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# ECOLOGICAL TRANSITION

Economic, environmental and social challenges

RT/2022/6/ENEA



ITALIAN NATIONAL AGENCY FOR NEW TECHNOLOGIES,  
ENERGY AND SUSTAINABLE ECONOMIC DEVELOPMENT

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## **ECOLOGICAL TRANSITION**

Economic, environmental and social challenges

L. Fiorani, A. Conte, A. Doronila

### **Abstract**

*In this time of crisis, we discover the need for anthropological values to guide the navigation of our species on this planet. Since 2000 EcoOne, the ecological section of the International New Humanity Association-NGO (general consultative status of the United Nations ECOSOC, official partner of UNESCO, accredited to UNEP) has organized numerous international conferences on environmental issues. The 2020 meeting "New Pathways to Integral Ecology" discussed the economic, environmental and social challenges of the ecological transition: some selected papers from the conference are published in this report.*

**Key words:** *sviluppo sostenibile, economia circolare, transizione ecologica.*

### **Riassunto**

In questo tempo di crisi, scopriamo la necessità di valori antropologici per guidare la navigazione della nostra specie su questo pianeta. Dal 2000 EcoOne, sezione ecologica dell'Associazione Internazionale New Humanity-NGO (status consultivo generale dell'ECOSOC delle Nazioni Unite, partner ufficiale dell'UNESCO, accreditata presso l'UNEP) ha organizzato numerose conferenze internazionali su temi ambientali. L'incontro del 2020 "Nuove vie verso l'ecologia integrale" ha discusso le sfide economiche, ambientali e sociali della transizione ecologica: alcuni paper selezionati della conferenza sono pubblicati in questo rapporto.

**Parole chiave:** sustainable development, circular economy, ecological transition.



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## Introduction

by Luca Fiorani, Andrea Conte, Augustine Doronila

The time of crisis, like the one we are experiencing, forces us to profoundly rethink our society, starting from the responsible use and equitable distribution of natural resources, and to awaken from the consumerist dream, induced by materialistic overdose. We discover, thus, the urgent need for spiritual values, not necessarily religious, to guide the navigation of our species on this planet. Spiritualities, in fact, have a revolutionary force and a dynamic impact on all expressions of human life. So, it is also for the spirituality of unity of the Focolare Movement, founded by Chiara Lubich who, since the 40s of the last century, dreamed of a new art, a new politics, a new science, as evidenced by her 1949 writing "Resurrection of Rome". In her latest publication of this paper<sup>1</sup>, Lubich added an important note to the text: "It is sometimes thought that the Gospel does not solve all human problems and that it brings only the Kingdom of God understood in a solely religious sense. But this is not the case. It is certainly not the historical Jesus or He as Head of the Mystical Body who solves all problems. Jesus-us, Jesus-I, Jesus-you does it... It is Jesus in man, in that given man – when his grace is in him – who builds a bridge, makes a road. Jesus is the true, deepest personality of each one. Every man (every Christian), in fact, is more a son of God (= other Jesus) than a son of his father. It is like another Christ, a member of his Mystical Body, that every man brings his own typical contribution in all fields: in science, in art, in politics. It is the incarnation that continues, the complete incarnation that concerns all the Jesus of the Mystical Body of Christ."

Reading these words, not a few members of the Focolare Movement have felt the blood boiling in their veins from the desire to concretely transform our society in all its aspects, from the smallest to the largest, believing that these are not pious practices but profoundly human and divine gestures, of the incarnation precisely.

This is why EcoOne has developed, an international network of academics, professionals and citizens who work in environmental sciences and want to complete their technical-scientific knowledge with a sapiential reading of ecological problems: even if EcoOne inspires concrete actions, its program does not consist so much in formulating technical

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<sup>1</sup> "Chiara Lubich's "Resurrection of Rome", *Nuova Umanità* XVII, 6 (1995).*Nuova Umanità* XVII (1995), n. 6, pp. 5-8.

solutions to environmental problems, as in elaborating – in dialogue with people of any conviction – an ecological culture in which the role of the person in nature is not exploitation (as a despotic master), but care (as a loving administrator).

EcoOne was founded in 1999 on the initiative of Lubich and Sergio Rondinara, a nuclear engineer with extensive expertise in philosophy and theology, in response to a solicitation by Giuseppe (Pino) Giaccone, a world-renowned marine biologist<sup>2</sup>. Since 2000, fifteen international conferences on environmental issues have been organized. The articles we publish in this issue of *New Humanity* are based on the presentations made during the last conference “New ways to integral ecology: five years after *Laudato si*”. Although most of the presentations were broadcast in five languages from Castel Gandolfo between 23 and 25 October 2020, the conference – of which we report below the program – was held electronically and was attended by more than a thousand people from the five continents, up to the Wallis and Futuna Islands, in the South Pacific Ocean, one step away from the international date line.

23/10/20 15:00-17:00 – Session “The impact of *Laudato si*’ in the contemporary world”

Welcome speech by Luca Fiorani

Message of Pope Francis

Round table (moderated by Tiziana Longhitano) between Joshtrom Isaac Kureethadam, Tomás Insua, Onofrio Farinola and Piero Benvenuti

23/10/20 18:00-19:00 – Webinar “A dialogue on *Laudato si*”

24/10/20 09:00-11:00 – Session “Science and technology save the world?”

Moderator: Mirko Di Bernardo

- Introduction by Enrico Giovannini
- Gaetano Borrelli – Sustainable development
- Eleonora Rizzuto – Circular Economy
- Maurizio Pallante – Happy Degrowth
- Francesca Ceruti – Technologies and tools to use and manage resources efficiently

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<sup>2</sup> More information on the historical development of EcoOne can be found in Luca Fiorani, “Ecologia e spiritualità dell’unità,” *Unità e Carismi* 2 (2016).

- Lorna Gold – Towards a new socio-economic paradigm

24/10/20 12:00-13:00 – Laboratory “Economy, environment and society”

Moderator: Andrea Conte

- Samuele Ramellini – Invasive species. An environmental and conservation challenge
- Andrea Galluzzi – A heart that knows. Reflection on the thought of Romano Guardini
- Kodjo I. Atchikiti – Laudato si’ and project management framework policy
- Paulo R. Reich – The world is our home. A possible link between Frankl’s anthropology and Lubich’s charisma
- Helen Ostrowski – Paths of Peace. The “Biosphere Leapfrog” project

24/10/20 15:00-17:00 – Session “Ecology and society”

Moderator: Pierluigi Sassi

Introduction by Luca Mercalli

- Alberto De Toni – Complexity: new perspective and perception of reality, new citizenship of knowledge and organization
- Pietro Ramellini – On the meaning of integral ecology
- Grammenos Mastrojeni – Geopolitical, economic and commercial impact of climate change in the Mediterranean Sea
- Antonello Pasini – Fighting climate change: the responsibility of scientists
- Miguel Panão – Towards a new environmental awareness

24/10/20 18:00-19:00 – Webinar “Ecology and society: good practices”

25/10/20 09:00-11:00 – Session “New ways towards integral ecology”

Moderator: Daniele Spadaro

- Stefano Comazzi – Action for a United World
- Stefano Bernardini – ASD Sunrise 1
- Michele Durante – Cultural Center for Development “G. Lazzati”
- Andrea Conte – Dare per salvaguardare l’ambiente
- Lilly Seidler – Greening Africa Together
- Laura Russo – Associazione ecologica Mèco
- Alessio Valente – New Humanity

- Conleth Burns – United World Project
- Ophélie Ofakimoana Pelletiere – Project “Ecological solidarity in Wallis and Futuna”

25/10/20 12:00-13:00 – Conclusions

Final comments from the EcoOne Commission

If the 2005 conference began with a message from Lubich<sup>3</sup>, the 2020 conference opened with a message from Pope Francis in which he<sup>4</sup> affirmed “the urgency of a new and more inclusive socio-economic paradigm” and the need to “implement concrete measures ... while fighting the structural causes of poverty and working to protect the natural environment.” The Pope’s words must be read in the light of *Fratelli tutti*: even if *Laudato si’* already encouraged us to “listen both to the cry of the earth and to the cry of the *poor*”<sup>5</sup>, *Fratelli tutti*<sup>6</sup> seems to be taking a decisive step towards the care of humanity: “Saint Francis, who felt himself a brother of the sun, the sea and the wind, he knew that he was even more united with those who were of his own flesh. Everywhere he sowed peace and walked alongside the poor, the abandoned, the sick, the discarded, the least.”<sup>7</sup>

Precisely in the light of *Fratelli tutti*, we offer the reader the publications of this issue of *New Humanity*, as a small contribution to the journey of society towards the concreteness of action, oriented above all to the search for a new socio-economic paradigm, modeled on the ecology of fraternity.

The published texts allow a reading of our time in the light of *Laudato si’*, passing through the current pandemic crisis and discovering new ways for an integral ecology. Here we offer the reader a very brief summary of the themes that emerged during the reports presented at the conference, even those that did not give rise to a publication.

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<sup>3</sup> Published in *Nuova Umanità* XXXIV (2012), n. 1, pp. 49-51.

<sup>4</sup> Available on: [http://www.vatican.va/content/francesco/it/messages/pont-messages/2020/documents/papa-francesco\\_20201023\\_messaggio-meeting-ecology.html](http://www.vatican.va/content/francesco/it/messages/pont-messages/2020/documents/papa-francesco_20201023_messaggio-meeting-ecology.html)

<sup>5</sup> Francis, *Laudato si’*, Encyclical Letter, (Vatican City: Libreria Editrice Vaticana, 2015). [http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html) Sec. 49.

<sup>6</sup> Francis, *Fratelli Tutti*, Encyclical Letter, (Libreria Editrice Vaticana, 2020). [https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20201003\\_enciclica-fratelli-tutti.html](https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20201003_enciclica-fratelli-tutti.html).

<sup>7</sup> Francis, *Laudato si’*.Sec. 5.

In a time like the present one, characterized by the pervasiveness of techno-sciences against the background of a global ecological crisis, it is not surprising, in fact, that an encyclical like *Laudato si'* appears as a “polar star” in the dark general disorientation. The explicit call for a renewed vision of man and the world resonates as the necessary realization to be carried out in an age in which it is believed that what is technically possible is also ethically justifiable.

Francis is a powerful icon in the fight for climate justice, placing the poor at the center of his agenda: they suffer, in fact, the greatest consequences despite being the least guilty. Faced with the evidence of its vulnerability, humanity has tried to make itself stronger to the point of forgetting that this vulnerability is its “ontological” characteristic, an essential condition to be taken into account also in the perspective of the integral ecological balance. If the response of strong anthropocentrism to vulnerability was the culture of waste, that of theological anthropocentrism is care: human ecology is the recognition of the other and of creation as a gift of God. *Laudato si'* does not, therefore, deal with the mere “environment” but with the integral destiny of our common home.

So what should be our first goal? Health, growth or environment? This question is oppressing peoples and governments as if these three values were competing with each other and incompatible. In reality, we must take exactly the same steps to protect health, development and a functional planet, whose balance depends on an infinitely complex network of interactions.

The spirit of *Laudato si'* is perfectly aligned with the revolutionary vision of the world that has been unveiled by modern scientific cosmology that shows us a universe characterized by a unitary evolution: a path that dates back 13.8 billion years, up to the current era. The most important consequence is that there is no separation or distinction between the cosmos and us: we, with our material body and consciousness, are an integral part of the evolving universe. From a Christian perspective, we are therefore co-creators of the cosmos only by putting our intelligence and all our knowledge and skills at the service of unconditional Love. The faith community must remind us of our inherent goodness and our ability to work together as one human family to meet the common climate challenge. Communion with the whole of creation is the key to unlocking a new environmental awareness. It requires attention and solitude, and nature is one of the most suitable environments to be actively aware of the present: listening to the inner voice in solitude can be an act of contemplation.

From the warning to enter into dialogue with everyone for the care of our common home arose the need for an interreligious meeting for environmental protection. The dialogue commonly highlighted the importance of taking care of the spiritual aspect of human life, which helps to give a direction of life to daily actions. One must have an egalitarian gaze before all creation which is the work of a God who expresses himself through all the beings existing in nature, intimately connected to each other, connected by a golden thread visible only to the eyes of Love.

Ecological conversion is a cultural revolution that needs the contribution of ideas, passion, professional skills of a large number of people. It is the way to go to fall within the limits of environmental sustainability. It is a happy degrowth that can be achieved by reducing waste, increasing self-produced or exchanged goods in the form of a mutual gift, producing objects made to last, repairable, recyclable, reducing the time spent at work and increasing the time dedicated to relationships.

The road to an integral ecology is still long and full of obstacles, but the ways to travel it are innumerable: from the search for new technologies to manage resources efficiently, to the circular economy, from the study of the complexity of the Earth system to that of invasive species, from education to environmental protection of the new generations to actions for a united world.

We conclude here the brief exposition of some ideas taken from the conference, aware that they can be a source of inspiration on what we can still do: human creativity has no limits. “For the believer, the world is not contemplated from the outside but from the inside, recognizing the bonds with which the Father has united us to all beings. Moreover, by increasing the particular capacities that God has given to each believer, ecological conversion leads him to develop his creativity and enthusiasm, in order to resolve the tragedies of the world, offering himself to God “as a living, holy and pleasing sacrifice.”<sup>8</sup>

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<sup>8</sup> Francis, *Laudato si'*. Sec. 220

## **Message**

*by Pope Francis*

Dear brothers and sisters!

I offer cordial greetings to all taking part in this international Meeting being held as part of the year-long observance of the fifth anniversary of the Encyclical Letter *Laudato Si'*. I express my gratitude to EcoOne, the ecological initiative of the Focolare Movement, and to the representatives of the Dicastery for Promoting Integral Human Development and the Global Catholic Climate Movement who have cooperated in making this event possible.

Your Meeting, with its theme “New Ways towards Integral Ecology: Five Years after *Laudato Si'*”, addresses a relational vision of humanity and care for our world from a variety of perspectives: ethical, scientific, social and theological. In recalling the conviction of Chiara Lubich that the created world bears within itself a charism of unity, I trust that her perspective can guide your work in the recognition that “everything is connected” and that “concern for the environment needs to be joined to sincere love for our fellow human beings and an unwavering commitment to resolving the problems of society” (*Laudato Si'*, 91).

Among such problems is the urgent need for a new and more inclusive socio-economic paradigm that reflects the truth that we are “a single human family, fellow travelers sharing the same flesh, children of the same earth which is our common home” (*Fratelli Tutti*, 8). This solidarity with one another and with the world around us demands a firm willingness to develop and implement practical measures that foster the dignity of all persons in their human, family and work relationships, while at the same time combating the structural causes of poverty and working to protect the natural environment.

Achieving an integral ecology calls for a profound interior conversion on both the personal and communal level. As you examine the great challenges facing us at this time, including climate change, the need for sustainable development and the contribution religion can make to the environmental crisis, it is essential to break with the logic of exploitation and selfishness and to promote the practice of a sober, simple and humble lifestyle (cf. *Laudato Si'*, 222-224). It is my hope that your work will serve to cultivate in the hearts of our brothers and sisters a shared responsibility for one another as children of God and a renewed commitment to be good stewards of his gift of creation (cf. Gen 2:15).

Dear friends, once again I thank you for your research and your cooperative efforts to seek new ways that lead to an integral ecology for the common good of the human family and the

created world. In offering my prayerful best wishes for your deliberations during this meeting, I cordially invoke upon you, your families and your associates God's blessings of wisdom, strength and peace. And I ask you, please, to remember me in your prayers.

Rome, from Saint John Lateran, 23 October 2020

## **Laudato si': impact and new avenues**

by Isaac Kureethadam Joshtrom

### **Introduction**

Laudato si'<sup>9</sup> is widely acknowledged as “the most important environmental text of the twenty-first century.”<sup>10</sup> This prophetic evaluation has been confirmed by an article that was published in the prestigious scientific journal *Biological Conservation* in 2019. The study attributes the spiking of interest on environmental issues during the last few years to the publication of *Laudato si'*<sup>11</sup> According to the author, “after decades of declining interest in the environment, *Laudato si'* may be catalyzing societal transformation.”<sup>12</sup> Pope Francis' encyclical letter on caring for our common home appears to have had a significant impact. I shall now offer an overview of the impact that *Laudato si'*, Pope Francis' landmark encyclical on creation care, has made through four key points.

The Paradigm Shift ushered in by the Encyclical

*Laudato si'* as a Game-Changer

Renewed urgency: the cries of the earth, poor, and children

Signs of Hope: the emergence of a people's movement from below

### **The paradigm shift ushered by in *Laudato si'***

*Laudato si'* is not just any “environmental” document. Carrying the sub-title, “On Care for our Common Home”, it is clear that Pope Francis' concerns extend beyond the environment to

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<sup>9</sup> Francis, *Laudato si'*, Encyclical Letter, (Vatican City: Vatican Press, 2015). [http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_encyclica-laudato-si.html](http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_encyclica-laudato-si.html)

<sup>10</sup> Dale Jamieson, “Why *Laudato si'* Matters,” *Environment: Science and Policy for Sustainable Development* 57, no. 6 (2015/11/02 2015), <https://doi.org/10.1080/00139157.2015.1089140>, <https://doi.org/10.1080/00139157.2015.1089140>.

<sup>11</sup> Malcolm McCallum, “Perspective: Global country-by-country response of public interest in the environment to the papal encyclical, *Laudato Si'*,” *Biological Conservation* 235 (07/01 2019), <https://doi.org/10.1016/j.biocon.2019.04.010..>

<sup>12</sup> *Ibid.*, 209.

the whole of humanity. This is highlighted by his insistence that “we need only take a frank look at the facts to see that our common home is falling into serious disrepair.”<sup>13</sup>

*Laudato si'* reminds us that we are destroying our very abode, that we are running out of time, that we may be condemning future generations to a common home in ruins.

The encyclical has had great impact on the collective imagination of the world precisely for the fact that it captured the dramatic urgency of the historical moment we are living in, namely, the threat to our very common home.

