologiczna, są uznawane za typowe wytwory ekolingwistyki powstałe w kontekście holistycznego ujęcia rzeczywistości. Stanowią one kaskadę ekojęzykową, która tak niedawno wniosła innowacyjne zmiany w rozwój nauki społecznej Kościoła, takiej jak ta wyrażona w Encyklikach i Orędziach Światowych Dni Pokoju, mająca na celu budowanie kultury pokoju opartej na sumieniu ekologicznym. Wkład Kościoła w rozwój świadomości ekologicznej był wzorcowy, jeśli chodzi o zapewnienie ludziom energii duchowej niezbędnej do tego, aby mogli oni stać się "operatorami pokoju".

Słowa kluczowe: ekologia, rozwój zrównoważony, ekoteologia, ekolingwistyka, etyka środowiskowa, religia i ekologia, chrześcijaństwo i ekologia

Introduction

Today more than ever, there is a need to find a language able to unveil the identity of man and his/her role in nature and/or creation, by evoking science and/or faith, respectively. Such a language may be named “ecothological” by evoking eco-theology as an evolving transdisciplinary field of enquiry between ecology and religion (Edwards 2006), a crossroads where the innovative systems science and the traditional metaphysical faith meet. A language is a collective asset in promoting communication, information, reflection, judgement and eventually action, grounding the human capacity to develop culture and human lifestyle that defines peculiar civilisation patterns (Gare 2017). Every field of human activity systems has its own linguistic forms, frames and metaphors (Stibbe, 2015), including science, technology, economy, philosophy, poetry, literature, advertising and religion.

A “consumers society,” such as that which is prospering in the world of today, has developed many separate fields of interest requiring strict specialisation of both competence and language, whereby cross-understanding is hardly attainable and political control is dramatically missing. Consequently, private interests largely overcome public ones, common goods are neglected, natural resources are depleted and pollution spreads everywhere into air, water, soil and biomass chains and webs. The planetary ecosystem is suffering from human ill governance and his “fever” manifests itself as a “greenhouse effect.” Humanity, torn apart by fratricidal wars - the latest of which are developing in Ukraine, at the core of Europe, and at its border, in Israel and Palestine area - is running the capital risk of a global nuclear devastation. Humanity is now suffering a dangerous ethical oblivion, from which it is necessary to recover and take on a new form of responsibility developing an “ecological conscience”. To this aim, an important contribution for making peace “with God the creator and all of creation” (John

Paul II 1990) comes from the “Social Doctrine of the Church”.

1. Emergence and Development of an Ecological Conscience

The emergence of ecological awareness started with the birth of the new term *ecology*, introduced in German language (*Oecologie*) by Ernst Haeckel (1834-1919) in 1866. The term identifies *relations* among organisms within their environment of life. The focus of interest for both ecological inquiry and management is not so much an individual entity, but the *web of relations* in which he/she/it is involved. Ecology generates an *ecocentric* perspective that recognises humanity’s embeddedness in the natural world and involves new ethical implications. The inspiring term *ecology* has part of its roots in the emergence of chemistry, a science developed in the nineteenth century, to which Justus von Liebig, a celebrated German soil chemist, made an important contribution through his biogeochemistry approach. Biogeochemistry had positive effects on other scientific fields, such as geology and biology. Italian geologist and priest Antonio Stoppani (1824-1891) provided a prophetic conception of what happens at a planetary level as effect of the interaction among geological, physical, chemical, biological and anthropic forces. He defined the Earth as a “telluric organism” and announced a new geological era - “the anthropozoic era” (Stoppani 1873), today defined “Anthropocene.” In the early 1920s, Russian biogeochemist Vladimir Vernadskij (1863-1945) and French priest and paleontologist Pierre Teilhard de Chardin (1881-1945) developed the concepts of *biosphere* and *noosphere*. In the history of human beings, the first important example in attempting to bridge the gap between science and faith is that offered by Pierre Teilhard de Chardin (1945 and 1959) by suggesting the following recognizable patterns of the functional *integration principle*:

1. integration of opposites in view of a unitary vision of both material and

immaterial reality in a way that satisfies the need of wholeness in knowledge and sense;

2. integration of the evolution steps in the history of both cosmos and humanity as a coherent process of unitary development leading to a focus point (*Omega point*);
3. integration between a spatiotemporal scale and a process scale of increasing information according to the law of complexity-conscience;
4. integration of disciplinary contents into a transdisciplinary framework.