The paradigm shift brought about by *Laudato si'* is most evident in the new language of “integral ecology” provided by Pope Francis. Pope Francis’ reminds us that “human life is grounded in three fundamental and closely intertwined relationships: with God, with our neighbour and with the earth itself.”<sup>14</sup>

*Laudato si'* is about integral ecology. It hears and responds to this cry from a triple perspective: physical, moral, and religious. This is yet another reason why the encyclical has struck such a responsive chord with public opinion. Please allow me to dwell briefly on each of these dimensions.

The encyclical deals with the physical manifestations of the crisis of our common home, as he himself states: “drawing on the results of the best scientific research available today.”<sup>15</sup>

Pope Francis offers a holistic and integral perspective about the multiple manifestations of the contemporary ecological crisis: from climate change to pollution, from the depletion of natural resources to water scarcity, from the loss of biodiversity to desertification, etc. It does so authoritatively – as widely acknowledged by the global scientific community.

At the same time, *in Laudato si'*, Pope Francis reminds us that the ecological crisis is also a human tragedy. A tragedy of unimaginable proportions that threatens the security and livelihoods of people around the world, which raises several moral questions in its wake. As Pope Francis is quick to note in *Laudato si'*, “the deterioration of the environment and of society affects the most vulnerable people on the planet.”<sup>16</sup>

The concern for the poor - and as the Pope mentions “the earth herself, burdened and laid waste, is among the most abandoned and maltreated of our poor”<sup>17</sup> - is at the heart of the

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<sup>13</sup> Francis, *Laudato si'*, sec. 61

<sup>14</sup> Francis, *Laudato si'*, sec. 66

<sup>15</sup> Francis, *Laudato si'*, sec. 15

<sup>16</sup> Francis, *Laudato si'*, sec. 48

<sup>17</sup> Francis, *Laudato si'*, sec. 2

encyclical. *Laudato si'* is, in fact, a social encyclical more so than one focused on climate change. This is exemplified by “climate” being mentioned just 14 times throughout the text, whilst “the poor” – 59 times.<sup>18</sup> According to the Pope, “Today, however, we have to realize that a true ecological approach *always* becomes a social approach; it must integrate questions of justice in debates on the environment, so as to hear *both the cry of the earth and the cry of the poor.*”<sup>19</sup>

In *Laudato si'*, Pope Francis, as a spiritual leader, is quick to note that the ecological crisis is also a religious one and offers us a profoundly positive vision of the natural world. He points out “how faith convictions can offer Christians, and some other believers as well, ample motivation to care for nature and for the most vulnerable of their brothers and sisters.”<sup>20</sup> According to Pope Francis, “human life is grounded in three fundamental and closely intertwined relationships: with God, with our neighbour and with the earth itself.”<sup>21</sup> Thus, it is evident that our relationship with God and our neighbour inherently includes our relationship with mother Earth.

### **Laudato si', a game-changer!**

*Laudato si'* has had huge impact on our contemporary world, and we might call it a real “game-changer” in our response to ecological issues.

It will not be an exaggeration to say that, probably, the most enthusiastic reception of the encyclical was accorded by the scientific community. *Laudato si'* in a way was responding to an SOS from the scientific community. In 2014, a year prior to the publication of the encyclical, appalled by the lack of visionary global leadership to avert the impending ecological crisis, two eminent academics, Veerabhadran Ramanathan – climate scientist at the University of California, San Diego, and Professor Sir Partha Dasgupta – economist at St John’s College, Cambridge, took the exceptional step of invoking the moral leadership of Pope Francis, aware of his growing international stature.<sup>22</sup>

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<sup>18</sup> Mike Hulme, “Finding the Message of the Pope’s Encyclical,” *Environment Science and Policy for Sustainable Development* 57 (10/26 2015), <https://doi.org/10.1080/00139157.2015.1089139>.

<sup>19</sup> Francis, *Laudato si'*, sec. 49

<sup>20</sup> Francis, *Laudato si'*, sec. 64

<sup>21</sup> Francis, *Laudato si'*, sec. 66

<sup>22</sup> P. Dasgupta and V. Ramanathan, “Environment and development. Pursuit of the common good,” *Science* 345, no. 6203 (Sep 19 2014), <https://doi.org/10.1126/science.1259406>.

The reception that the scientific community accorded to the encyclical has been unprecedented. Renowned scientific journals such as *Nature* and *Science* published favourable editorials before and after the publication of an encyclical.<sup>23</sup>

*Laudato si'* has had a warm reception from the political community too. Immediately following its publication in 2015, *Laudato si'* received enthusiastic endorsements from important political leaders around the world, beginning with the United States President, Barak Obama. The United Nations Secretary-General Ban-Ki-moon welcomed the encyclical, and the Secretariat of the United Nations Convention on Biological Diversity came out with a Statement supporting the encyclical.

The most important contribution of the encyclical *Laudato si'* to the political process in the international arena was its impact in the signing of the Paris Climate Agreement in 2015. On Pope Francis' own admission in January 2015, the encyclical was timed to influence the outcome of the crucial United Nations Framework Convention on Climate Change conference in Paris in December 2015. The Pope, in fact, told reporters that he wanted the encyclical out early enough so "that there is some time between the publication of the encyclical and the meeting in Paris" to help bolster the delegates to "be more courageous."<sup>24</sup> Shortly after the encyclical was published, Lord Nicholas Stern, former Chief Economist of the World Bank and author of the well-known Stern Review on climate change,<sup>25</sup> participating in a symposium with the presence of the Pope, congratulated Pope Francis for the "extraordinary leadership" shown by him with the publication of *Laudato si'*.<sup>26</sup>

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<sup>23</sup> See editorials in: "Hope from the Pope," *Nature* 522, no. 7557 (2015/06/01 2015), <https://doi.org/10.1038/522391a>, <https://doi.org/10.1038/522391a>. (25 June 2015); Marcia McNutt, "The Pope tackles sustainability," *Science* 345, no. 6203 (2014), <https://www.jstor.org/stable/24917622>.; Marcia McNutt, "The beyond-two-degree inferno," *Science (New York, N.Y.)* 349 (07/03 2015), <https://doi.org/10.1126/science.aac8698>.

<sup>24</sup> "In-flight press conference of his holiness Pope Francis from the Philippines to Rome," news release, 19/01/2015, 2015, [https://www.vatican.va/content/francesco/en/speeches/2015/january/documents/papa-francesco\\_20150119\\_srilanka-filippine-conferenza-stampa.html](https://www.vatican.va/content/francesco/en/speeches/2015/january/documents/papa-francesco_20150119_srilanka-filippine-conferenza-stampa.html).

<sup>25</sup> Nicholas Stern, *The Economics of Climate Change: The Stern Review* (Cambridge: Cambridge University Press, 2007). <https://www.cambridge.org/core/books/economics-of-climate-change/A1E0BBF2F0ED8E2E4142A9C878052204>.

<sup>26</sup> Nicholas Stern, "Environmental justice and climate change" (International Meeting on Environmental Justice and Climate Change, Istituto Patristico Augustinianum, Rome, 10-11 September 2015 2015).

The encyclical *Laudato si'* continues to inspire political action at international, national, regional and local levels in the care for our common home.

*Laudato si'* has been hailed an inspiration and potential game-changer for the approximately 1.2 billion Catholics, the larger Christian community and the world's other major religious traditions.

After the publication of the encyclical, several Bishops Conferences as well as individual Bishops issued pastoral letters on creation care in the light of *Laudato si'*. We may also mention countless initiatives like retreats, pilgrimages, outdoor masses, seminars and conferences, catechism lessons, etc. in very many parishes, dioceses, formation houses around the world on themes related to *Laudato si'*.

*Laudato si'* is exceptional for its ecumenical flavour. In the preamble to *Laudato si'*, Pope Francis takes pains to evidence the significant contribution of the Ecumenical Patriarch Bartholomew I, known as the "green Patriarch" for his commitment to ecological questions for nearly a quarter of a century. The leadership of the Ecumenical Patriarch on ecological issues is not only acknowledged by Pope Francis but also drawn upon and cited approvingly. The Pope dedicates two extensive paragraphs to present some of the key ecological intuitions of Bartholomew like the concept of ecological sin, the need for repentance, the spiritual and theological roots of the problem, and the vital importance of asceticism in responding to the crisis.

Significantly, *Laudato si'* has had a ripple effect within the interfaith community too. The imminent release of the encyclical inspired the issuing of a statement in June 2015 entitled *Rabbinic Letter on the Climate Crisis* which was signed by more than 330 Jewish Rabbis. We may also recall that exactly three months after the publication of *Laudato si'*, the *Islamic Declaration on Global Climate Change* was released at the International Islamic Climate Change Symposium in Istanbul.<sup>27</sup> In the meantime, two other major world religions, Buddhism and Hinduism, also issued important declarations on ecological stewardship.<sup>28</sup>

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<https://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2015/09/Stern-speech-on-environmental-justice-and-climate-change-10-September-2015.pdf>

<sup>27</sup> "Islamic Declaration on Climate Change," 2015, <https://unfccc.int/news/islamic-declaration-on-climate-change>. <https://unfccc.int/news/islamic-declaration-on-climate-change>

<sup>28</sup> A group of fifteen eminent global Buddhist leaders, beginning with the Dalai Lama and including other eminent Buddhist monastic and lay leaders, among them the King of Bhutan, issued on 29<sup>th</sup> October 2015 the *Buddhist Climate Change Statement to World Leaders*. "Buddhist Climate Change Statement to World Leaders

## **Renewed urgency: the cries of the earth, poor, and children**

Whilst acknowledging the remarkable impact of the encyclical in the short span of five years on our contemporary world, from politics to economics, from religions to civil society, we feel a sense of renewed urgency about the mission of *Laudato si'*. The need to care for our common home is even more important today as the cries of the earth, poor, and children have grown even louder.

We are already in a full-fledged climate emergency, which carry many dire consequences. A landmark report from the Intergovernmental Panel on Climate Change in 2018 clearly stated that humanity has as few as 12 years to ensure that global average temperature does not cross the critical threshold of 1.5°C. A threshold, which if crossed increases the likelihood of severe, pervasive, and irreversible impacts for people and ecosystems. Furthermore, it has become clear that the Earth is also dangerously poised at the verge of (or currently already in) a sixth mass extinction of species with disastrous implications for the entire web of life.

The poor are wailing too. Vulnerable communities around the world are the first and most disproportionately affected victims of ecological degradation. As Pope Francis pointed out in *Laudato si'*, there exists indeed an “intimate relationship between the poor and the fragility of the planet.”<sup>29</sup> We are indeed approaching not only irreversible geo-physical tipping points, but also crucial socio-economic thresholds, the crossing of which can lead to the collapse of communities, societies and cultures.

The current pandemic has amplified these cracks in our physical and social systems. The origin of the present coronavirus – as with its previous ‘avatars’ like SARS and MERS – stems from human interference in the intricate balance of natural ecosystems through wildlife trading and deforestation linked to mining, logging and animal husbandry. The Covid-19 emergency has revealed a fundamental truth that we have ignored for too long – we cannot be healthy unless our relationship with the planet and its ecosystems are healthy.

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2015,” 2015, <https://plumvillage.org/articles/buddhist-climate-change-statement-to-world-leaders-2015/>. *Bhumi Devi Ki Jai! A Hindu Declaration on Climate Change* is a global call to the 900 million Hindus living worldwide to lead lives in harmony and balance with the natural world and asks world leaders to find long and lasting solutions to climate change at the upcoming climate negotiations in Paris (COP21). “Hindu Declaration on Climate Change,” 2015, <http://www.hinduclimatedeclaration2015.org/>. <http://www.hinduclimatedeclaration2015.org/>

<sup>29</sup> Francis, *Laudato si'*, sec. 16

Human and planetary health are intimately linked. The explosion of the coronavirus is, in fact, our wake-up call from nature.

The coronavirus emergency also made clear how like in every crisis, the poor are the hardest hit.

This virus affects us all, even princes and film stars. But the equality ends there. By exploiting the extreme inequalities between rich and poor people, rich and poor nations and between women and men, unchecked this crisis will cause immense suffering.<sup>30</sup>

Added to the cry of the earth and the cry of the poor is the cry of our children. They have taken to the streets, in large and growing numbers, giving vent to their frustration about our apathy, inaction and blatant disregard for our common home. They remind us adults, of what is so obvious, sketched out in big and colourful letters on cardboard placards they have been carrying, namely, that;

“There’s no Planet B”

“We Have Only One Home”

“Our House is on Fire”

“Don’t Mess with My Future”

“Planet over Profit”

“Earth is not Use and Throw”

“Climate is Changing, Why Are Not We?” ...

It is indeed a shame of older generation that our children have to take to the streets and accuse us of literally stealing their future. In fact, we are stealing the future of countless future generations who will have to live in a warmer world with sweltering temperatures, melting glaciers, and rising seas, destructive hurricanes and deadly floods, along with the spectre of mass migration, food shortages and insecurity. We may be condemning future generations to a common home in ruins.

One of the most powerful questions raised by Pope Francis in the encyclical and which echoes loudly in our ears, even after we have laid down the text, is: “What kind of world do we want to leave to those who come after us, to children who are now growing up?”<sup>31</sup>

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<sup>30</sup> Oxfam, *Dignity not destitution, an ‘Economic Rescue Plan For All’ to tackle the Coronavirus crisis and rebuild a more equal world* (Oxfam International, 09/04/2020 2020), <https://www.oxfam.org/en/research/dignity-not-destitution>.

<sup>31</sup> Francis, *Laudato si’*, sec. 160

The coming years are indeed crucial. We have been served a last call! We are the last generation that could and needs to act in order to avoid the crossing of crucial tipping points and avoid irreversible damages to our common home.

### **Signs of hope: emergence of a mass movement from below**

The precarious state of our common home calls for immediate, holistic, and unified responses at all levels - local, regional, national and international. We need, above all, “a peoples’ movement” - an alliance of all people of good will - for the care of our common home. We need an alliance of people from churches, faith communities, NGOs and governments involved in ecological, economic, educational, and political issues, and civil society, in general.

There are, indeed, encouraging, and solid signs of hope. It appears that a people’s movement is begging to take shape. We see the gradual emergence of a movement from below and from the peripheries for the care of our common home, inspired by *Laudato si’*.

On 24 May 2020, on the fifth anniversary of the encyclical, Pope Francis went on to announce a Special *Laudato si’* Anniversary Year. He invited “all persons of good will” to celebrate the Special Anniversary Year running from 24 May 2020 to 24 May 2021 and “take care of our common home and our more fragile brothers and sisters.”

The “*Laudato si’* Year” announced by Pope Francis comes as a ray of hope. It holds the promise of a time of grace (*kairos*) in a moment of crisis – ecological and economic, compounded with the health, migrant and food security crises.

The proposal of the multi-year “*Laudato si’* Action Platform” which is an integral part of the “*Laudato si’* Year” is a concrete step in this regard. It is a seven-year journey toward ecological conversion and “total sustainability at the end of the *Laudato si’* Special Anniversary Year, there will be a public commitment from the part of various institutions to begin the journey to total sustainability in the spirit of *Laudato si’*. The various categories of which include:

1. *Laudato si’* Families
2. *Laudato si’* Parishes and Dioceses
3. *Laudato si’* Schools and Universities
4. *Laudato si’* Hospitals / Health Care Centres:
5. *Laudato si’* Businesses/Agricultural Farms, etc.
6. *Laudato si’* Organizations (NGOs, Foundations, Centres)
7. *Laudato si’* Religious Orders:

The Multi-Year Laudato si' Action Platform is framed across seven “Laudato si' Goals” - LSGs – (resembling the UN SDGs!), which will serve as parameters for integral ecology in the spirit of Laudato si'. The holistic goals reflect the gamut of Catholic social teaching, and each lists examples of various benchmarks to accomplish.

Response to the Cry of the Earth (greater use of clean renewable energy and reducing fossil fuels in order to achieve carbon neutrality, efforts to protect and promote biodiversity, guaranteeing access to clean water for all, etc.)

Response to the Cry of the Poor (defence of human life from conception to death and all forms of life on Earth, with special attention to vulnerable groups like the indigenous communities, migrants, children at risk, etc.)

Ecological Economics (sustainable production, fair-trade, ethical consumption, ethical investments, divestment from fossil fuels and any economic activity harmful to the planet and the people, investment in renewable energy, promoting alternate business models such as co-operatives, non-profits, etc.)

Adoption of Simple Lifestyles (sobriety in the use of resources and energy, avoid single-use plastic, adopt a more plant-based diet and reduce meat consumption, greater use of public transport and avoid polluting modes of transportation, etc.)

Ecological Education (rethink educational curricula in the spirit of integral ecology to create ecological awareness and action, promote ecological protagonism of young people, etc.)

Ecological Spirituality (recover a religious vision of God's creation, encourage greater contact with the natural world in a spirit of wonder, praise, joy, and gratitude, promote creation-centred liturgical celebrations, develop ecological catechesis, etc.)

Emphasis on Community involvement and participatory action at the local, regional, national, and international levels (promote advocacy and people's campaigns, encourage rootedness in local territory and neighbourhood, etc.)

The Laudato si' Action Platform will be launched at the end of the Laudato si' Special Anniversary Year with a certain number of the above institutions who will begin their 7-year journey of integral ecology in the spirit of Laudato si'. In 2022, a new group, hopefully double the number of the previous group, will begin their 7-year journey, and so on. This will go on for each of the coming years of the new decade. In this way, it is hoped that we arrive at the “critical mass” needed for radical societal transformation invoked by Pope Francis in Laudato si'.

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## The cry of the climate & the cry of the poor: Pope Francis' urgent appeal for climate justice

by Tomás Insua

What would catch your attention most? A scientist explaining that “key components of the Earth’s climate system could pass their tipping point this century”<sup>32</sup> or Pope Francis stating that with regard to climate change “we are at the limit! We are on the verge of suicide?”<sup>33</sup> And what strikes your justice chord more strongly? A scientist explaining that “climate-related hazards exacerbate other stressors, often with negative outcomes for livelihoods, especially for people living in poverty”<sup>34</sup> or Pope Francis warning that “it is the poorest of the poor who suffer the consequences with the most difficulty! Therefore the climate issue is a matter of justice?”<sup>35</sup>

Even though those statements were describing the same phenomena, you probably found the Pope’s message communicating the urgency and the injustice of the climate crisis to be more compelling. His role as an unexpected messenger, combined with his outspoken statements and down-to-earth language, makes Pope Francis an enthralling climate communicator. With his exceptionally high media visibility and his moral authority as an advocate of the poor, Pope Francis is a powerful icon in the fight for climate justice.