To Teilhard, *integration*, *harmony* and *love* are key words and show an itinerary of hope, if they operate as value elements for action. The process of planetary “hominization”, that is already at its climax, ought to be now followed by the process of “humanization”, that is instead at its very beginning. A spiritual evolution phase should complete the entire process of life evolution on the Earth, with a “noospheric” convergence brought about by both demographic pressure in a confined planetary space and a spirit of creative belonging in a cosmic project (Caporali 2015, 102).

Biophysicist Alfred Lotka (1880-1949) wrote an “ecological treatise” in 1925 without mentioning the term ecology. However, the very character of ecology emerges in his book by linking the separate worlds of the organic and the inorganic within a system approach. As to matter, a truly biochemistry approach emerges at planetary level with astonishing insights into the most important cycles of chemical elements. As to energetics, or “dynamics of the world engine,” nature appears as evolution of a system of energy transformers, “anabions and catabions,” doing cyclic working measurable through input/ output analysis and efficiency performance calculation. As to the flow of knowledge in the whole system, Lotka puts emphasis on the information-action unitary process with this conclusion: “Thus, in the light of modern knowledge, man is beginning to discern more clearly what wise

men of all ages have intuitively felt his essential unity with the Universe [...] A race with desires all opposed to Nature could not long endure; he that survives must, for that very fact, be in some measure a collaborator with Nature. With extending knowledge must come awakening consciousness of active partnership with the Cosmos” (Lotka 1925, 433).

The ecosystem concept is the theoretical underpinning of the modern science of ecology. In the original Tansley’s vision (1935), the ecosystem concept has opened the way for both identifying the organisation pattern of nature with a unique term and connecting material, biological, psychological and ethical values. Basic connections operate through the integration of functional processes in a trophic dynamic (producers, consumers, decomposers). Lindemann (1942) made a first, clear illustration of the trophic-dynamic aspects of the processes of energy transfer and nutrient cycling in nature. Epistemologically, the ecosystem concept functions as a meaningful integrative tool in the hierarchical organisation of reality for scaling up enquiry. The two basic pillars of hierarchy and integration that emerge as ecosystem properties have methodologically operated as pure “legs” on which the new ecosystem ecology has moved its first steps and is still standing and developing. On the base of scientific evidence, the ecosystem model has heuristic, aesthetic and ethical values (MAB 1971; Caporali 2021). In 1971, UNESCO launched the “Man and Biosphere Programme” (MAB) of research in order to provide an ecological approach for the improvement of the global relationships between man and the environment. Ontologically, functional processes such as transfer of energy, nutrient cycling and biodiversity creation are the basis for continuous ecosystem development or sustainability, working together to create a balanced, self-maintaining structure. Schumacher (1973) provided a first detailed description of the use of intermediate technology for reducing both poverty and environmental

impact. Sustainability is today a paradigm for both local and global development with self-evident ethical values for maintaining natural capital and ecosystem services, while reducing ecological footprint.

A new language (ecolinguistics) and a new field of transdisciplinary enquiry (ecothology) have emerged to sustain an education process for sustainable development. Ecological conscience is just an appropriate example of a new conceptual formulation for advances in ecotechnology through ecolinguistics.

Ecologist Aldo Leopold (1949) was the first to link the concept of “Land Ethics” with that of “Ecological Conscience” in this way: “A land ethics, then, reflects the existence of an ecological conscience, and this in turn reflects a conviction of individual responsibility for the health of the land. Health is the capacity of the land for self-renewal. Conservation is our effort to understand and preserved this capacity” (Leopold 1949, 221).

The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land (Leopold 1949, 204).

Later, American Catholic theologian Thomas Merton (1915-1968) strongly advocated Leopold’s statements, as shown in the following excerpts from an article that appeared in *The Catholic Worker*, June 1968 (Merton 1968, 4):

- Aldo Leopold brought into clear focus one of the most important moral discoveries of our time. This can be called the ecological conscience. The ecological conscience is centered in an awareness of man’s true place as a dependent member of the biotic community. Man must become fully aware of his dependence on a balance which he is not only free to destroy but which he has already begun to destroy. He must recognize his obligations toward the other members of that vital community.
- The respect for life, the affirmation of all life, is basic to the ecological conscience. The tragedy which has been revealed

in the ecological shambles created by business and war is a tragedy of ambivalence, aggression and fear cloaked in virtuous ideas and justified by pseudo-Christian clichés.

- The psychological root of it is doubtless in the profound dehumanization and alienation of modern Western man, who has gradually come to mistake the artificial value of inert objects and abstractions (goods, money, property) for the power of life itself.
- The ecological conscience is also essentially a peace-making conscience. A country that seems to be more and more oriented to permanent hot or cold war-making does not give much promise of developing either one.
- Catholic theology ought to take note of the ecological conscience and do it fast.

In 2004, the Pontifical Council for Justice and Peace published the volume “Compendium of the Social Doctrine of the Church” (CSDC) in order to offer it “to the faithful and to all people of good will”. The Introduction (*An Integral and Solidary Humanism*) presents a description of current human predicament in the following terms. Humanity is coming to understand ever more clearly that it is linked by one sole destiny that requires joint acceptance of responsibility, a responsibility inspired by an integral and shared humanism. It sees that this mutual destiny is often conditioned and even imposed by technological and economic factors, and it senses the need for a greater moral awareness that will guide its common journey. Marvelling at the many innovations of technology, the men and women of our day strongly desire that progress be directed towards the true good of the humanity, both of today and tomorrow.

In CSDC, chapter 10 (Safeguarding the Environment) and Chapter 11 (The Promotion of Peace) are subsequent and fully integrated, in such a way that this sequence is not casual but stems from the original sources from which most of them come,

i.e. preceding Encyclical Letters and annual Messages for the World Day of Peace¹. These documents constitute the very body of knowledge that flows from the cross-fertilisation between the science of Ecology and the Christian faith. This transdisciplinary process is still underway and feeds what today we call Eco-theology.

International literature concerning eco-theological advances recognises Pope John Paul II's 1990 message for the celebration of the World Day of Peace as one of the grounding documents for Christian Eco-theology. Its Introduction already makes clear the connection between an emergent ecological conscience and its implication for a peaceful world: "In our day, there is a growing awareness that world peace is threatened not only by the arms race, regional conflicts and continued injustices among peoples and nations, but also by a lack of due respect for nature, by the plundering of natural resources and by a progressive decline in the quality of life. [...] A new ecological awareness² is beginning to emerge which, rather than being downplayed, ought to be encouraged to develop into concrete programmes and initiatives" (John Paul II 1990, No. 1).

Many ethical values, fundamental to the development of a peaceful society, are particularly relevant to the ecological question. The fact that many challenges facing the world today are interdependent confirms the need for carefully coordinated solutions based on a morally coherent worldview.

Starting from biblical considerations that help understand better "the relationship between human activity and the whole of creation," the connection between an ecological conscience and a peaceful world takes form in the sequence of three points as summarized in Box 1.

Box 1. Relationships between ecological conscience, war and peace – based on Pope John Paul II (1990).

The Ecological Crisis: A Moral Problem

- The indiscriminate application of advances in science and technology.
- The most profound and serious indication of the moral implications underlying the ecological problem: the lack of respect for life evident in many of the patterns of environmental pollution.

In Search of a Solution

- Earth is ultimately a common heritage, the fruits of which are for the benefit of all.
- The concepts of an ordered universe and a common heritage both point to the necessity of a more internationally coordinated approach to the management of the earth's goods.

The Urgent Need for a New Solidarity

- The ecological crisis reveals the urgent moral need for a new solidarity, especially in relations between the developing nations and those that are highly industrialized.
 - Today, any form of war on a global scale would lead to incalculable ecological damage. But even local or regional wars, however limited, not only destroy human life and social structures, but also damage the land, ruining crops and vegetation as well as poisoning the soil and water.
 - An education in ecological responsibility is urgent: responsibility for oneself, for others, and for the earth.
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2. Recent Contributions of the Social Doctrine of the Church to the Construction of a Peace-Making Ecological Conscience

According to the Compendium of the Social Doctrine of the Church, "*The World Days of Peace* are particularly intense moments of prayer for peace and for the commitment to build a world of peace. The Papal Messages on these annual occasions represent a rich source for the renewal and development of the Church's social doctrine and show the Church's constant pastoral activity aimed at the promotion of peace" (CSDC 2004, 520). Meaningful to the construction of a peace-making ecological conscience, which is a steppingstone

¹ The first one released by Pope Paul VI in 1968.