Pope Francis’s climate advocacy reached its pinnacle in June 2015 with the release of his groundbreaking encyclical letter *Laudato si’: On Care for our Common Home*. An encyclical is the most authoritative teaching document a pope can issue, and *Laudato si’* was

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<sup>32</sup> “Tipping Elements In Earth’s Climate System,” Potsdam Institute for Climate Impact Research, Science Daily, updated 7 February, 2008, <https://www.sciencedaily.com/releases/2008/02/080204172224.htm>.

<sup>33</sup> ““In-Flight Press Conference of His Holiness Pope Francis from the Central African Republic to Rome,” 30 November 2015,” Libreria Editrice Vaticana, 2015, [https://www.vatican.va/content/francesco/en/speeches/2015/november/documents/papa-francesco\\_20151130\\_repubblica-centrafricana-conferenza-stampa.html](https://www.vatican.va/content/francesco/en/speeches/2015/november/documents/papa-francesco_20151130_repubblica-centrafricana-conferenza-stampa.html).

<sup>34</sup> Rajendra K. Pachauri, “*Climate Change 2014: Synthesis Report*,” *Intergovernmental Panel on Climate Change*, (Pachauri and Leo Meyer, 2014), 54. (2014), [https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR\\_AR5\\_FINAL\\_full.pdf](https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full.pdf).

<sup>35</sup> ““Address of His Holiness Pope Francis to Foundation for Sustainable Development”, on “Environmental Justice and Climate Change.” 11 September 2015,” Libreria Editrice Vaticana, 2015, [https://www.vatican.va/content/francesco/en/speeches/2015/september/documents/papa-francesco\\_20150911\\_fondazione-sviluppo-sostenibile.html](https://www.vatican.va/content/francesco/en/speeches/2015/september/documents/papa-francesco_20150911_fondazione-sviluppo-sostenibile.html).

addressed not only to the world's 1.2 billion Catholics but “to all people of good will.”<sup>36</sup> The timing was significant, as it was an intentional call for action to governments convening five months later for the COP21 Climate Summit in Paris—the result of 21 years of stalled U.N. negotiations to sign a climate agreement.<sup>37</sup>

While scientists and policymakers usually dominate the debates on climate change, the Pope's advocacy helped frame the issue in moral terms relatable to the lay audience. This essay will analyze Pope Francis' contribution to the climate justice cause and will explore the role of world religions in the journey ahead to tackle the climate crisis.

### **The science & religion partnership**

While the scientific community has compiled unequivocal evidence on how human activities disrupt the climate system, this has not been enough to mobilize the global community to act.<sup>38</sup> The complexity of climate change and the politics surrounding it relegate the issue to a low priority for most citizens and policymakers, even if they are aware of the catastrophic implications.

When appealing to people's minds proves ineffective, speaking to their hearts can provide an alternative means for action. Considering that 84% of people globally have a religious affiliation, faith leaders have the potential to become influential allies to the scientific community and make a decisive contribution in motivating humanity to change course.<sup>39</sup>

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<sup>36</sup> This encyclical was particularly newsworthy because it was the first time in 2000 years that a pope devoted an encyclical exclusively to ecology, using as title a famous canticle by the 13th-century preacher Saint Francis of Assisi. It is important to note that *Laudato si'* is a comprehensive document that examines other socio-ecological issues beyond climate change and develops a holistic moral framework that covers other principles beyond justice towards the poor. This essay, by focusing on “the cry of the climate and the cry of the poor”, is a deep dive into a fraction of *Laudato si'*.

<sup>37</sup> As Francis himself explained: “The important thing is that there be a bit of time between the issuing of the encyclical and the meeting in Paris, so that it can make a contribution . . . Let's hope that in Paris the delegates will be courageous.” See: “In-flight press conference of his holiness Pope Francis from the Philippines to Rome 19 Jan 2015,” Libreria Editrice Vaticana, 2015, [https://www.vatican.va/content/francesco/en/speeches/2015/january/documents/papa-francesco\\_20150119\\_srilanka-filippine-conferenza-stampa.html](https://www.vatican.va/content/francesco/en/speeches/2015/january/documents/papa-francesco_20150119_srilanka-filippine-conferenza-stampa.html).

<sup>38</sup> “Scientific Consensus: Earth's Climate Is Warming,” NASA, accessed 7 Nov 2021, <https://climate.nasa.gov/scientific-consensus/>.

<sup>39</sup> “The Global Religious Landscape, 18 Dec 2012,” Pew Research Center, 2012, <https://www.pewforum.org/2012/12/18/global-religious-landscape-exec/>.

Multiple conferences and publications on the intersection of science, religion, and ecology are testament of the increased collaboration between the scientific and faith communities in the face of the environmental challenge.<sup>40</sup>

Moreover, a commonality of religion and climate science is that they recognize no national boundaries and stress the interconnectedness at the core of the climate crisis. Science unequivocally emphasizes that the causes and consequences of climate change are blind to country borders. For instance, one ton of CO<sub>2</sub> has the same warming effect on the global climate regardless of its country of origin, affecting all countries to a certain degree. Meanwhile, the world's major religions share a concern for the deep ties binding peoples, as illustrated by the writings of Mary Evelyn Tucker and John Grim.<sup>41</sup> In words of Pope Francis, "our planet is a homeland and that humanity is one people living in a common home."<sup>42</sup>

Both perspectives are critical and must be given consideration, as national boundaries are at the heart of the thorny nature of the U.N. negotiations. Distrust between geopolitical competitors is a recurrent problem blocking the cooperation needed to address climate change. Furthermore, world religions play a critical role in stressing both the urgency and the injustice of the climate crisis. The next two sections will review Pope Francis' decisive contribution on both fronts.

### **The urgency: the cry of the climate**

Pope Francis acknowledges the scientific facts of climate change early on in *Laudato si'* and stresses the severe urgency of the crisis.<sup>43</sup> He begins by stating that "it is [his] hope that this Encyclical Letter . . . can help us to acknowledge the appeal, immensity and urgency of the

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<sup>40</sup> For instance, the Forum on Religion and Ecology at Yale is a 20-year-old international network that has convened interdisciplinary conferences, published books and collected relevant statements. See [fore.yale.edu](http://fore.yale.edu)

<sup>41</sup> See for example John Grim and Mary Evelyn Tucker, eds. "Religion and Ecology: Can the Climate Change?", *Daedalus: Journal of the American Academy of Arts and Sciences*, (2001), 130.

<sup>42</sup> Pope Francis, "Laudato si': On Care for our Common Home", *Libreria Editrice Vaticana*, paragraph 164 [http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_encyclica-laudato-si.html](http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_encyclica-laudato-si.html)

<sup>43</sup> Given the important recognition of Pope Francis to the role of science, his encyclical generated an intense dialogue with the scientific community. For instance, major journals such as *Nature* and *Science* dedicated editorials to engage with the Pope's call.

challenge we face.”<sup>44</sup> This urgent tone permeates the whole document. Francis uses accessible vocabulary to bring attention to the planetary state of emergency that continues to worsen, with key climate metrics breaking records year after year<sup>45</sup>: “our common home is falling into serious disrepair . . . we can see signs that things are now reaching a breaking point.”<sup>46</sup>

The Pope’s emphasis on the urgency contrasts with the business-as-usual operating mode of most politicians, who are driven by short-term election cycles rather than long-term plans. Despite significant progress in scaling up the deployment of renewable energy, most countries continue to subsidize and build new fossil fuel infrastructure, guaranteeing new and sizable carbon emissions for the next few decades.<sup>47</sup> This is in stark contradiction with the extremely ambitious goal of the Paris Climate Agreement to “pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels,” which requires countries to transition from fossil fuels to clean energy sources in a very short timeframe.<sup>48</sup>

All 196 countries agreed to the 1.5°C target because it is the threshold beyond which climate change will likely become catastrophic for many vulnerable communities while exacerbating the risk of crossing planetary “tipping points” that would unleash run-away climate disruption.<sup>49</sup> According to the conservative estimate by the IPCC, on a business-as-usual trajectory we would have a 50 percent probability of exceeding the “carbon budget” in just eight years, increasing global temperatures beyond the 1.5°C threshold.<sup>50</sup> Changing course in time to avoid crossing this red line is a massive and urgent undertaking that cannot wait

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<sup>44</sup> Ibid., paragraph 15.

<sup>45</sup> “2016 Climate Trends Continue to Break Records”, *NASA*, 19 July 2016, <http://go.nasa.gov/2k1w61g>

<sup>46</sup> Ibid., paragraph 61.

<sup>47</sup> David Coady; Ian Parry; Louis Sears; Baoping Shang. “How Large Are Global Energy Subsidies?” *International Monetary Fund*. (2015), [http://www.imf.org/~media/Websites/IMF/Imported/external/pubs/ft/wp/2015/\\_wp15105pdf.ashx](http://www.imf.org/~media/Websites/IMF/Imported/external/pubs/ft/wp/2015/_wp15105pdf.ashx)

<sup>48</sup> “Adoption of the Paris Agreement,” *United Nations Framework Convention on Climate Change*, 12 December 2015, <https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>

<sup>49</sup> Bill Hare et al., “Implications of the 1.5°C limit in the Paris Agreement for climate policy and decarbonisation,” *Climate Analytics*, August 2016, [http://climateinstitute.org.au/verve/\\_resources/ClimateAnalytics\\_Report\\_FINAL\\_23082016.pdf](http://climateinstitute.org.au/verve/_resources/ClimateAnalytics_Report_FINAL_23082016.pdf)

<sup>50</sup> “Only five years left before 1.5C carbon budget is blown”, *CarbonBrief*, 19 May 2016, <https://www.carbonbrief.org/analysis-only-five-years-left-before-one-point-five-c-budget-is-blown>

for new technological miracles to arrive in a few decades. The urgency, as Francis reminds us, could not be greater.

The head-in-the-sand attitude of most leaders in the political and economic elites becomes even more worrisome when considering the scale of fossil fuel extraction operations. Mainstream data from the fossil fuel industry reveals that their mines and wells currently in operation have 2.35 times more carbon than the “carbon budget” to keep temperature increase below the 1.5°C threshold.<sup>51</sup> In other words, the data suggests that the Paris temperature goal requires the shutdown of 58 percent of the current extraction operations in the fossil fuel industry. The magnitudes are even larger if the wider unexploited reserves are considered: in order to stay below the 1.5°C limit, 85 percent of fossil fuel reserves must remain untouched.<sup>52</sup>

Though these steps seem radical, they are necessary to avoid exceeding the dangerous 1.5°C threshold. Given the conflicting priorities and incentives that limit policymakers’ ability to act boldly, religious leaders have an important role to call for bold action in line with the ambitious aspirations of the Paris Agreement. Pope Francis calls us to embrace “the radical change which present circumstances require” and argues that “the effects of the present imbalance can only be reduced by our decisive action, here and now.”<sup>53</sup> The urgency of the climate crisis requires no less.

### **The injustice: the cry of the poor**

Pope Francis’ moral authority as an upholder of the poor is an important asset in addressing the social injustice of climate change.<sup>54</sup> A native of Argentina and the first pope from the developing world, Pope Francis has put the poor at the core of his agenda. His outspoken critique of social injustices and inequitable economic order has gained significant media

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<sup>51</sup> “The Sky’s Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production,” Oil Change International, 22 September 2016, <http://priceofoil.org/2016/09/22/the-skys-limit-report/>.

<sup>52</sup> Ibid., page 6

<sup>53</sup> Pope Francis, “Laudato si’: On Care for our Common Home”, *Libreria Editrice Vaticana*, paragraph 161, 171, [http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html).

<sup>54</sup> Although climate change is an injustice towards both future generations and the poor, this short essay focuses on the later given that it is less known in public opinion and it is where Pope Francis had more impact. A related climate injustice that is also beyond the scope of this essay is the one towards other species pushed to extinction.

coverage. As the former archbishop of Buenos Aires, he incarnated the Catholic “preferential option for the poor” by frequenting the city’s slums to minister marginalized communities.<sup>55</sup> In his encyclical, Pope Francis masterfully depicts the ecological crisis as an injustice towards the poor in his widely cited call to “hear both the cry of the earth and the cry of the poor,” which serves as inspiration for this essay’s title.<sup>56</sup> He went on to explain how social justice and the planetary well-being are two sides of the same coin: “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.”<sup>57</sup>

Pope Francis was able to bring attention to the “double injustice of climate change.”<sup>58</sup> The first injustice is that climate change has the largest impact on the poor, who suffer the most from extreme weather events like floods and hurricanes, increasing water scarcity, reductions in crop yields, and rising sea levels that impact coastal cities. Tropical countries share the commonality of being among the world’s poorest, while also being the most vulnerable to climate change.

The second injustice is that the poor are the least responsible for global greenhouse gas emissions that disrupt the climate system. The logic is straightforward: The fewer energy, goods and services one consumes, the less greenhouse gas emissions one produces. As proved by global CO<sub>2</sub> datasets (such as CarbonMap.org or GlobalCarbonAtlas.org), industrialized nations like the U.S. and Australia have the highest contributions to the climate crisis while poorer countries like those in Africa contribute the least. This is what Pope Francis calls the “ecological debt . . . between the global north and south.”<sup>59</sup>

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<sup>55</sup> Laura Schneider, “Papa argentino: Bergoglio y los curas villeros,” *Global Voices*, 8 April 2013, <https://es.globalvoices.org/2013/04/08/papa-argentino-bergoglio-y-los-curas-villeros/>

<sup>56</sup> Pope Francis, “Laudato si’: On Care for our Common Home”, *Libreria Editrice Vaticana*, paragraph 49, [http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html).

<sup>57</sup> *Ibid.*, paragraph 139.

<sup>58</sup> Jean-Pascal van Ypersele, “The Double Injustice of Climate Change,” *Université Catholique de Louvain*, 26 October 2015, [http://www.elic.ucl.ac.be/users/vanyp/Conference2015/talk-JPvanYpersele\\_Bishops\\_appeal.pdf](http://www.elic.ucl.ac.be/users/vanyp/Conference2015/talk-JPvanYpersele_Bishops_appeal.pdf)

<sup>59</sup> Pope Francis, “Laudato si’: On Care for our Common Home”, *Libreria Editrice Vaticana*, paragraph 51, [http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html).

## The contribution to the Paris Agreement

The encyclical was such a strong call to action, stressing the urgent and unjust nature of the climate crisis, that it helped catalyze momentum for a positive outcome at COP21. Additional high-level statements by Pope Francis and other faith traditions – like the Islamic Declaration on Climate Change – helped nudge climate negotiators towards higher ambition.<sup>60</sup>

This was complemented by the massive mobilization of the faith community's grassroots, as illustrated by the sizable faith contingents that participated in the Global Climate March of November 2015 and the delivery of nearly 2 million petition signatures to COP21 political authorities.<sup>61</sup> "The Pope's encyclical, along with mobilization by many other faith groups across the globe, provided a clear moral imperative for taking climate action, supporting the Paris Climate Change Agreement," explained Christiana Figueres, the former UNFCCC Executive Secretary.<sup>62</sup>

The Paris Agreement highlighted the "1.5°C victory," through which the Climate Vulnerable Forum (CVF), the negotiating block of the 43 most vulnerable countries, managed to enshrine an ambitious temperature goal.<sup>63</sup> The Catholic Church played an important role in supporting this advocacy effort, through both the Holy See's diplomatic channels at COP21 and through the mobilization of nearly one million Catholics who signed the 1.5°C petition of the Global Catholic Climate Movement.<sup>64</sup> In words of James Fletcher, Saint Lucia's former Minister for Sustainable Development and a key CVF leader, "our cause was helped tremendously in June 2015, when Pope Francis released his *Laudato Si* encyclical . . .

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<sup>60</sup> "Islamic Declaration on Global Climate Change," *Islamic Foundation For Ecology And Environmental Sciences*, <http://www.ifees.org.uk/declaration/>

<sup>61</sup> "Nearly 2 million people-of-faith petition on the eve of COP21", *The Lutheran World Federation*, 29 November 2015, <https://www.lutheranworld.org/news/nearly-2-million-people-faith-petition-eve-cop21>

<sup>62</sup> "Pope's Climate Encyclical Raises Action," *UNFCCC Newsroom*, 16 June 2016, <http://newsroom.unfccc.int/paris-agreement/first-anniversary-of-pope-francis-encyclical-laudato-si/>

<sup>63</sup> Since 2009, the official target of the negotiations was 2°C, backed by the big industrialized nations, but the intense lobbying efforts of CVF managed to secure the more ambitious 1.5°C goal. Of course this target is meaningless unless developed countries do their fair share in terms of mitigation efforts and climate finance commitments, but this diplomatic victory was critical to recognize the rights of communities at risk in the most vulnerable countries and set a high level of ambition.

<sup>64</sup> "The role of Catholics in the 1.5°C victory at COP21," *Global Catholic Climate Movement*, 13 December 2015, <http://catholicclimatemovement.global/1-5c-victory/>

climate vulnerable countries now had a champion who cut across geographic, political and social divides.”<sup>65</sup>

### **The role of religion in the journey ahead**

As political momentum from COP21 has declined in subsequent rounds of the U.N. climate negotiations, world religions have an important role to play to demand more courageous action from governments and corporations. Given the exasperating business-as-usual attitude that continues to pervade the response of most governments – exacerbated by the rise of populist politicians – the faith community must continue its urgent call for climate justice. This becomes all the more important in the face of the COVID-19 crisis, which reminds us of the *Laudato si'* motto that “everything is connected”, that destruction of ecosystems and wildlife leads to zoonotic pandemics. Faith groups have already been coordinating their joint advocacy in U.N. halls. Now the greater challenge remains to coordinate the faith community at national and sub-national levels to advocate for local climate action in the context of a call for “green and just recovery plans” in response to the pandemic.<sup>66</sup>

Most importantly, faith communities must focus on their core strength: values. Climate change is ultimately a moral crisis requiring realignment of our values, and world religions have the potential to transform billions of followers through their spiritual practices and their massive networks of houses of worship and educational institutions. While the advertising machinery of corporations fosters consumerism, individualism and the abuse of nature, faith leaders can advance instead the opposing values of simplicity, community and the appreciation of nature. As scientists Veerabhadran Ramanathan and Partha Dasgupta argued, “the transformational step may well be a massive mobilization of public opinion by the Vatican and other religions . . . Over and above institutional reforms and policy changes that are required, there is a need to reorient our attitude toward nature.”<sup>67</sup>

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<sup>65</sup> James Fletcher, “The Role of SIDS and Vulnerable Countries in Influencing Climate Change Negotiations,” *Philippines Senate*, 15 August 2016, <http://www.thecvf.org/wp-content/uploads/2016/08/James-Fletcher-Address-at-Inaugural-Lectures-of-Philippines-CVF-South-South-Centre.pdf>

<sup>66</sup> “COP 22 Interfaith Climate Statement,” *Interfaith Statement 2016*, <http://www.interfaithstatement2016.org>

<sup>67</sup> Partha Dasgupta and Veerabhadran Ramanathan, “Pursuit of the common good,” *Science* 345, (2014) no. 6203: 1457-58, <http://science.sciencemag.org/content/345/6203/1457>

Beyond the inner transformation of humankind, in *Laudato si'* we are called to question two paradigms that dominate the public debate and constrain our collective ability to respond to the climate crisis. On one hand, it challenges the capitalist paradigm that champions a “deified market” and the “modern myth of unlimited material progress” that tramples the environment.<sup>68</sup> On the other hand, it disputes the technocratic paradigm that trumpets an “irrational confidence in progress” which makes us hope that illusory technical solutions will fix ecological imbalances.<sup>69</sup> The Pope’s appeal is drastic: “Halfway measures simply delay the inevitable disaster. Put simply, [we ought to] redefin[e] our notion of progress.”<sup>70</sup> Ultimately, the faith community needs to remind us about our inherent goodness and our capacity to collaborate as one human family to tackle the common climate challenge. As Pope Francis put it, “humanity still has the ability to work together in building our common home . . . Human beings, while capable of the worst, are also capable of rising above themselves, choosing again what is good and making a new start.”<sup>71</sup> In the end, world religions must be tasked with keeping climate hope alive.

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<sup>68</sup> Pope Francis, “*Laudato si'*: On Care for our Common Home”, *Libreria Editrice Vaticana*, paragraph 56, 78, [http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html).

<sup>69</sup> *Ibid.*, paragraph 19.

<sup>70</sup> *Ibid.*, paragraph 94.

<sup>71</sup> *Ibid.*, paragraphs 13, 205.

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## **Cosmic roots of the *Laudato si'*: the role of Cosmologia for a global ecology**

*by Piero Benvenuti*

The *Laudato Si'* stands out among all previous encyclicals in that, as it is made clear by its sub-title “on care for our common home”, it is addressed not only to the Catholic or Christian communities, but to all people in the world who care about the future of our environment.

The *Laudato Si'* has indeed been received with great attention by many communities worldwide, quite independently from their religious belief and cultural heritage. However, the encyclical goes well beyond the common concept of ecology, which is normally concerned only with the protection of the material environment: the quality of the air, the preservation of forests and biodiversity, the availability of clean water to everybody, the control of anthropic activities that influence the climate change, etc. All these issues had already received attention by international organizations, as for example the OECD Global Forum on Environment.

The real novelty of the *Laudato Si'* resides in the inclusion, within the concept of ecology, of the care for mankind, not as if it were a separate entity from the material world, but as an integral part of the global Cosmos. Indeed, the very incipit of the encyclical recalls the well-known *Cantico delle Creature* by Saint Francis:

“Praised be You, my Lord  
For our sister Mother Earth  
Who feeds and governs us,  
And produces various fruits  
And coloured flowers and plants”

It is really a revolutionary declaration that embraces everything in a cosmic fraternity: the Sun, the Moon, the Stars ...

“Praised be You, my Lord with all Your creatures  
Especially our brother, Master Sun

...

Praised be You, my Lord  
For Sister Moon and the Stars;”

and this surprising declaration does not exclude “our Sister Bodily Death”, as an integral and essential feature of our presence in the world. Clearly, Saint Francis did not consider the material and biological environment (stars, flowers and plants, ants and wolves) as

something external, different or less important than us: everything in the created world share the same dignity, which is not limited to entities, but also to the processes that, from giving birth to “our Sister Bodily Death”, constitute an essential component of it.

Following the inspirational thought of Saint Francis, the encyclical implies – although not explicitly mentioned – the elimination of any drastic separation between matter and spirit, between the material world and its consciousness, the latter being represented by the emergence of humankind. This implication is made evident by the reference by Pope Francis to the visionary contribution of Pierre Teilhard de Chardin, cited for the first time, at least to my knowledge, in a papal encyclical.

Indeed, the spirit of the *Laudato Si'* is perfectly aligned – I would dare to say: deeply rooted – into the revolutionary vision of the world that has been unveiled by the modern scientific cosmology. According to the latter, the main characteristic of our universe is its unitary evolution, a path that scientists has been able to describe for a period that dates back 13,8 billion years ago up to the current era. During its long history, our universe underwent a continuous evolution, characterized by very different phases, from an initial almost undifferentiated mixture of elementary particles and electromagnetic radiation, towards the formation of the first stars and galaxies, which represents an essential step for enriching the chemistry of the cosmic milieu, out of which new stars were born including a number of planets orbiting them. Indeed, we know now for sure that around any star we see, actually around any star of the entire universe, there is a planetary system similar to our own and some of these exoplanets, as they are dubbed, have characteristics that resemble those of our mother Earth.

We know, by our own experience and existence, that, at least on the planet we live in, our sister and mother Earth, the abovementioned unitary cosmic evolution proceeded locally with what we call the biological evolution, which eventually led to the emergence of the self-conscious mankind. If we match our earthly experience with what we have learnt about the cosmos, we have to admit that the hypothesis that the same evolutionary path we have observed on our Earth, happened or will happen also on some of the billions of billions of planets in the universe, is becoming more and more plausible. We should leave to the scientific investigation the burden to make this hypothesis more credible, meanwhile we should start reflecting on the consequences that this new cosmic vision entails upon us.

The most important consequence is that there is no separation or distinction between the cosmos and ourselves: we, with our material body and our consciousness, are an integral

part of the evolving universe. From a Christian perspective, this means that the Creation cannot anymore be considered an event fixed in space and time, but it is an ever-continuing process which is unrolling in time and not yet completed. Indeed, Saint Thomas Aquinas already warned us that the Creation cannot be considered an event happening only once and introduced the concept of *Creatio continua*, an a-temporal continuous action by God that keeps the whole reality into existence. Of course, Saint Thomas could not imagine in his time that his concept of *Creatio continua* should be extended to be a continuous process that not only keeps the reality into existence, but tends towards a future divine design. Indeed, we saw that the long cosmic path has driven what we used to call the inanimate matter towards the spirit, the consciousness: therefore, the traditional distinction body-soul that we inherited from the Greek philosophers has certainly to be revisited.

But if the evolution, and therefore the Creation, is not yet complete, what would be the final destination of the cosmic path? Science alone cannot answer this question, but we know, or better we believe – because it has been revealed to us by Jesus of Nazareth – that we, together with the cosmos, are moving towards the realization of the Kingdom of Heavens, towards a universal “christification”, as Teilhard de Chardin loved to call it.

And here is the link with the *Laudato Si'*, whose section 83 reads:

“The ultimate destiny of the universe is in the fullness of God, which has already been attained by the risen Christ, the measure of the maturity of all things. Here we can add yet another argument for rejecting every tyrannical and irresponsible domination of human beings over other creatures. The ultimate purpose of other creatures is not to be found in us. Rather, all creatures are moving forward with us and through us towards a common point of arrival, which is God, in that transcendent fullness where the risen Christ embraces and illumines all things. Human beings, endowed with intelligence and love, and drawn by the fullness of Christ, are called to lead all creatures back to their Creator.”

In this context Pope Francis is absolutely right in reminding us that we were “endowed with intelligence and love”: the fact that our rational power has allowed us to discover the evolutionary characteristics of the universe as well as its mechanisms, makes us co-responsible of its future. In other words, we have become co-creators: we can direct, at least on our Earth, the global evolution – I insist: the evolution of matter and spirit together – towards its future.

This has become a tremendous responsibility: the future, not only of the mankind and its earthly environment, but symbolically of the entire cosmos is literally in our hands. And the

time is ripe (I would say, the *kairòs* has come): we cannot wait or hesitate any more. Consider for example what is happening with the GMO, the genetically modified organisms: an outcome which the “natural, unconscious” evolution might eventually had achieved in millions of years, it is now realized, using our scientific knowledge and technological skills, in matters of years or months. What should be our guiding principle in driving the evolution this way? And should we put limits to the process, taking into account that the long-term consequences are difficult to predict?

If we want to be considered real co-creators, aligning our actions to the aim of the Pantocrator, we may read back the prophetic verses of Genesis I, 24: when Adam and Eve were expelled from the garden of Eden, after having eaten the fruit of the tree of the knowledge of good and evil, God “[...] at the east of the garden of Eden he placed the cherubim and a flaming sword that turned every way to guard the way to the tree of life.” Maybe the cherubim fell asleep or the sword had its flame extinguished, but how can we call today’s genetic manipulations anything else as an attempt to the very roots of the tree of life? (the too often forgotten second tree of the garden of Eden).

Let me mention here a subtler parallel evolution – maybe not yet perceived as such – which is happening through the global communication networking. The fast-technological progresses in this field is generating phenomena that go well beyond their initially planned purposes. We have seen already how our collective conscience can be influenced by the increasing connectivity, but this is just a first step towards a globalization of consciences. Consider the deployment of the huge amounts (tenths of thousands!) of communication satellites that are already being deployed in Low Earth Orbit. Their main declared purpose is to provide web connectivity all over the world, in principle a useful technological progress. However, what is not being sufficiently highlighted is that the latency of this type of communication, i.e. the time a signal takes to reach us from the space web, will be in the range of milliseconds, similar to the speed of neurons transmission in our brain. Match this data with the possibility, recently proposed, to implant a chip in our brain so that it will be continuously connected to the world wide web.

Is this the first step towards the realisation of the *noosphere*, the prophetic vision that Teilhard had when the web was not even dreamed? If this is the case, how can we drive this different, but equally important evolution, in such a way it represents a real progress towards the christification of the world?

In both cases, our responsibility as cosmic consciousness, or, from a Christian perspective, as co-creators, is brought to play: we cannot anymore look the other way, and the *Laudato Si'* is shaking the conscience of all people of good will, urging them to act.

But how should we act? The answer has been given few days ago by Pope Francis with his new encyclical *Fratelli tutti – All brothers*, which is indeed, in his own words, the logical extension of the *Laudato Si'*. Unconditional Love for everyone and everything in the created cosmos is the key. Only if we bend our intelligence and all our knowledge and skills to unconditional Love, Love that makes no distinction whatsoever, we may be considered real co-creators aiming to the promised realization of the Kingdom of Heavens.



## **A Dialogue on *Laudato si'***

*by Antonino Puglisi, in dialogue with John Chryssavgis, Gopal Patel and Mohammad Ali Shomal*

The environmental crisis represents one of the most urgent and critical problems of our time. Pope Francis in his encyclical letter *Laudato si'*<sup>72</sup> emphasized the need “to enter into dialogue with everyone about our common home<sup>73</sup> ... before it is too late.”<sup>74</sup> In particular, women and men of various religious faiths can play a significant role in addressing the challenges related to climate change and all its devastating consequences by leading the change.

This article is the result of a dialogue between representatives of three major religions (Christianity, Islam and Hinduism) around the specific contribution that religions can play in the current environmental crisis and how a spiritual view of nature can help motivate our anthropological and ecological conversion.

Dr. Mohammad Ali Shomali, is the director of the International Institute for Islamic Studies in Iran and the Risalat Institute in the United Kingdom.

Rev. Dr. John Chryssavgis, Archdeacon, is a theologian and advisor on environmental issues to the Patriarch of Constantinople.

Gopal D. Patel, is director of the Indu Bhumi Global organization and co-chair of the United Nations *Multifaith Advisory Council*.

This dialogue, which was held in Castel Gandolfo on October 23, 2020<sup>75</sup>, was moderated by Dr. Antonino Puglisi, a researcher in chemistry at BOKU University in Vienna, Austria, and a research associate at the Faculty of Theology and Religion at the University of Pretoria, South Africa, and a member of the EcoOne steering committee.

On May 24, 2015, Pope Francis addressed the Catholic Church and all of humanity with the encyclical *Laudato si'*. In the document, the Pontiff issues “an urgent invitation to renew

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<sup>72</sup> Francis, *Laudato si'*, Encyclical Letter, (Vatican City: Vatican Press, 2015). [http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html)

<sup>73</sup> Francis, *Laudato sí*, sec. 3

<sup>74</sup> Francis, *Laudato sí*, sec. 193

<sup>75</sup> <https://www.youtube.com/watch?reload=9&v=CDKqt6oquZI&feature=youtu.be>

dialogue about how we are building the future of the planet”<sup>76</sup>, urging the opening of a conversation “that unites us all, because the environmental challenge we are experiencing, and its human roots, concern and touch us all.”<sup>77</sup>

**Dr. Shomali, how do you see the future of dialogue particularly between Christianity and Islam with reference to environmental protection? And what do you think has been the legacy of the *Laudato Si'* in this regard?**

(Dr. Mohammad Ali Shomali)

*I think an important aspect of Christian-Muslim dialogue is related to how we can address our common challenges and how we can offer our common witness in a way that reflects our unity in a concrete way. Nature is a very important area in the lives of all of us. It is a big part of God’s creation and manifestation, but also something that affects the lives of billions of people today and generations to come. It is something that has a great impact on our physical, mental, and spiritual well-being, something that is deeply rooted in our scriptures and the teachings of our great leaders and scholars.*

*So, I think there is no doubt that this is an area where we should and must work together. It’s very important that Pope Francis with his encyclical **Laudato si'** stressed the urgency of working for nature conservation from a religious perspective and with a religious sense of responsibility. Of course, this is an issue that people who do not have a defined faith orientation are also very attentive to.*

The arrival of the COVID-19 pandemic has suddenly catapulted us into a fragile new world. Now more than ever it is clear how the future of humanity is closely tied to the care of our common home. Several religious *leaders* have spoken out in defense of the environment, but the role of His Holiness Patriarch Bartholomew has been and continues to be one of the most significant. For over three decades, he has been at the forefront of promoting the protection of creation and his efforts have earned him the title of *Green Patriarch*. In his message for World Creation Day last September 1, 2020, His Holiness Patriarch Bartholomew I, writes among other things:

*“We reiterate that the environmental activities of the Ecumenical Patriarchate are an extension of its ecclesiological self-consciousness and do not constitute a mere*

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<sup>76</sup> Francis, *Laudato sí*, sec. 14

<sup>77</sup> *ibid*

*circumstantial reaction to a new phenomenon. The very life of the Church is an applied ecology.”<sup>78</sup>*

**Rev. Chryssavgis, what is the responsibility of the Church and the faithful in shaping a new future? Some people argue that the Church should not be concerned with ecology or social justice but rather should focus on spiritual matters. How do you respond to this provocation?**

(Rev. John Chryssavgis)

*My approach is very simple and, I would say, deeply biblical. The Gospel message and the theological and spiritual vision must be translated into living practice in the world. They are not simply romantic notions for a heavenly reality but require from us appropriation and conversion so that they reflect the same reality “on earth as in heaven” (Matthew 6:10). The problem often faced by people is not so much a resistance to God or some higher being; rather, it is accepting the full implications of the fact that God created the world as “good” (in Genesis 1) and that we are called to “care for it” (in Genesis 2:15) that does not belong to us, but should be cared for and shared by all people and all creatures, in our generation and for the sake of future generations.*

*When we read Christ’s words in the temple, “The Spirit of the Lord is upon me because he has anointed me to bring glad tidings to the poor. He has sent me to proclaim liberty to captives and recovery of sight to the blind, to let the oppressed go free” (Luke 4:18), we tend to identify the captives, the blind, and the oppressed with other people instead of ourselves. Instead, we should embrace these limitations because we are actually the ones who are called to face our passions and obsessions, our habits, and compulsions.*

*This is why people resist the mandate to care for God’s creation and the calling to live more simply. Because the stakes are too high; because it is easier to deny climate change or dismiss it as too costly. This is precisely why His Holiness Ecumenical Patriarch Bartholomew has repeatedly stressed - for almost thirty years now - that the ecological crisis is not a political challenge; it is not a scientific or technological problem. It is a fundamentally theological and spiritual issue. In fact, it can only be properly addressed and fully resolved when people begin to see the broader perspectives of our planet’s natural environment and resources. We are treating our planet inhumanly and godlessly because we fail to see it as*

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<sup>78</sup> “Message for World Day of Creation,” 2020, <https://www.vaticannews.va/en/church/news/2020-09/bartholomew-i-message-for-world-day-of-creation-full-text.html>.

*a gift inherited from above. Unless we change the way, we perceive the world, we will continue to deal with the symptoms, not their causes. In short, the way we view God's creation is the way we will ultimately treat it.*

**Gopal Patel, with his Hindu organization Bhumi Global, is at the forefront of coordinating a multi-religious group of religious organizations consulting with the United Nations on the environment, through the support of WWF. What has been your experience in this regard? What, in your opinion, is the specific contribution that religions can bring in this context?**

(Gopal Patel)

*There are two basic things we can bring to the ecological discourse. The first is to create space for grief for what we have done to creation. We can offer comfort to those who are suffering - materially, emotionally, spiritually - in the state the world is in. We need to be able to contain that pain and turn it into positive action, to give hope that things can get better.*

*The second contribution is to offer a renewed framework of moral reference and values for the world. In the last two centuries we have increasingly lost our way and forgotten the purpose and essence of a good life. We have allowed economic growth and development to come at the expense of the planet, we have forgotten that we are all called to care for the Earth, that we are deeply interconnected with all life and have a responsibility to care for one another. The ecological crisis cannot be solved with the same thinking that caused the crisis. We need a new approach, and the World's Religions can offer wisdom, understanding, and vision of what that new approach should be.*

Many people agree that science alone is not enough to get us out of this crisis and that we rather need wisdom. In this regard, *Laudato si'* has a very beautiful passage when it states that "the world is something more than a problem to be solved, it is a joyful mystery that we contemplate in gladness and praise<sup>79</sup>."