² "Ecological awareness" is a translation in the Vatican documentation from the original Italian "coscienza ecologica."

in developing eco-theology in practice, is the Pope Benedict XVI's 2010 Message, whose title is "If You Want to Cultivate Peace, Protect Creation." This kind of "eco-theological imperative" is together an eco-linguistic metaphor and a civic goal to achieve (peace cultivation) through an ethical commitment of both Christian care and ecological conscience, as explicitly written at the start of the 2010 Message: "Respect for creation is of immense consequence, not least because 'creation is the beginning and the foundation of all God's works' and its preservation has now become essential for the pacific coexistence of mankind. Man's inhumanity to man has given rise to numerous threats to peace and to authentic and integral human development wars, international and regional conflicts, acts of terrorism, and violations of human rights. Yet no less troubling are the threats arising from the neglect – if not downright misuse – of the earth and the natural goods that God has given us. For this reason, it is imperative that mankind renew and strengthen 'that covenant between human beings and the environment, which should mirror the creative love of God, from whom we come and towards whom we are journeying'" (Pope Benedict XVI 2010, No. 1).

According to the 2010 Message, the benefit that human mind and culture can enjoy from this transdisciplinary approach to see nature as creation is psychologically relevant and comparable to an injection of spiritual energy useful to confirm human dignity and role: "In my Encyclical *Caritas in Veritate*, I noted that integral human development is closely linked to the obligations which flow from man's relationship with the natural environment. The environment must be seen as God's gift to all people, and the use we make of it entails a shared responsibility for all humanity, especially the poor and future generations. I also observed that whenever nature, and human beings in particular, are seen merely as products of chance or an evolutionary determinism, our overall sense of responsibility wanes. On

the other hand, seeing creation as God's gift to humanity helps us understand our vocation and worth as human beings" (Pope Benedict XVI 2010, No. 2).

An ecological conscience, if applied to the dynamics of the decision-making process either individual or collective, is capable to raise ecological responsibility for action, for example promoting friendly technology for the environment and discouraging armaments, as warmly recommended in the 2010 Message: "In this broader context one can only encourage the efforts of the international community to ensure progressive disarmament and a world free of nuclear weapons, whose presence alone threatens the life of the planet and the ongoing integral development of the present generation and of generations yet to come" (Pope Benedict XVI 2010, No. 11).

In conclusion, Pope Benedict XVI strongly encourages an education supported by an ecological conscience that operates in favour of ecological responsibility:

- Education for peace must increasingly begin with far-reaching decisions on the part of individuals, families, communities and states. We are all responsible for the protection and care of the environment. This responsibility knows no boundaries (Pope Benedict XVI 2010, No. 11)
- I readily encourage efforts to promote a greater sense of ecological responsibility which, as I indicated in my Encyclical *Caritas in Veritate*, would safeguard an authentic "human ecology" and thus forcefully reaffirm the inviolability of human life at every stage and in every condition, the dignity of the person and the unique mission of the family, where one is trained in love of neighbour and respect for nature. (Pope Benedict XVI 2010, No. 12)
- Protecting the natural environment in order to build a world of peace is thus a duty incumbent upon each and all. It is an urgent challenge, one to be faced with renewed and concerted

commitment; it is also a providential opportunity to hand down to coming generations the prospect of a better future for all. May this be clear to world leaders and to those at every level who are concerned for the future of humanity: the protection of creation and peace making are profoundly linked! (Pope Benedict XVI 2010, No. 13)

In the 2010 Message, the following statement drawn from the Encyclical Letter *Caritas in Veritate* is of extreme interest to an ecologist for building a peace-making culture according to both an ecological conscience and an eco-theological perspective: “Nature is a gift of the Creator, who gave it an inbuilt order and enabled man to draw from it the principles needed to “till it and keep it” (cf. Gen. 2:15) [...] Man thus has a duty to exercise responsible stewardship over creation, to care for it and to cultivate it” (Pope Benedict XVI 2010, No. 6).