The encyclical clearly had a great impact in the Catholic Church, but perhaps most interesting was its ecumenical and interreligious dimensions.

**How has the document been seen and received in your communities?**

(Rev. John Chryssavgis)

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<sup>79</sup> Francis, *Laudato sí*, sec. 12

*I think it is important to note that one of the most significant aspects of Laudato si' is not so much its obvious impact on environmental issues, but rather its ecumenical breadth and depth. I was fortunate enough to be involved with the encyclical from before its completion and publication to the moment it was officially released in the new synod hall at the Vatican, jointly released - for the first time ever - by the relevant papal representative, in this case His Eminence Peter Cardinal Turkson, and the patriarchal spokesman, His Eminence Metropolitan John of Pergamon. Beyond this historical moment, the encyclical itself makes abundant reference to the pro-environmental initiatives of His Holiness the Ecumenical Patriarch of Constantinople over many decades.*

*The fact that we have two leaders - the patriarch, who had been working on this issue for decades, and the pope with his global influence who has been able to universalize this vital message - is crucial. Religion may not always transform people; but it can certainly mobilize people. Politics will not be able to achieve this; in fact, politics will always divide people. Whereas religion can have an immense influence and lasting impact on the world. And in this regard, the friendship and the link between the Pope and the Patriarch is, in my humble opinion, not accidental but providential. It is a friendship that preceded the encyclical, that shaped the encyclical and that continued after the encyclical. Indeed, one of the tangible results of the friendship is the designation of September 1st as the World Day of Prayer for the Environment, which the Pope accepted and supported immediately after the publication of Laudato si'. Moreover, just two years after Laudato si' appeared, the Pope and Patriarch issued their first - again the first - joint encyclical for Creation Day on September 1st.*

*A second aspect of the encyclical that I would like to highlight in terms of its impact on other Christians is its emphasis - again long highlighted by Patriarch Bartholomew - on the fact that ecological awareness and practice are an integral part of the Christian mandate and mission. Environmental conversion or transformation is not something incidental or additional to our vocation as Christians.*

*(Gopal Patel)*

*From my experience, not many Hindu groups and leaders are aware of Laudato si'. This is because they are not very familiar with the workings of the Catholic Church. The Hindu communities I know who are aware of it have welcomed and appreciated the encyclical. They recognize the great influence of the Catholic church and its ability to encourage people to take positive action. I would say that Hindus like the way the Pope makes it clear that caring for our common home is a central teaching of Catholicism and Catholics everywhere*

*should take this teaching seriously. They appreciate the boldness of this approach and the fact that the document challenges the status quo a bit. Many Hindus recognize the weight of responsibility that religious leaders have and that the Pope has a deep conviction that he must speak about it as a moral duty.*

(Dr. Mohammad Ali Shomali)

*I think people who work in the field of environmental ethics and environmental activism are familiar with Laudato Si, because this is one of the most important documents, in this field, in recent years. However, this does not mean that it has been sufficiently publicized yet. We need to work harder to spread the message of Laudato Si and similar documents, especially to the general public, and I think initiatives like today's meeting, when we have people of different religious faiths committed to this, would help.*

This conversation emphasizes the fact that science and technology alone cannot solve the ecological problem and that we need to find other resources alongside the human intellect to help motivate a much-needed ecological and anthropological conversion.

So, to conclude, one last question.

**What, then, is Nature in the light of your spiritual tradition and how can this vision help us to shape and enrich our ecological commitment?**

(Rev. John Chryssavgis)

*Our ecological prayer must move from the distant periphery of an abstract theology to the center of practical life, if Orthodox spirituality is to become "embodied", I would say that there are three complementary models of caring for God's creation that are proposed - and have been tested - by the Orthodox tradition.*

*The first is the biblical model, according to which the Church is called to be in solidarity with the weakest parts of the Body of Christ. It must represent the most vulnerable, defenseless, voiceless elements of this world, who according to St. Paul " We know that all creation is groaning in labor pains even until now" (Rom 8:22). For the earth, too, is a member of our body, a part of our flesh, inseparable from our history and destiny. In the same way that the God of Israel once heard the cry of the poor and oppressed (Ex. 3 and Jonah 4), God also hears the silent cry of the earth. This is the biblical covenant, God's promise to the people of Israel: that God hears the world; that God cares for the world; that God cares for the smallest details of this earth - down to the last speck of dust!*

*I would define the second model as an ascetic model. Here I would emphasize the three R's of the ascetic life: renunciation, repentance, and accountability.*

*Renunciation is the way to learn to share. In this sense, renunciation has social consequences; it reminds us to use material goods with respect. Renunciation is about simply living so that others can simply live. Repentance is a way of confessing that we have sinned. So we recognize that we are self-centered, that we are not living up to our calling to “serve and preserve the earth.” And responsibility is our challenge, our choice. Having renounced all that clutters our minds and our lives, and having repented of our wastefulness, we can direct our lives with love and reverence toward creation and the Creator.*

*Finally, there is the sacramental model, through which we recognize that nothing is profane, that everything is created by God and loved by God, that God is - and is within - the very constitution of this world. If God is removed or if we remove God from the world, the world would collapse. This is the depth of a sacramental worldview.*

(Gopal Patel)

*A central teaching of Hinduism is that all life is sacred and equal for all beings. From the smallest ant, to the tiger, from the tree to the elephant, all life is animated by God. This simple yet profound teaching means that we must treat all life with respect, understanding that everything is equal in God’s eyes. This in Sanskrit is called sama-dharana - egalitarian view. These Hindu texts explain that if we live with such an egalitarian view, we will naturally treat all of life with respect and not aim to harm or exploit others. And because this view should be extended to animals, plants, and the Earth itself, it means that we should not destroy the natural world.*

*I think this teaching is important because in many ways our current society places humans above all other life forms. This has unfortunately led to humans causing mass destruction and devastation to animals and biodiversity. So, Hinduism asks us to be a little more humble, to recognize that God created everything in the world, and every form of life has a right to exist and we should not interfere with that.*

(Dr. Mohammad Ali Shomali)

*For me, nature is an integral part of my relationship with myself and with God, and I cannot think of any meaningful spiritual life without having high regard for nature. Going out into nature, whether it’s a forest or a mountain, being near a river or a waterfall or in a desert, whether it’s day or night, under clouds or clear skies with bright stars, listening to the waves of water or the song of birds or the movement of leaves with the wind. Each one has something special, and all have an effect on the soul. If we could only open up to them and*

*listen to them and see them, we would not be able to remain the same. We would receive a lot of positive energy and peace from them.*

*I think that being closer to God and being closer to our inner selves would certainly be helped by being in nature and I hope that we can all work to preserve our nature. In Islamic hadiths, the earth is presented as our mother, and you can only understand the meaning of this statement when you know how much mothers are valued in Islam and how much emphasis is placed on being kind and respectful to your mother. So, I hope that we can be kind to our mother earth and be respectful and grateful for all that we have and continue to receive from the earth.*

At the end of this stimulating conversation there remains a great sense of gratitude for the wisdom that has emerged from religious traditions in reference to nature. *Laudato Si* emerges as a universal invitation to care for nature and for one another, and that in doing so we should seek wisdom, creativity, and love. The word “love” is in fact used in the text about 70 times to indicate a path on which all are invited to walk. Only by “being love,” in fact, will humanity be able to restore that gaze on itself and on the rest of creation to rediscover that golden thread of love that exists among all beings. As Chiara Lubich reminds us, “everything on earth is in a relationship of love with everything: everything with everything. It is necessary to be Love in order to find the golden thread among beings.”<sup>80</sup>

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<sup>80</sup> Chiara Lubich, *Scritti spirituali /1* (Roma: Città Nuova, 1997).

## Happy Degrowth

by Maurizio Pallante

### The concept of degrowth

The concept of degrowth is often confused with the concept of recession, whereas it has a totally different meaning, which can be deduced only from a correct interpretation of the concept of economic growth.

Economic growth is not, as is generally believed, an increase in the number of goods produced and services provided by an economic and productive system during the course of a year. This because the parameter by which it is measured, the gross domestic product (GDP), is a monetary value, consisting of the sum of the prices of goods and services for final use produced and sold during that period of time.

The objects and services that are sold are commodities. The concept of commodity does not coincide with the concept of *good*, which defines objects and services that meet a need or satisfy a desire. Since in industrialized countries for two or three generations we have been accustomed to buying everything, we need - what we buy are merchandise what we need are goods - we have ended up confusing the two concepts. In Britain and the United States, the word merchandise practically no longer exists. If you look it up in the dictionary, the equivalent is the word goods, which means exactly goods.

In order to understand the meaning of the word *degrowth*, it is necessary to restore the awareness that the concepts of *good* and *merchandise* are different. Different does not mean opposite. The opposite of good is not merchandise, but a useless or harmful object. The opposite of merchandise is not good, but an object not for sale.

Two opposite characteristics cannot coexist in the same subject or object. A man cannot be tall and short at the same time, nor fat and thin. Two, or more, different characteristics can, however, and if they are two, they can give rise to four combinations: a man can be tall and thin, short and thin, tall and fat, short and fat.

Four combinations can be created between merchandise and goods: merchandise that are not goods, goods that are not merchandise, goods that can only exist in the form of merchandise, and goods that cannot exist in the form of merchandise.

Happy degrowth<sup>81</sup> can be achieved in the first instance by reducing the production and consumption of merchandise that are not goods: waste. For example: the energy that is dispersed from fixtures, from the attic and from the walls in the heating of environments (at least 2/3); the food that is thrown away (at least 2% of GDP); the drinking water that is dispersed in water pipes (up to 60%); the materials contained in discarded objects that are buried or burned. Reducing waste does not decrease well-being. Every waste causes environmental damage. Reducing waste saves money and reduces environmental damage. Unlike recession, which is the generalized reduction of all production of merchandise, regardless of whether they are goods or not, happy degrowth is a selective and governed reduction. It is not limited to putting the *minus* sign in front of the GDP, because in this way we do not come out of the quantitative (il)logic of those who claim that the GDP should always be preceded by the *plus* sign. It is *minus* when it is *better*. Recession causes unemployment, the selective reduction of waste creates useful employment, which pays for its investment costs with the savings in operating costs that it allows (example: energy renovation of buildings).

Happy degrowth can be achieved, in the second instance, by increasing the production and use of goods that are not bought, but self-produced or exchanged in the form of a reciprocal gift of time within community relationships<sup>82</sup>. In the course of two or three generations in Western countries, the know-how that made it possible to self-produce many goods at home has been eradicated from the heritage of collective knowledge (the vernacular economy of which Ivan Illich speaks) and all interpersonal relationships have been transformed into commercial relationships (loss of the value of solidarity). How so? Whoever does not know how to do anything and cannot count on a network of collaborative relationships must buy everything he/she needs, and therefore the GDP grows more because of them rather than for those who do not have to buy everything. Consequences: total subordination to the market, loss of manual skills (according to a phrase attributed to Kant, the hand is the window of the mind) that distinguish the human species from all other living species, identification of wealth with money.

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<sup>81</sup> Cf. Maurizio Pallante, *La felicità sostenibile. Filosofia e consigli pratici per consumare meno, vivere meglio e uscire dalla crisi* (Rizzoli, 2009).

<sup>82</sup> Maurizio Pallante, *La decrescita felice - La qualità della vita non dipende dal PIL* (Editori Riuniti, 2011).

There are goods that can only be had in the form of merchandise: goods that require advanced technology or specialized professional skills. Examples: computers, magnetic resonance imaging, household appliances. Degrowth would be unfortunate if it were to be achieved through a decrease in goods that can only be had in the form of commodities. However, a happy degrowth can also be achieved in this area: producing objects made to last, repairable, designed so that at the end of their useful life they can be easily disassembled, allowing the materials they are made of to be divided into homogeneous types so that they can be reused/recycled to make other objects.

There are goods that cannot be had in the form of merchandise: relational goods: trust, esteem, love cannot be bought. Societies that have focused their economy on the growth of the production of goods, give more value to the time dedicated to work to produce goods in exchange for a monetary income that allows to buy goods, rather than to the time dedicated to human relationships, to one's creativity, to spirituality. Happy degrowth is achieved by reducing the time dedicated to work and increasing the time dedicated to relationships.

Points 1 and 3 allow us to set the only proposals of economic and industrial policy that can get us out of the economic crisis and create useful employment in activities that reduce the ecological crisis. Points 2 and 4 involve a change in behavior patterns and value system that are able to give meaning to life. The economy has been aimed at the growth of the production of goods by the industrial mode of production. Happy degrowth is a cultural revolution that is developing because the historical era that began with the industrial revolution in the second half of the eighteenth century is coming to a close. When a historical epoch closes, the system of values on which the way of thinking of human beings has been based goes into crisis, and therefore the awareness of its limits begins to spread and the need to build a new cultural paradigm begins to assert itself. Happy degrowth is a cultural revolution with these characteristics, in its dawning phase. In order for the light of day to arrive, the contribution of ideas, passion, professional skills of a much larger number of people than those who stayed awake to see the dawn is needed.

### **Why happy degrowth is necessary**

The current climate crisis is the most serious and most difficult problem to solve that humanity has ever had to face. It is the most serious because it threatens the very survival of the human species. It is the most difficult because to solve it, technological innovations are not enough to reduce carbon dioxide emissions, increasing the efficiency of energy transformation processes, reducing waste, replacing fossil energy sources with renewable

sources, reusing the materials contained in discarded objects to produce new objects in the logic of the so-called circular economy. All this is necessary to mitigate and slow down the increase of the Earth's temperature, but it is not enough to decrease it if the economy continues to be aimed at the growth of the production of goods, because the reduction of material consumption and emissions per unit of product, which can be achieved with more efficient technologies, will be systematically nullified by the increase of goods produced.

In December 2015, COP 21 was held in Paris, where, at the end of grueling discussions, a compromise was reached that was unanimously considered a success. The agreement envisages a reduction in the growth of climate-changing emissions that will make it possible to contain the increase in the Earth's temperature in 2100 between 1.5 and 2°C, compared to pre-industrial levels. An increase not higher than those values was thought (really thought?) to be a fair compromise between the need to prevent the climate crisis from getting out of control and the need not to undermine the growth of the world economy. Despite the Paris agreements, (or, more correctly, as a result of those agreements) not only have the concentrations of climate-changing gases in the atmosphere continued to grow, but they have grown faster than ever before, from 400 to 417.9 parts per million. As a result, the five-year period 2015 - 2019 was the warmest on record.

The report presented by the World Meteorological Organization on September 24, 2019, states that the Earth's average temperature has increased by 0.2°C over the previous five years and the increase compared to pre-industrial times has reached 1.1°C. To meet the commitments made at COP 21 in Paris to contain the Earth's temperature increase to within 2°C in 2100, reductions in climate-altering gases would need to be tripled. Containing it within 1.5°C would require a five-fold increase.

At least, one might ask, has the decision not to reduce emissions and to limit their increase so as not to damage economic growth, served to increase production in industrialized countries? No. In recent years, their economies have remained essentially flat and in 2019 began to veer from stagnation to recession. Before the coronavirus arrived to give it a decisive blow.

*Neither development nor sustainability have been achieved through sustainable development.* The climate crisis is the most troubling aspect of a global ecological crisis caused by the fact that global economic growth has outstripped the biosphere's ability to provide it with the resources it needs and to metabolize its waste.

Carbon dioxide emissions from the combustion of fossil fuels exceed the capacity of chlorophyll photosynthesis to metabolize them. The unmetabolized amounts concentrate in the atmosphere. They fluctuated between 170 and 270 parts per million for 8,000 centuries until the second half of the nineteenth century, rose to 380 parts per million by the end of the twentieth century, reached 417.9 parts per million in the second decade of this century, and continue to rise. Together with the methane emitted by the enteric fermentation of the huge number of industrially raised ruminants, the methane released by the melting of the permafrost and the emissions of nitrous oxide, they have already raised the Earth's temperature by 1.5°C compared to pre-industrial levels, well before 2100, triggering the climate changes whose consequences humanity has just begun to suffer. We must decrease them before it is too late.

*Overshoot day*, the day on which humanity comes to consume the renewable resources the planet regenerates over the course of a year, first fell below the threshold of December 31 in the early 1980s; since then it has gradually and increasingly advanced its deadline, reaching July 29 in 2019. We need to decrease consumption of renewable resources before it is too late.

The reduction in the stocks of many non-renewable resources (particularly fossil fuels and some minerals) has caused and is causing an increasing number of conflicts to seize the remaining deposits. The consumption of non-renewable resources must be decreased before it is too late.

The increasing quantities of chemically synthesized products, which the biosphere is not able to metabolize, generate forms of pollution increasingly serious and widespread: in all the oceans float masses of plastic pulp as large as the United States; in the air, in the water cycle, in soils and foods increase the concentrations of pollutants used in many industrial processes and agriculture; increase the micro and nano particles emitted by combustion processes, including the burning of waste. All of this results in an increase in the incidence of fatal diseases. We need to decrease the production of chemically synthesized products. The fertility of agricultural soils and biodiversity have been drastically reduced, fish populations have been halved. It is necessary to decrease the exploitation of agricultural land and the quantity of fish caught.

*Degrowth is not a political option to be demonized. It is a trivial mathematical deduction that does not even require knowledge of the four operations. Addition and subtraction are enough.*

**Happy degrowth cannot be the end of productive activities. It is the path to follow in order to fall within the limits of environmental sustainability.**

If human activities had not exceeded environmental sustainability, neither on the side of resource consumption nor on the side of emissions, why should we propose the objective of decreasing the production of goods? *We should only propose to produce well*, as it does not happen today because the concern is to produce more and more, we should propose to produce without polluting, without damaging other living species, without leaving someone without the means to live, delivering to future generations a world more beautiful than the one left by previous generations<sup>83</sup>.

Today, in addition to *producing well* in order to reduce environmental damage, we should also *produce less* in order to progressively bring our consumption of resources and biodegradable emissions within the limits of the capacity of chlorophyll photosynthesis. We can also boost photosynthesis with gigantic reforestation plans (botanist Stefano Mancuso speaks of 1000 billion trees), reversing the trend of reducing it as we have done so far. In any case, to fall within the limits of environmental sustainability we must reduce the production of goods. *There is no alternative*, often contracted in the acronym TINA (a slogan often used by the British Conservative Prime Minister Margaret Thatcher and then widely adopted by other politicians).

To reduce it, mitigating as much as possible the repercussions on consumerist lifestyles that rich nations have internalized for several generations, it is necessary to develop technological innovations that make it possible to increase the efficiency of the processes of transforming resources into goods, so as to reduce the consumption of raw materials, energy and water for each unit of product. It is necessary to develop technological innovations that make it possible to increase the durability of goods and recover the materials of which they are composed when they are discarded. But all of this would be useless if the demand for end-use goods were not also reduced, so it is necessary, incidentally because it would require a separate discussion, to change the value system that leads us to identify happiness with the possession of things.

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<sup>83</sup> Maurizio Pallante and Alessandro Pertosa, *Solo una decrescita felice (selettiva e governata) può salvarci* (Torino: Lindau, 2017).

## Quotes from Pope Francis' Encyclical *Laudato si'* related to growth and degrowth

"We fail to see the deepest roots of our present failures, which have to do with the direction, goals, meaning and social implications of technological and economic growth."<sup>84</sup>

This has made it easy to accept the idea of infinite or unlimited growth, which proves so attractive to economists, financiers and experts in technology. It is based on the lie that there is an infinite supply of the earth's goods, and this leads to the planet being squeezed dry beyond every limit. It is the false notion that "an infinite quantity of energy and resources are available, that it is possible to renew them quickly, and that the negative effects of the exploitation of the natural order can be easily absorbed."<sup>85</sup>

"It is not enough to balance, in the medium term, the protection of nature with financial gain, or the preservation of the environment with progress. Halfway measures simply delay the inevitable disaster."<sup>86</sup>

"Frequently, in fact, people's quality of life actually diminishes – by the deterioration of the environment, the low quality of food or the depletion of resources – in the midst of economic growth. In this context, talk of sustainable growth usually becomes a way of distracting attention and offering excuses. It absorbs the language and values of ecology into the categories of finance and technocracy, and the social and environmental responsibility of businesses often gets reduced to a series of marketing and image-enhancing measures."<sup>87</sup>

"That is why the time has come to accept decreased growth in some parts of the world, in order to provide resources for other places to experience healthy growth."<sup>88</sup>

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<sup>85</sup> *Compendium of the social doctrine of the church*, (Libreria Editrice Vaticana, 2004). [https://www.vatican.va/roman\\_curia/pontifical\\_councils/justpeace/documents/rc\\_pc\\_justpeace\\_doc\\_20060526\\_compendio-dott-soc\\_en.html](https://www.vatican.va/roman_curia/pontifical_councils/justpeace/documents/rc_pc_justpeace_doc_20060526_compendio-dott-soc_en.html). Sec. 462.

<sup>86</sup> Francis, *Laudato si'*. Sec. 194.

<sup>87</sup> Ibid.

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## **«A heart that knows». Romano Guardini's contribution to *Laudato si'* and to integral ecology of Pope Francis**

*by Andrea Galluzzi*

### **Romano Guardini, precursor and educator**

Romano Guardini (Verona, 1885 - Munich, 1968) is considered one of the most influential intellectual figures of the 20th century in Europe. A philosopher, theologian, eclectic personality in his studies, he found in the Catholic priesthood the way to express his religious depth and his desire for truth, bringing him in the direction of a broad cultural vision. Guardini was - and is - a point of reference and inspiration for many. Not only for the quantity of his writings and for his literary skills, but also for his qualities as an educator and precursor of a thought open to a vision of the world capable of interpreting the present time. His major contribution can be identified in his influence on all those movements and currents of thought, which emerged in the period between the First World War and the Second Vatican Council, and which were based on the desire for a renewed ecclesial consciousness<sup>89</sup>. The very fact that he is considered the precursor of many ideas which later entered into the Council itself<sup>90</sup> - in particular those with regard to the relationship between the Church and the world - testifies to the depth of his intellectual speculation and the scope of his pastoral and teaching activity. Significant traces of his intellectual speculation can be detected in the thought of various contemporary theologians - including Karl Rahner (1904-1984) and Hans Urs Von Balthasar (1905-1988) - and in the magisterial lines of Joseph Ratzinger (Benedict XVI) and Jorge Mario Bergoglio (Francis)<sup>91</sup>.

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<sup>89</sup> Including the liturgical, biblical and lay movement. Cf. Juan Gabriel Ascencio, "Romano Guardini, philosophical precursor of the Second Vatican Council", *Alpha Omega*, 3 (2014).

<sup>90</sup> cfr. Marcello Acquaviva, "Il concreto vivente. L'antropologia filosofica e religiosa di Romano Guardini", Città Nuova, Roma 2007, p. 24.

<sup>91</sup> For an excursus on the influence of Guardini's thought in the theological and philosophical field, please refer to: J. Rajčáni, *Identity and moral action. Reflections on Christian existence in the light of the thought of Romano Guardini*, Aracne, Rome 2016.

## The guardianian formation of Bergoglio

What particularly binds Bergoglio to Guardini - as Massimo Borghesi<sup>92</sup>, one of the greatest scholars of Guardini's thought, documents well - is the discovery by the future Pope Francis of the theme of *polar opposition*<sup>93</sup> (a work published by Guardini in 1925, a cornerstone of his dialectical methodology), which explains how two opposing realities can be reconciled in a dynamic and unifying equilibrium that leads to a superior whole containing the tension between the two starting poles. This discovery took place in 1986, the year in which Bergoglio went from Argentina to Germany, at the philosophical-theological faculty of Sankt Georgen in Frankfurt, to work on a doctoral thesis on the thought of the Italian-German author<sup>94</sup>. The thesis - the title of which should have been *The Polar Opposition as the Structure of Everyday Thought and of the Christian Proclamation* - was never completed, but the study undertaken gave Bergoglio the advantage of strengthening the dialogical vision of his thought, which draws its essence from a tradition of authors who see the Church as a place of encounter, harmonization, and unification of diversity<sup>95</sup>. In this line of thought, the intellectual position of the future Pope Francis found in Guardini's polar dialectic a cognitive method with which to develop a fruitful synthesis. Bergoglio himself explains it thus:

"The opposition opens a path, a road to travel. [...]. Romano Guardini helped me with a book of his that was important to me, *The Polar Opposition*. He spoke of a polar opposition in which the two opposites do not cancel each other out. Nor does it happen that one pole destroys the other. There is no contradiction or identity. For him the opposition is resolved in a higher plane. In that solution, however, the polar tension remains. The tension remains, it is not cancelled. Limits must be overcome, not denied. Oppositions help. Human life is structured in an oppositional form. And this is what happens now also in the Church. [...]"<sup>96</sup>

Evidence of the Guardianian influence on Bergoglio's intellectual formation emerges particularly in the apostolic exhortation *Evangelii Gaudium* (2013), in which the entire section

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<sup>92</sup> M. Borghesi, *Jorge Mario Bergoglio. Una biografia intellettuale*, Jaca Book, Milano 2017.

<sup>93</sup> R. Guardini, *Versuche zu einer Philosophie des Lebendigkonkreten*, tr. it.: *L'opposizione polare. Saggio per una filosofia del concreto vivente*, Morcelliana, Brescia 2016.

<sup>94</sup> cfr. M. Borghesi, *Jorge Mario Bergoglio*, cit., p. 118.

<sup>95</sup> Bergoglio's thought, which in many respects is similar to that of Methol Ferré, comes to be constituted as a symphony of opposites. A philosophy that is placed in the bed of Catholicism, understood as *coincidentia oppositorum*, in the wake of Adam Mohler, Erich Przywara, Romano Guardini, Henri de Lubac. *Ibid.*, p. 23.

<sup>96</sup> *Ibid.*, p. 121.

regarding the criteria for the common good and social peace is taken from the 1986<sup>97</sup> thesis on Guardini and hinges on the dialectic of polar pairs. The reflection of Pope Francis is expressed here in four principles<sup>98</sup> oriented to the development of social coexistence and which find their ideal synthesis in the well-known depiction of the Church as a *polyhedron*<sup>99</sup>, that is, a reality in which the communal dimension is realized in a dialogical form, welcoming, never monolithic, nor uniform, but open, patient, sensitive to respect for diversity and unifying at the same time.<sup>100</sup> These principles will also be recalled in *Laudato Si'* to reinforce the vision of a concrete reality centered on the human person. In short: in the perspective of *polar opposition* opened by Guardini, Bergoglio succeeds in grasping that dialogical dimension to be understood as “synthesis of a fruitful tension open to conciliation, far from any absolutization and constructor of a concrete unity”.<sup>101</sup>

### **The contribution of Guardini to *Laudato si'*: technology, modernity, power, nature**

In the text of the encyclical *Laudato Si'*, Bergoglio uses Guardini's thought and words to highlight the relationship between technology and power. The underlying issue, central to the anthropological reflections of our time, is to highlight how technology has endowed man with a power that he is no longer able to control. Guardini traces the framework of this problem in two works: *The End of the Modern Age* (1950) - cited no less than eight times in *Laudato Si'* - and *The Power* (1951). In these writings, the German-Italian author deals realistically with the problem of how man can succeed in taking back the power derived from technical progress, but without deviating towards that form of thought in which it is believed that what is technically possible is also ethically justifiable, as a certain vision nourished by

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<sup>97</sup> cfr. *Ibid.*, p. 119.

<sup>98</sup> The criteria given in *Evangelii Gaudium* are: 1) Time is superior to space; 2) Unity prevails over conflict; 3) Reality is more important than the idea; 4) The whole is superior to the part. See Francis, *Evangelii Gaudium: Apostolic Exhortation on the Proclamation of the Gospel in Today's World*, 2013, §§ 217-237. In the 1986 thesis, Bergoglio explicitly innervates his reflection from the system of opposites with which Guardini describes the *concrete living*, that is, the dialogical system in which man is defined in the totality of his existence. For an in-depth and precise reconstruction on the subject, see: M. Borghesi, *Jorge Mario Bergoglio*, cit., pp. 123-136.

<sup>99</sup> cfr. Francis, Encyclical letter *Evangelii Gaudium of the Holy Father Francis* (Vatican City, 2013) cit 236. [https://www.vatican.va/content/francesco/en/apost\\_exhortations/documents/papa-francesco\\_esortazione-ap\\_20131124\\_evangelii-gaudium.html](https://www.vatican.va/content/francesco/en/apost_exhortations/documents/papa-francesco_esortazione-ap_20131124_evangelii-gaudium.html)

<sup>100</sup> cfr. M. Borghesi, *Jorge Mario Bergoglio*, cit., p. 133.

<sup>101</sup> The phrase is by Guardini, quoted in *Ibid.*, p. 122.

the culture of modernity would impose. The affinities with Bergoglio's thought make Guardini the modern author cited several times in the text of the encyclical; his guiding-thought highlights the rupture of the polar tension man-nature had with modernity and describes a world dangerously inclined towards the "globalization of the technocratic paradigm"<sup>102</sup>, in a vision that involves economic, social, and environmental aspects.

Explicit references to Guardini emerge in chapters 3 and 6 of the encyclical - called respectively "The Human Root of the Ecological Crisis" and "Education and Ecological Spirituality" - and highlight the educational vocation of the Italian-German author and his ability to depict the person in the disorientation of post-modernity. The issue finds its focus in the statement that "modern man has not been educated to the right use of power"<sup>103</sup> and it is necessary to allow him to find a new ethics, culture and spirituality, based on self-awareness and on a rediscovery of the relationship with nature; these are themes on which Guardini reflected at length. In an effort to urge a response to the ecological problem, Pope Francis emphasizes the need for a conversion with a strong communitarian character that can go beyond the individual contributions. To highlight the complexity of the challenge and emphasize the fact that only a community dynamic can make the change lasting, Pope Francis relies on the words of Guardini: "The demands of this work will be so immense that the possibilities of individual initiatives and the cooperation of individuals, individually formed, will not be able to meet them. A union of forces and a unity of contributions will be necessary."<sup>104</sup>

Beyond the explicit citations, references to Guardini also emerge implicitly in the reference to the four principles of social ethics described in *Evangelii Gaudium*. Indeed, Pope Francis, in different chapters of *Laudato Si'*, reminds the reader that: "reality is superior to the idea"<sup>105</sup>;

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<sup>102</sup> Francis, *Encyclical letter Laudato Si' of the Holy Father Francis* (Vatican City, 2015). [https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html) 101-112

<sup>103</sup> R. Guardini, *Das Ende der Neuzeit. Ein Versuch zur Orientierung; Die Macht. Versus einer Wegweisung*, tr. it.: *La fine dell'epoca moderna - Il potere*, Morcelliana, Brescia 1993, p. 81. Cited in: Francesco, *Laudato Si'*, cit., 105.

<sup>104</sup> R. Guardini, *La fine dell'epoca moderna - Il potere*, cit., p. 66. Cited in: Francesco, *Laudato Si'*, cit., 219.

<sup>105</sup> *Ibid.*, 110.

“the whole is superior to the part”<sup>106</sup>; “time is superior to space”<sup>107</sup>; “unity is superior to conflict”<sup>108</sup>. It can be said that the reference to the four principles in as many key points of the text is placed to reinforce a broader vision of reality that can lead to integral solutions for the socio-environmental crisis underway. Each principle contributes to the construction of a program of action that requires a concrete, non-idealistic commitment, capable of preserving the preciousness of all the polarities at stake and promoting a politics and an economy oriented to the care of the common home and social peace. In recalling these principles Bergoglio quotes himself, but in fact evokes Guardini.

The hope of Pope Francis is to be able to remedy the “deviated anthropocentrism”<sup>109</sup> of the modern mold with a new paradigm, based not on the denial of the human in favor of nature, but on a new vision of the whole that knows how to conjugate the combination of man and nature on the basis of universal categories that are able to overcome “the false dialectics of recent centuries”<sup>110</sup>. To facilitate the realization of this project, Pope Francis builds a line of thought that sees in the Guardinian model of polarity in its hermeneutical key.

### **A heart that knows. Guardini’s “polar tension” between Augustine and Thomas**

For Guardini, the method of thought appropriate to an anthropology that knows how to move towards overcoming any crisis must be dialectical, and in particular to develop according to a dialectic that finds its dynamism in the relationship between heart and mind. Along the same line, Bergoglio defines this form of knowledge as *sineidetic thought*<sup>111</sup>, thus intending to recall the idea that details must be seen and studied in function of the whole, and the whole in function of the parts, in a cognitive dynamic that is able to make use not only of reason, but also of intuition. Bergoglio follows, also in this aspect, the guidelines of the *polar Guardinian opposition*, which mature in the encounter between two traditions: the mystical-affective one, traceable to Plato and Augustine, and the logical-rational one, represented by Aristotle and Thomas Aquinas<sup>112</sup>.

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<sup>106</sup> *Ibid.*, 141.

<sup>107</sup> *Ibid.*, 178.

<sup>108</sup> *Ibid.*, 198.

<sup>109</sup> *Ibid.*, 118.

<sup>110</sup> *Ibid.*, 121.

<sup>111</sup> cfr. M. Borghesi, *Jorge Mario Bergoglio*, cit., p. 142.

<sup>112</sup> cfr. Idem, *Tra Agostino e Tommaso, la terza via di Guardini*, In: «Vita e Pensiero», 6 (2017).

Augustine and Thomas represent the poles of a way of thinking that combines heart and reason, giving life to a “Catholic thought of wholeness that holds together interiority and realism”.<sup>113</sup> Guardini expressed this kind of synthesis in his *Lettere dal lago di Como* (Letters from Lake Como, written between 1923 and 1925), a work in which he questioned himself about man and the crisis of the modern age triggered by the development of technology. In the Letters he shows the disposition of those who do not want to flee from the problems of history by taking refuge in a utopian vision but seek the answer within themselves: “But we observe that one can adhere to the facts of history with a free choice, with a real and proper decision: because it comes from a heart that knows. And this has its weight. Our place is in becoming. [...] The task of giving a form to this evolution is imposed on us and we can fulfil this task only by adhering to it honestly; but remaining sensitive, with an incorruptible heart, to everything destructive and non-human in it.”<sup>114</sup> Guardini matures in the awareness that if technology has a retroactive effect on man’s innermost being, it is precisely through the rediscovery of interiority that a vision of the world suitable for relating to the technical development of the present time must pass.

Bergoglio was able to take up this vision and re-propose it in various writings (and in particular in *Laudato Si’*), up to the recent *educational pact*<sup>115</sup> for the integral formation of the person, in which he once again underlines the importance of concrete commitment: “To educate, one must try to integrate the language of the head with the language of the heart and the language of the hands.”<sup>116</sup>

### **From the guardinian weltanschauung to integral ecology**

Knowledge of the world, for Guardini, can be achieved only by means of a vision capable of grasping what rationality alone cannot grasp completely. Guardini’s vision of the world (Weltanschauung) aims - through the polar tension between concept and intuition, rational and supra-rational - to find a point of perspective that allows us to emerge from the

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<sup>113</sup> *Ibid.*, p. 83.

<sup>114</sup> R. Guardini, *Briefe von Comer See*, tr. it.: *Lettere dal lago di Como*. La tecnica e l’uomo, Morcelliana, Brescia 1993, p. 95.