Ecology is just the science developed in order firstly to discover and explain the principles of organisation of nature (the *inbuilt order*), and secondly, to apply them to its governance (*tilling and keeping*). It is this meeting point between theory and praxis that gives mutual and concrete sustenance to both ecology and theology, making eco-theology an innovative and promising approach towards the building of a peace-making culture. To achieve this goal, the challenge is to provide appropriate education, for both content and methods, and appropriate educators.

Pope Francis has taken up this challenge by offering two Encyclical Letters “to the people of the world,” *Laudato Si’* (LS) in 2015 “On Care of Our Common Home”, and *Fratelli tutti* (FT) in 2020 “On Fraternity and Social Friendship”. Both Letters deal with the matter of cooperation for building a peace-making culture, the first one with all of creation and the second one with the other humans; together, the two Encyclicals call for cooperation and peace with God the Creator. In the development of the Social Doctrine of the Church, there

is an internal astonishing coherence, while new innovative insights and patterns of progress emerge in accordance with the context cultural evolution.

In LS, ecological conscience emerges within a narrative that starts from repentance from our exploitation of nature and misuse of human power and ends up with ecological conversion of the human way of life towards the care for creation. According to many process-relational responses by distinguished members of different scientific and humanist fields in a book dedicated to him (Cobb and Castuera 2015), Pope Francis asks for “the ambitious goal of replacing patterns of thought (how we teach, govern, do business, think, and who we include) with one that would redirect us toward ecological civilization”. His moral leadership stands up as a humanity’s ecological conscience constituted of three main eco-linguistic components, *Integral ecology* (LS, Ch. IV), *Ecological spirituality* (LS, Ch.VI) and *Ecological conversion* (LS, No. 216-221) (Table 1).

The last statement in table 1, “inner peace is closely related to care for ecology and for the common good”, opens up a new question on how to achieve “outer peace” as well, which would be beneficial for both the planet and humanity. The response to this question comes later, in the Encyclical *Fratelli Tutti*, “On Fraternity and Social Friendship”. The “outer peace” needs to be built with the other people in the world, at both local and global level (Box 2).

3. Ecolinguistics for Ecological Conscience and Peace

Scientific understanding of life in our planet has been holistically reframed³ with the introduction of innovative conceptual terms, like natural capital, biosphere, noosphere, ecosystem, ecosystem services, Anthropocene and sustainability, which

³ “Frames” are cognitive explanations based on conceptual systems done within cognitive linguistic tools, like metaphors and stories.

Table 1. Main components of the ecological conscience building process in LS – author’s own elaboration based on Pope Francis (2015)

Integral Ecology	Ecological Spirituality	Ecological Conversion
No. 139 It is essential to seek comprehensive solutions which consider the interactions within natural systems themselves and with social systems. We are faced not with two separate crises, one environmental and the other social, but rather with one complex crisis which is both social and environmental. Strategies for a solution demand an integrated approach to combating poverty, restoring dignity to the excluded, and at the same time protecting nature.	No. 202 Many things have to change course, but it is we human beings above all who need to change. We lack an awareness of our common origin, of our mutual belonging, and of a future to be shared with everyone. This basic awareness would enable the development of new convictions, attitudes and forms of life. A great cultural, spiritual and educational challenge stands before us, and it will demand that we set out on the long path of renewal.	No. 222 Christian spirituality proposes an alternative understanding of the quality of life, and encourages a prophetic and contemplative lifestyle, one capable of deep enjoyment free of the obsession with consumption.
No. 141. This suggests the need for an “economic ecology” capable of appealing to a broader vision of reality. Protection of the environment is in fact “an integral part of the development process and cannot be considered in isolation from it”.	No. 216 The life of the spirit is not dissociated from the body or from nature or from worldly realities, but lived in and with them, in communion with all that surrounds us.	No. 223 Such sobriety, when lived freely and consciously, is liberating. It is not a lesser life or one lived with less intensity. On the contrary, it is a way of living life to the full.
	No. 217 The ecological crisis is also a summons to profound interior conversion.	No. 224 That is why, it is no longer enough to speak only of the integrity of ecosystems. We have to dare to speak of the integrity of human life, of the need to promote and unify all the great values.
		No. 225 An adequate understanding of spirituality consists in filling out what we mean by peace, which is much more than the absence of war. Inner peace is closely related to care for ecology and for the common good.