<sup>115</sup> Francis, *Message of his holiness Pope Francis for the launch of the global compact on education* (2019).[https://www.vatican.va/content/francesco/en/messages/pont-messages/2019/documents/papa-francesco\\_20190912\\_messaggio-patto-educativo.html](https://www.vatican.va/content/francesco/en/messages/pont-messages/2019/documents/papa-francesco_20190912_messaggio-patto-educativo.html)

<sup>116</sup> Idem, *Ai Partecipanti al Convegno sul tema “Education: the global compact”*, organizzato dalla Pontificia Accademia delle Scienze Sociali, 2020.

sectorization of knowledge and the closure of immanence to open up to the transcendent, in a dynamic dialogue. Bergoglio makes use of this thought to express the tension of coming out of the closure in which all social bodies, including the Church can find themselves, and to highlight the model of an ecology that can be called “integral”, that is, including human, social, economic and political dimensions, in relation to that vital environment that is the world.<sup>117</sup> It is a matter - for Guardini as for Bergoglio - of implementing a way of understanding the human that can be a valid reference for all humanity in all its challenges, including those related to the environment and sustainable development.

For Guardini, the perspective point on which to center and from which to orient oneself in order to implement this vision is Christ<sup>118</sup>, in whom both the individual and the Church as a whole are found. The theological reference to Christ - which *Laudato Si'* itself denotes as the “fulcrum of universal maturation”<sup>119</sup> - can acquire value even outside the experience of faith to the extent that the Church succeeds in witnessing to its own commitment in the educational-social field, and in translating the message for an integral ecology in dialogical terms: between disciplines, between persons and between institutions.

The implementation of an integral ecology passes through a broad and synergistic collaboration among these subjects and requires finding solutions starting from a global perspective and from the dialogue among the protagonists of this research. In view of this implementation, Guardini’s *Weltanschauung* constitutes a valid philosophical reference: in fact, it does not aim only at defining the lines of this dialogical space but intends to *inhabit it* and from there - we could say paraphrasing Francis - trace the profile of a humanity capable of maturing in the awareness of having entrusted the custody of our common home.

The integral ecology of Pope Francis thus implies the traits of Guardini’s *Weltanschauung*: a vision that inhabits a space in which the various disciplines, including science, theology, and philosophy, can find their common denominator in a concrete idea of humanity capable of looking at the world wisely and putting heart and reason in dialogue, living up to the challenges of our time.

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<sup>117</sup> cfr. Francis, *Laudato Si'*, cit., 137.

<sup>118</sup> R. Guardini, *Vom Wesen katholischer Weltanschauung*, tr. it.: *La visione cattolica del mondo*, Morcelliana, Brescia, 2018, p. 45

<sup>119</sup> Francis, *Laudato Si'*, 83.

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## Integrating environment and human life

by Pietro Ramellini

### Oikos, logos, and holon

The release of the encyclical letter *Laudato Si'* by Pope Francis<sup>120</sup> has brought to the fore the concept of integral ecology<sup>121</sup>. In this paper, I will elucidate a possible meaning for this term through a reflection on its three components: *oikos*, *logos*, and integrality<sup>122</sup>.

At first sight, the concept of integral ecology sounds captivating, since it suggests a holistic paradigm capable of renewing our approach to the current ecological crisis. Yet, some conceptual knots must be untied. The problem is whether ecology can be integral, or if on the contrary the expression 'integral ecology' is contradictory.

Actually, the word 'integral' relates to an allness or wholeness which can be either a *pan*, an aggregate of components, or a *holon*, a totality of components. Most of those who speak of integrality think to *holon*, as the verbiage of holisms of all kinds testifies. Accordingly, integral ecology should refer to some *holon*. But is this possible?

From an etymological viewpoint, the word 'ecology' comes from the Greek roots *oikos* and *logos*; thus, it means the rational - in particular, the scientific - study of our common house, that is, the natural environment. Though there has been an inflation of the concept, historically and disciplinarily ecology has been established as the natural science of the environment<sup>123,124,125</sup>. It is well known that etymology can deceive and obstruct the

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<sup>120</sup> Francis, *Laudato si'*, Encyclical Letter, (Vatican City: Vatican Press, 2015). [http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html)

<sup>121</sup> Literature on integral ecology is still in its infancy. See S. Esbjörn-Hargens and M. E. Zimmerman, "Integral Ecology," in *Encyclopedia of environmental ethics and philosophy*, ed. J. Baird Callicott and Frodeman Robert (Farmington Hills, MI: Macmillan Reference USA/Gale Cengage Learning, 2008). for a preliminary, rather idiosyncratic assessment of the state of the art.

<sup>122</sup> For a thorough exposition of my conception see Pietro Ramellini, "On the Meaning of Integral Ecology," *Alpha Omega* 19, no. 2 (2016).

<sup>123</sup> For a recent review of this discipline see Levin, Simon A. Carpenter Stephen R. 2009. "The Princeton guide to ecology."

<sup>124</sup> For some ethical aspects see Pietro Ramellini, *Linee di etica ambientale* (Milano: Edizioni Paoline, 2006).

<sup>125</sup>and for the field of human ecology see Pietro Ramellini, "Bioetica ed ecologia umana," Editorial, *Studia Bioethica* 8, 2 (2015), <https://riviste.upra.org/index.php/bioethica/article/view/3578/2697>.

conceptual analysis, yet it remains true that in common parlance 'ecology' keeps a scientific undertone, while when one does not want to make a reference to science, other words like 'green' or 'natural' - and more recently 'eco-friendly' or 'biophilic' - are preferred.

Now, taken as *holon* human experience is far larger than the scientific endeavour. Even if we enlarge the meaning of *logos* to include all rational thinking, again human experience reaches well beyond rationality: to quote Pascal, the heart knows reasons that reason does not know<sup>126</sup>. So, an integral approach cannot be reduced to mere *logos*.

Even harder problems are raised by *oikos*, which is endowed with the feeling of comfort and harmony of a home, rather than that of a house. Now, the idea that the environment is a warm dwelling is sheer romanticism and irenism: whoever has had a direct experience of wild environments knows how much they can be dangerous. And in fact, houses were established as anti- or counter-environments: from the Paleolithic cave to the bioarchitectural skyscraper, houses are separated spaces, with peculiar abiotic and biotic properties; once established, houses are then controlled by their inhabitants, in short domesticated (from Latin *domus*, i.e., house).

On the contrary, the environmental dynamics is uncontrollable and indifferent to our fate, as it is evident in catastrophes and pandemics. It is true that the human impact on the world has increased and will keep growing; yet for a long time to come the world environments will remain challenging places. Finally, since human beings are themselves part of the environment, all their disasters and cruelties add to the natural calamities. So, the metaphor of the environment as a home has little to do with an integral experience of the actual environment.

Someone could claim that the environment will become comfortable through hard human effort. Yet are we sure that to completely domesticate all environments would be a sound policy? And were this plan feasible, do we really need to tame all the wilderness? Is it not better to leave part of our planet free to follow its own dynamics?

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<sup>126</sup> After all, not all cultures have based their idea of rationality on something akin to the Greek or Western *logos*; see for instance François Jullien, *De l'être au vivre* (Paris: Gallimard, 2015).for an exploration of the Chinese way of dealing with reality.

## **A possible meaning for “integral ecology”**

So, there seems to be mutual incompatibility between *integral* on one side, and *oikos-home* and *logos* on the other side. Can we find a way to recover some accord between these three terms?

Let us explore further. The situation of the human being in the environment cannot be accounted for just by the intellectual *logos*; rather, it involves all the multifarious interactions between humans and their environments. And again, the actions of human beings are consistently partial, never integral: nobody can actualise all possible interactions with the environment. Even the interactions between the whole humankind and the global environment, taken as the sum of the interactions of each single person with his or her local environment, do not actualise the integrality of all possible experiences.

In sum, the human exploration of one's existential space is just a path among innumerable others, an immersion into one particular *Lebenswelt* rather than the enclosing, the surrounding or the encircling of all of them. There is no *holon* in this journey: our stories have always the character of *meros*, of partiality, and above and beyond them there is always something else to be lived and loved.

Integrality can therefore be resignified as integration in the reality, that is, as an awareness of, an openness to, and an immersion in all the dimensions and possibilities of reality; as such, integration involves a sense of limit, smallness, finitude and - in a religious context - of creatureliness. Thus, we come to a first possible formula for “integral ecology”, taken as the interaction between the environment and us: an environmental human praxis immersed in, open to, and part of, the integrality of reality.

Now, though the praxis of each man and of humankind itself is partial, it is a praxis which involves the integrality of man within the integrality of reality. Again, however, human life is too rich to be conveyed just by *praxis*; we can add *poiesis*, the activity by which human beings produce something other than themselves, rather than merely staying alive; but there is also contemplative life, and even the Daoist non-doing (*wu wei*). So, in the place of ‘praxis’ it is preferable to speak of life itself, as the most comprehensive term one can resort to when dealing with human (living) beings; in this way, speaking of human life we already imply the integrality of the human being. Similarly, when we say ‘reality’ we already imply the integrality of reality.

We can even remove from our formula the adjective ‘environmental’, since in the end the environment is reality itself. This is a risky move, because it seems to eliminate any

ecological and environmental reference from the horizon; but if we are aware of the previous remarks, we can run the risk.

So, a possible formula to convey the gist of “integral ecology” will be: *human life immersed in, open to, and part of reality.*

As it is evident, according to this notion the point is not so much to devise an integral ecology, but to integrate ecology in human life, or better to conceive human life as integrated in the environment, to integrate human life and environment. But there is more than that. First of all, human “ecology” is automatically included in the formula, since it makes reference to human life. Second, integration has something to do with salvation, inasmuch as *salus* comes from an ancient root which not only meant ‘whole’ but was the source of the word *holos* itself. Moreover, since *salus* means also health, we discover a deep circulation between integrality, healing, salvation and *oikos*. In this respect, we can recall a famous passage from Plato’s *Phaedrus*, where Socrates claims that to cure and care for body and soul it is necessary to appeal to nothing less than the totality of being (*hole ousia*)<sup>127</sup>.

### **A possible meaning for a Christian “integral ecology”**

In a certain sense, the Christian worldview is agapocentric, since agape is the being of God<sup>128</sup>. Indeed, there is a similarity between the idea of integration and agape. In fact, agape has to do with our taking part in the reality we are immersed in, opening ourselves to a communion with it; there can be no agape where people are indifferent to their environment, do not participate in the pangs of creation<sup>129</sup>, and close minds and hearts to their human and non-human neighbours. Though no human being can experience all its treasures and riches, surely agape involves all human dimensions and aspects: agape is the integral actualisation of the human being, in his or her free response to the revelation of God’s agape<sup>130</sup>.

This leads us directly to a possible formula for a Christian “integral ecology”: *human life immersed in, open to, and part of an agapic reality.*

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<sup>127</sup> Op cit *Phaedrus*, 270c. H. G. Gadamer, “Über die Verborgenheit der Gesundheit,” *Erfahrungsheilkunde* 52, no. 10 (23.10.2003 2003). discusses this passage in relation to health and disease.

<sup>128</sup> Cf I John 4: 8. (NRSV)

<sup>129</sup> Cf Rm 8. (NRSV)

<sup>130</sup>Karl Rahner and Herbert Vorgrimler, “Dizionario di teologia,” in *Dizionario di teologia* (Milano: TEA, 1994).10.

That is, both reality and love are territories to be explored in their boundlessness, diving into their integrality, opening to their countless surprises, and focusing now on this, now on that partial aspect of them<sup>131</sup>.

### **The Heart as a metaphor for integral ecology**

To conclude, it would be useful to find a metaphor capable of summarising all what we have said. In fact, ideas may persuade or convince, images and metaphors thrill and move.

As we have seen, according to the Christian perspective the point from which to think and carry out our interactions with the environment is agape: human beings are the measure of all things to the point that they use the measure of agape. Yet in a way of another, it seems that all cultures and faiths put love at the centre of life and reality; surely, the concept of love is polysemous, ranging for instance from the Greek *eros* to the Mohist *jiān'ài*, but here we can tolerate some ambiguity.

One of the best metaphors and icons of love, and in particular of agape, is the heart. Interestingly, the triple character of “integral ecology” as we have devised it - namely, immersion, openness and partialness - can be related to the heart. First of all, immersion in reality and love is a descent into their most intimate depths: their heart, actually. Second, openness to reality and love means to make room for them, to open minds, hearts and bowels to the cry of the earth and of the poor<sup>132</sup>. Third, we are not only part, but at the heart of reality and love, being the conscience of the unconscious and the voice of the voiceless. But is not the heart, like love, an ambiguous reality, and the place where both bad and good come from? Yes, and it is also due to such ambiguity that it is a good metaphor for “integral ecology”.

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<sup>131</sup> In this sense, the fourth chapter of the encyclical letter *Laudato Si'* may be seen as providing useful considerations and promptings with reference to these various partial aspects. In the first section of this chapter (nos. 138-142), the environmental, economic, and social dimensions of human life are examined; in the second (nos. 143-146), the Pope passes to cultural ecology; in the third (nos. 147-155), the relevance of an ecology of daily life is taken into account; in the fourth (nos. 156-158), the analysis is focused on the principle of the common good; finally, in the fifth section (nos. 159-162) integral ecology is further extended, in order to include also intergenerational justice. Besides, a clear reference to agapic reality is to be found in the second chapter of the encyclical: “creation can only be understood as a gift from the outstretched hand of the Father of all, and as a *reality* illuminated by the *love* which calls us together into universal communion” (n. 76, emphasis added).

<sup>132</sup> Francis, *Laudato si'*, 49

Finally, the heart is also a metaphor of the core of something<sup>133</sup>. And here we get a welcome by-product: our heading towards the centre of reality and love allows us to recover even the metaphor of the house. In fact, in many cultures the most intimate retreat of a house is the fireplace. So, let us close this meditation in a rather lyrical way: even if the environment is often dangerous, at the heart of this house a fire of love and intellect glows, heating and enlightening all reality.

In other words, the heart is the hearth of the Earth.

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<sup>133</sup> The etymology of 'core' is uncertain, but it could derive from the Latin *cor*, i.e., heart.

## **One health: mankind's and planet's interwoven wellbeing**

*by Grammenos Mastrojeni*

### **The false dilemma: health or?**

Health, growth, or environment? Which should be our first goal? This question – especially in face of the current pandemic – is oppressing peoples and governments as though these three values were competing among them and incompatible. But it is a false issue, scientifically misleading. Never before it has been as urgent for science to guide policy. And the scientific lesson of the COVID-19 pandemic urges additional engagement in Green Deal policies to create more resilient societies, that can boost growth, showing that there is no contradiction: we have to do exactly the same things to achieve health, development and a functional planet. We can define policies affecting positively at the same time the most relevant dimensions of wellbeing: economic activity, employment, health, environmental sustainability, work-life balance, as focused in the recent EU Green Deal proposal.<sup>134</sup> But with one more fundamental lesson to be drawn: health and environment know no boundaries; fragilities we don't cope with in our closer or further neighborhoods revert back to us, so that no one can be left behind in a green and health protective upgrade of our nations so that, clearly, leaving behind the weakest implies we will all lag behind.

There are many proven and apparent links between environmental degradation and weaker health. First of all, the case of climate change demonstrates it. It has become obvious that climate change brings a threat to health in its basic and restricted meaning: if we define “health” as an absence of physiological pathologies, we are all concerned with the swift mutations of pathogens areals or the impact of heat waves; or we could even worry about the de-freezing of pre-historic super bugs with the accelerating thaw of permafrost. Other links - under the pandemic spotlight - relate to pollution: there is widespread evidence in epidemiological studies of the impact of long term exposure to particulate matter (PM10 and PM2,5) on inflammatory and adverse outcomes of respiratory diseases leading to

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<sup>134</sup> Bertrand Piccard and Frans Timmermans, “Which world do we want after COVID-19?,” *EURACTIV.com* (2020). <https://www.euractiv.com/section/energy-environment/opinion/which-world-do-we-want-after-covid-19/>.

pneumonia, emergency hospital admissions and eventually deaths.<sup>135</sup> Just as well, the COVID-19 triggers respiratory diseases, inflammation, pneumonias, and preliminary empirical evidence from around 3000 daily data from Italian provinces identifies a significant association between long term exposure to particulate matter and COVID-19 contagions and diseases.<sup>136</sup> Similar evidence is provided by a Harvard study on around 3,000 US counties.<sup>137</sup> But this only represents the tip of the iceberg. If, instead, health is considered as the portrait, projection, and result of the overall wellbeing of a person, the link becomes fundamental.

The policy broad implication of COVID-19 pandemic, just as the horizon of a more sustainable development, is not de-growth; neither the opposite of growth no-matter-how, without consideration for negative social and environmental externalities. Around 94 % of primary and secondary PM emissions depend on human action<sup>138</sup> and, more specifically, on our choices of house heating, transportation, sources of energy and techniques of industrial and agricultural production. If we want to create resilient wellbeing after the pandemic we must create strong fiscal support for green investment - dematerialization, digitalization, energy efficiency - starting in the most severely hit and more polluted areas. We can take the initiative in Europe, where the wind is blowing in the right direction. But we cannot forget that diseases know no boundary, if the weakest isn't safe, no one is safe especially around a sea where Cairo ranks 7th and Beirut, Amman, Algiers and Athens rank high in the global index of most polluted cities.<sup>139</sup> Besides the pandemic, air pollution is estimated to cause

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<sup>135</sup> C. Arden Pope, Douglas W. Dockery, and Joel Schwartz, "Review of Epidemiological Evidence of Health Effects of Particulate Air Pollution," *Inhalation Toxicology* 7, no. 1 (1995/01/01 1995), <https://doi.org/10.3109/08958379509014267>, <https://doi.org/10.3109/08958379509014267>.

<sup>136</sup> Leonardo Becchetti et al., "Understanding the Heterogeneity of Adverse COVID-19 Outcomes: The Role of Poor Quality of Air and Lockdown Decisions" (10 April 2020). <http://dx.doi.org/10.2139/ssrn.3572548>.