Box 2. Social conditions for building “outer peace” – author’s own elaboration from Pope Francis (2020).**Without Borders**

No. 17: To care for the world in which we live means to care for ourselves. Yet we need to think of ourselves more and more as a single family dwelling in a common home.

Rights without Borders

No. 127: We can aspire to a world that provides land, housing and work for all. This is the true path of peace, not the senseless and myopic strategy of sowing fear and mistrust in the face of outside threats. For a real and lasting peace will only be possible “on the basis of a global ethic of solidarity and cooperation in the service of a future shaped by interdependence and shared responsibility in the whole human family”.

Open Societies that Integrate Everyone

No. 130: Preparing local communities for the process of integration.

No. 129: Our response to the arrival of migrating persons can be summarized by four words: welcome, protect, promote and integrate.

No. 192: [We] have called upon “the architects of international policy and world economy to work strenuously to spread the culture of tolerance and of living together in peace; to intervene at the earliest opportunity to stop the shedding of innocent blood”.

together have offered a more accurate representation of both the structure and functioning of nature, and the role of humans as meaningful components in it. A fascinating story of life evolution until now has yielded, with such Eco-linguistic innovations, a pervasive cultural contamination of every human activity system, including religion in the form of eco-theology.

The main achieved insights, which together are components of an ecological conscience, are the following:

- life is a property of the planet Earth and operates as an interactive phenomenon between biotic and abiotic components developing into a *community of co-operators* (*producers, consumers and decomposers*);
- each individual organism contributes with a specific role (*ecological niche*) to the functioning of the whole ecosystem;
- *cooperation* among community members largely overcome *competition* originating *sustainability*, i.e. capability to last and evolve;
- since the advent of the industrialisation era (*Anthropocene*), the role of man as a *decomposer* has enormously grown due to *techno-respiration* (fossil fuel consumption by the manmade machines), whereby pollution and greenhouse effect have resulted.

These insights, formulated with specific eco-linguistics terms, may also have an iconographic representation in order to frame ecological conscience through the story of the human predicament (figure 1).

It could sound astonishing that such a concept as *natural capital* may have originated from a religious context, but that actually happened in the Encyclical Letter *Quadragesimo Anno* of Pope Pius XI (1931) as follows: “In the application of *natural capital* to human use, the law of nature, or rather God’s will promulgated by it, demands that righty order be observed” (Pope Pius XI 1931, No. 53). Even more curious is the fact that the metaphor “natural capital” appears

in the original Italian version and not in the English translation by Vatican which instead reports “natural resources”. However, as Caporali (2021, 65) mentions, the ecologist Fancis C. Evans (1956) made important comments on the concept of ecosystem that recall at roots the meaning of natural capital: “In the fundamental aspect, an ecosystem involves the circulation, transformation, and accumulation of energy and matter through the medium of living things and their activities.”

Altogether, the sequence of eco-linguistic metaphors such as natural capital, ecosystem services, human footprint, sustainable development constitutes a collection of conceptual key words that summarizes the story of the current human predicament interpreted through an ecological conscience. Concerning peace, there is a strict relationship with sustainable development in the sense that without peace no sustainable development can occur (UN 2015, SDG 16). While war means no sustainability, peace is the first condition to enable sustainability.

Faithful to his concept of integral ecology, Pope Francis (2022) makes the following recommendations in the 2022 Message for the Worl Day of Peace:

- Here I wish to propose three paths for building a lasting peace. First, dialogue between generations as the basis for the realization of shared projects. Second, education as a factor of freedom, responsibility and development. Finally, labour as a means for the full realization of human dignity. These are three indispensable elements for “making possible the creation of a social covenant”, without which every project of peace turns out to be insubstantial. (No. 1)
- It is essential, then, to forge a new cultural paradigm through “a global pact on education for and with future generations, one that commits families, communities, schools, universities, institutions, religions, governments and the entire human family to the training of mature men and women.” A compact

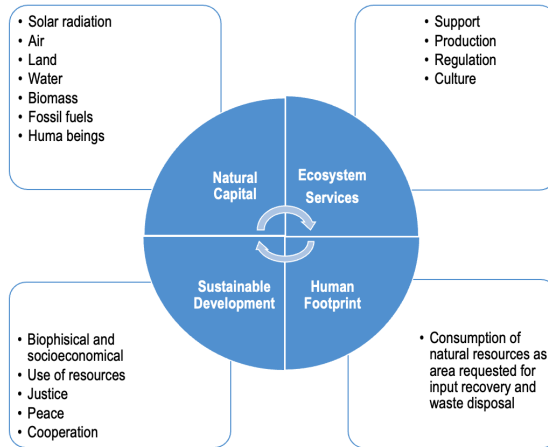


Figure 1. Eco-linguistic frame of ecological conscience through the *story* of human predicament

that can promote education in integral ecology, according to a cultural model of peace, development and sustainability centred on fraternity and the covenant between human beings and the environment. (No. 3)

- Labour is an indispensable factor in building and keeping peace. It is an expression of ourselves and our gifts, but also of our commitment, self-investment and cooperation with others, since we always work with or for someone. Seen in this clearly social perspective, the workplace enables us to learn to make our contribution towards a more habitable and beautiful world. (No. 4)

These recommendations seem resemble one kind of ethical philosophy and politics of *eco-poiesis* (home-making) for grounding a peace-making “ecological civilization” (Gare 2017, 181-183) through three interdependent dialectical patterns of representation such as language, labour, and education (Figure 2).

Language improvement through eco-linguistics makes it easier to understand the relationship between man and nature; labour through sustainable technologies preserves the natural resources of the environment on which human economy grounds; appropriate education recognises

the benefits of both appropriate language, labour and technologies for organising a peaceful and sustainable civilisation.

In the latest Apostolic Exhortation *Laudate Deum – to all people of good will on the climate crisis* (LD), Pope Francis (2023) admits that:

- our responses to the suffering planet have not been adequate [...] and the situation is now even more pressing (No. 2);
- it is only possible to sustain a “situated anthropocentrism”. To recognize, in other words, that human life is incomprehensible and unsustainable without other creatures (No. 67);
- there are no lasting changes without cultural changes, without a maturing of lifestyles and convictions within societies (No. 70);
- authentic faith not only gives strength to the human heart, but also transforms life, transfigures our goals and sheds light on our relationship to others and with creation as a whole (No 61).

Ecological and spiritual motivations meet harmoniously in *Laudate Deum*, giving valid support and hope “for everyone to accompany this pilgrimage of reconciliation with the world that is our home” (LD, No. 69).

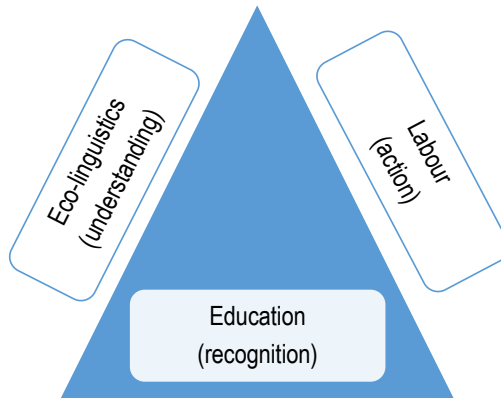


Figure 2. Components of a dialectical anthropology for a culture of eco-poiesis and peace – author’s own elaboration based on Gare (2017)

Conclusions

This essay provides a tentative effort for linking the emergent concept of ecological conscience with the ancient but still unrealized peace project of humanity. This issue is extremely relevant in today’s international arena where an escalation towards menaces of a nuclear war is mounting. The development of ecology, as a transdisciplinary field of research with a powerful epistemological approach like the ecosystem concept, unveils how cooperation in nature largely overcomes conflicts at any scale of life organisation, letting the local and the global planetary systems maintain themselves and prosper through evolution. Sustainability is a property of a system where harmony among its parts is structurally and functionally assured. If conflicts among parts overcome cooperation, systems vanish. As a consequence, human activity systems should be organised locally within the limits imposed by the environment and globally within a framework agreed by all nations concerning the just use and exchange of natural resources. The Church’s contribution to the advancement of ecological conscience in view of a peaceful society has been continuous and meaningful in the recent decades, providing human beings with the necessary spiritual energy to become “peace operators”.

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