<sup>137</sup> Xiao Wu et al., "Exposure to air pollution and COVID-19 mortality in the United States: A nationwide cross-sectional study," *medRxiv : the preprint server for health sciences* (2020), <https://doi.org/10.1101/2020.04.05.20054502>, <https://pubmed.ncbi.nlm.nih.gov/32511651>  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7277007/>.

<sup>138</sup> M Guevara, "Emissions of Primary Particulate Matter," in *Airborne Particulate Matter: Sources, Atmospheric Processes and Health*, Issues in Environmental Science and Technology (Royal Society of Chemistry, 2016).

<sup>139</sup> Cf. "World's most and least polluted cities," <https://globalresidenceindex.com/world-most-least-polluted-cities/>. And Cf. <https://globalresidenceindex.com/world-most-least-polluted-cities/> and Cf. Emilio Di Maria,

around 7.2 million deaths per year, 1.6 million of which from pneumonia;<sup>140</sup> but these figures also reflect once more a structural cruel consonance between environmental degradation and injustice: about 90% of pollution-related deaths occur in regions with low or middle income.<sup>141</sup> For the sake of all, no one can be left behind.

### **A new perspective: a global balance agenda**

But we now have the conceptual and policy tools to do so embedded in the 2030 Agenda that, finally and assumingly, reflects a new intuition about the world we live in: the goal is preserving a global balance that translates into a state of health shared by nature and mankind, where development is the result and not the instrument.<sup>142</sup> In 2016 a new era has started for development. A new Agenda, focused on 17 goals, will set the course of international development efforts until 2030, building on the results achieved in pursuing the previous international framework, known as the Millennium Development Goals. The latter, a list of eight simple and easy to understand objectives, paved the way to a much more articulated architecture: the goals have been multiplied in the 2030 Agenda, specified in 169 sub-targets, and subjected to a hopefully rigorous monitoring through a set of quantitative indicators. Yet, its more complex articulation is only the surface of a deeper revolution in perspective. The true novelty in the 2030 Development Agenda is not that it focuses more goals in a more detailed way, but that, finally and assumingly, it fully reflects a new intuition about the world we live in: global balance.

Compared with the past, the 2030 Development Agenda is characterized by three main features:

- its development goals are qualified as sustainable,

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ed., *Health right across the Mediterranean tackling inequalities and building capacities* (Genova: Genova University Press, 2019).

<sup>140</sup>Lelieveld J. et al., "Loss of life expectancy from air pollution compared to other risk factors: a worldwide perspective, in *Cardiovascular Research*", 116/ 11, 1 September 2020.

Burnett R. et al, "Global estimates of mortality associated with long-term exposure to outdoor fine particulate matter", in *Proceedings of the National Academy of Sciences, U.S.A.*, 2018.

<https://www.escardio.org/The-ESC/Press-Office/Press-releases/The-world-faces-an-air-pollution-pandemic>

<sup>141</sup> <https://www.who.int/news/item/27-09-2016-who-releases-country-estimates-on-air-pollution-exposure-and-health-impact>

<https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/ambient-air-pollution>

<sup>142</sup> It emerges from the overall architecture of the Rio+20 Summit Declaration, *The Future we Want*.

- it shifts from the perspective of one-way development aid from the “rich” to the “poor”, to the horizon of a shared and common interest to further develop together in a sustainable way, and, fundamentally

- it hints to the idea that the goals themselves are interconnected and synergic.

Another way to describe all these novelties of the 2030 Agenda is to say that it also takes care of the environment. Besides the fact that four out of seventeen goals directly refer to the health of the ecosystem, the inclusion of the environment further implies all the advancements in the new Agenda. Indeed, introducing the environment is different from considering another supplementary set of goals for mankind to reach, rather meaning that classical development goals have to be redefined and managed within a reactive system that surrounds us. It portrays a radical shift in perspective, as we start to look at the future of mankind not as an absolute, but within the grid of relationships and balances that shape the functioning of a broader system we belong to: one that is common and therefore has to be managed together; and one that, like a home a family shares, has to be kept in balance in all its elements, both human and physical.

### **A healty balance for nature and mankind: the big picture**

Sustainability, an eye to the health of the environment, and the idea that we all have to take together the path of a better development are revolutionary advances. But they cannot be understood as three separate innovations. Instead, they are all significant - but still incomplete - symptoms of a new perception of the human condition: everyone and everything is interconnected within a biophysical system that sustains life and enables development, which needs to be protected and kept in a state of vital, just, and generous balance. In this sense, the 2030 Development Agenda unintentionally exceeded its highest ambitions: it ended up being much more than a development roadmap focused on helping poorer communities bridge the gap, rather looking like a new economy, shaped by new values, for the whole of mankind.

Progress, development, and expansion, are not incompatible with balance, both human and environmental; on the contrary, they represent probably the way to grant progressive universal sustainability, once we manage growth in the awareness of global balance. But so far we didn't, and nowadays the awareness of global interconnectedness has been forced unto us by threats like climate change. We are now compelled to take into account the fact that environmental disruption is linked to food insecurity, State collapses, migrations and so

on: to the point that we are now facing a serious and imminent global shift in planetary balance that threatens to take the form of a single, vast – planetary scale - and dangerous positive feedback loop cycle where both human and natural components of the ecosystem could concur in making our mother Earth a barren garden. It's only normal: we forgot about it, but we are indeed part of the ecosystem, and we are naturally induced to react accordingly.

As the overall rapidly degrading situation forces us to stop reasoning sector by sector we are giving ourselves the instruments to analyze and manage our common home Earth as a global balance sustained by a collection of interlinked sub-balances. What we are realizing is that local or sectorial unbalances, beyond critical thresholds, tend to impact other balances and can spread at an ever accelerating pace to the whole system. Climate change and its feared tipping points – permafrost thaw and consequent methane release, albedo feedback loops, etc. – are becoming more well known to the public. Yet, fearsome as they are, they are nothing compared with the big picture that emerges once we put together the intricate series of interlinked environmental and human unbalances that we have pushed to the verge of a tilt towards catastrophically accelerating cumulative cycles. Basically a sick nature sickens societies that, in turn, destabilize and lose their ability to protect their environment, destroy it restarting the loop at a growingly fast and vast pace.

In this global interlinkage machinery, health stands as more than an element, one of the Goals, or a sub-balance to take into account. It provides an equivalence, a fundamental one, that acts as the very meaning of the new order we need to build: the health of the ecosystem produces the health of mankind and the health of mankind protects the ecosystem.<sup>143</sup>

The infinitely complex interactions network harnessed within Earth's balance can be described in the terms of a mathematical instrument often used to account for dynamic balance systems: a matrix. Matrixes portray - in compound systems like planet Earth - how the whole situation evolves as a result of the variation of its elements. To describe system Earth, and monitor the preservation of its stability, we need a matrix that interconnects in an overarching final balance, through algorithms, a set of sub-balances. It implies that a variation in one sub-balance can affect other related sub-balances and that these, in turn,

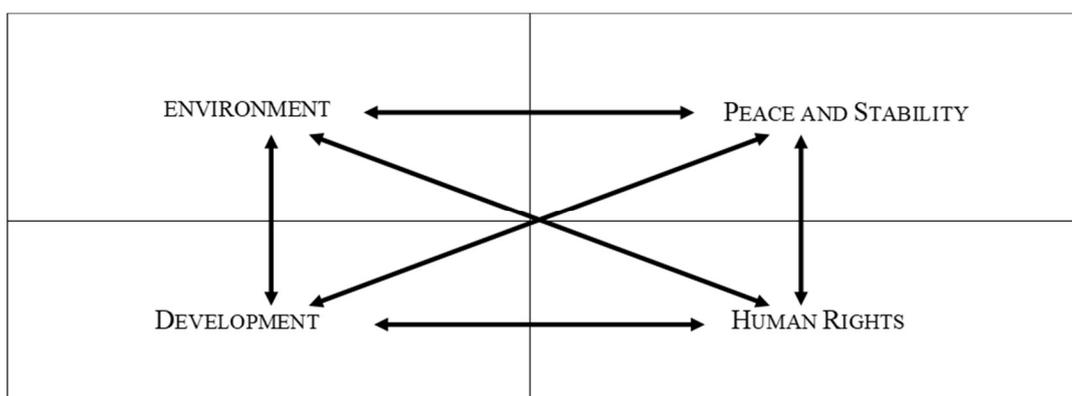
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<sup>143</sup> This approach is embodied in the most recent definition of health and operational addresses adopted by WHO as a "One Health" Strategy, <https://www.who.int/news-room/q-a-detail/one-health>

can reverberate on further elements, so that if the chain effect gains enough strength, it can modify the global state of the system.

If it took into account all the causal and cyclical connections that shape the bio-sphere, a matrix that describes this balance would be exceedingly complex – and useless, being that it would provide an instrument far beyond our quantitative capabilities. But such a matrix can be declined at different levels of complexity and from diverse angles, as a useful tool. And indeed, the two last development Agendas hint in this direction: probably as an intuitive consequence of a perceived but not rationalized truth, once environment came into the picture of development, the idea of a global balance matrix started unintentionally to emerge. The images chosen to communicate both the Millennium Goals and the 2030 Agenda, for instance, do look like a matrix at least in the way they were marketed to the public.

The two similar graphics – that ascribe each goal to a box, in a set that really reminds a matrix - do not just depend upon the choice to market the idea that both subsequent agendas are part of the same path: still instinctively, but they seem to spring out of a growing awareness of an organized order and balance. Since the intuition that the goals were interconnected within a planetary-wide balance was already present when the Millennium Development Goals were adopted in the year 2000, starting to represent them as a matrix came natural. In both tables, the difference between taking them as a matrix, instead of a mere list of goals, consists in identifying functions that connect all the different boxes, that we are only starting to explore in quantitative terms.



Especially if we look at the more evolved 2030 Agenda in this perspective, we recognize functions that connect, for instance, “life on land” with “quality education” that, in turn, reflect on “no poverty” and “zero hunger” which, again, are factors in “peace, justice, and strong institutions”, the end result of which could, again in turn, reshape “life on land” and “quality

education". In other terms, we are – still timidly - recognizing that we are coping with trans-sector local, regional, or even global feedback loops.

The 2030 matrix can be simplified in one more organic but still practical approach to describe global balance – and guide us in identifying significant interferences from the point of view of mankind's interests – a matrix that portrays dynamically the relationships among the environment, development, human rights/social welfare, and peace:<sup>144</sup> it basically says that a feedback loop is at work among the four dimensions; that if a land is contaminated, it will no longer sustain its owner, who can become vulnerable to abuses, prone to migrate or an easier pray to fanaticism, and so on. And, conversely, it says that if the peasant is granted a sounder education, he can manage better his field, defend it from contamination, count on a more dignified livelihood, and therefore resist temptations to engage in conflicts, etc. No matter which term of the matrix is subjected to an initial stress or improvement factor, its consequences will cyclically reverberate on the three related dimensions and grow in scope and impact. It is the Keynesian idea of a "multiplier" extended beyond traditional economy, to encompass the broader economy focused by the Agenda: one where the common etymologic roots of "economy" and "ecology" – the law and the science of our common house - are finally reconciled. And one that describes the goal of economy as an overall human condition of wellbeing and health. Our exemplified peasant's condition, if he is pray to the first disruptive cycle, can be described as lacking most of the elements that concur to a physical, psychological, and social, healthy life. Which is what the 2030 Agenda new economy aims at preventing: whereas classical economy limited its scope to the creation of material wealth, the economy-ecology encompassed in the new perspective aims at building all the conditions of individual and collective overall health.

### **"One health"**

In more pragmatic terms – and taking the environmental term of the loop as a starting point - environmental balance matters for livelihoods, dignity, development, peace and stability, the fulfilment of which defines a condition of health. The basic cause-to-effect link that has been identified is that, in the first place, some environmental modifications directly impact human beings: for instance, heat waves, water pollution, particulate, or the hole in the ozone layer obviously put at risk human health. Together with these, other environmental

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<sup>144</sup> Mastrojeni G., "Il ciclo indissolubile – pace, ambiente, sviluppo e libertà nell'equilibrio globale", Milano, 2002.

modifications trigger cumulative cycles of instability when they affect socio-economic organization, even if they do not directly concern human physiological well-being. By suppressing, randomizing, or displacing ecosystem services upon which societies have organized their livelihoods, environmental modifications cause insecurity and uncertainty in planning for the future, as they reintroduce in the system a higher than usual dose of chaos; insecurity and uncertainty, in turn, pave the way to poverty and disputes around vanishing services, fragility, compression of human dignity and rights, possibly violent conflicts and, all together, this mix integrates a push factor for both voluntarily chosen or forced migrations. This resulting situation, further in turn, is likely to revert back on the initial term, erode even more environmental and human health – because predation of nature is a way out in impoverished contexts - so that outcomes could be endlessly self-feeding.

It is therefore clear that the disruptive loop between the health of the environment and human health is broader and more complex than simply a question of spreading pathogens, poisoning, or temperatures: environmental decay produces a context where public and private health are severely affected. But this same loop can be actioned in the opposite direction to leverage a quick co-recovery of the planet and its human inhabitants.

To cope with climate change, we are currently relying on treaties and public measures focused on energy and other productive sectors. We need to, but this induces the illusion that remedies have to be orchestrated at the institutional, macroeconomic and organizational level, with individuals only passively concerned. It is an illusion indeed: no treaty or law, per se, will make a difference to the environment; all such instruments, instead, are meant to favor a change in individual and concrete community behavior. In other words, people tend to think that the climate and environment challenge can be solved by maintaining unaltered individual behaviors that would become sustainable thanks to a more efficient extraction and management of resources. This approach is not only quantitatively insufficient to defuse the environmental crisis, but also provides a mere delay in time of the collapse threshold, and still reflects the idea of a fundamental trade-off between development and environment: technology and better organization will give us more time, but fundamentally we don't want to change our ways of life.

Reality is cruder than that: we can hope to defuse environmental tipping points only if we apply enhanced efficiency to a different lifestyle that takes a healthy nature as a context of wellbeing. Quantitatively, the sum of even marginal improvements in the sustainability of individual choices – if practiced on a large scale - would be enough to bring back overall

environmental parameters below the collapse threshold. And here emerges the fundamental dimension of health: more sustainable individual behaviors tend to coincide with healthier lifestyles. Furthermore, they have cascade systemic repercussions that tend to build justice, dignity, stability, and peace at a planetary scale, therefore solving the health-environment nexus in its broader dimension.

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## Towards a new environmental awareness

by Miguel Oliveira Panão

Assuming the movement towards a new environmental awareness makes sense, what is the first thing we need to do? In 2000, the atmospheric chemist Paul Crutzen, a Nobel-prize winner, introduced the term expressing this, exclaiming — “*we are in the Anthropocene.*” In this expression, we recognize the human person as a geological force of nature, capable of changing the planet’s surface. Scientists still debate this term<sup>145</sup>, but events like climate change, the acidification of oceans, the changes we made in the landscape, the presence of plastic in oceans and their inhabitants, and even the anthropogenic extinction of species, imprints a definite footprint on the planet. Therefore, one may question how we became a geological force of nature.

All dynamics in the world come from harnessing the power of the Sun. The first stage of this harnessing came from plants using photosynthesis to convert the Sun’s power into chemical energy, and life blossomed. The second stage began with the Anthropocene when we converted solar energy into useful work. For example, the enormous farm fields, big cities, and transportation routes are products of this useful work, and among the first “geological” changes we performed on the planet. But we continued to evolve. And James Lovelock recently advances that we already began a third stage in processing solar energy<sup>146</sup>, converting it into *information*.

The Age of Information began with Claude Shannon’s work when he developed the notion of *bit* and produced his Mathematical Theory of Communication<sup>147</sup>, forever changing the information flux and how it affects our relational lives. However, it is curious that his theory is not a “Theory of Information”, an established research field since his work, but a “Theory

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<sup>145</sup> Erle C. Ellis, *Anthropocene : a very short introduction*, Very short introductions, ( Oxford University Press, 2018).

<sup>146</sup> James Lovelock, *Novacene : The Coming Age of Hyperintelligence* (2019). <https://international.scholarvox.com/book/88872606>.

<sup>147</sup> Cf. Claude E. Shannon and Warren Weaver, *The mathematical theory of communication*, The mathematical theory of communication., (Champaign, IL, US: University of Illinois Press, 1949). Cf. J.V. Stone, *Information Theory: A Tutorial Introduction* (Sebtel Press, 2015). [http://jim-stone.staff.shef.ac.uk/BookBayes2012/books\\_by\\_jv\\_stone/index.html](http://jim-stone.staff.shef.ac.uk/BookBayes2012/books_by_jv_stone/index.html). Cf. Jimmy Soni and Rob Goodman, *A Mind at Play - How Claude Shannon Invented the Information Age* (Simon & Schuster, 2017).

of Communication”, which is closer to a mindset change related to our evolutionary perspective of the world. Also, in the Age of Information, the Anthropocene expresses a link, we cannot neglect, between the evolution of nature and cultural evolution.

In 1993, the designer and writer Charlie Magee challenged the metaphor of *economics* as the primary driver of human evolution in the information age and, instead, proposed the metaphor of *communication*. In his words — “*evolution equals survival of the fittest communicators.*”<sup>148</sup> According to Magee, the fittest communicators have “*a greater ability to transform (...) information into knowledge and action.*” In this metaphor, the actions of an individual are relevant. The way we view ourselves as persons affects the cultural drive that our actions imprint on human evolution and, consequently, our planet’s evolution. However, we need a clear insight into the meaning of being an individual.

Peter Abbs, the poetry editor of the ecological magazine *Resurgence*, remarks how the word *individual* originally denoted *indivisible* in the same sense as used for God as Trinity. He says

*“the gradual inversion of meaning for the word ‘individual’, moving from the indivisible and collective to the divisible and distinctive, carries quietly within itself the historical development of self-consciousness, testifies to that complex dynamic of change which separated the person from this world making him self-conscious and self-aware, that change in the structure of feeling which during the Renaissance shifted from a sense of unconscious fusion with the world towards a state of conscious individuation.”*<sup>149</sup>

Self-consciousness is how the natural world, through us, thinks about itself. And it appears as the result of the cultural change in the meaning of the word “individual”.

The meaning of words evolves as part of human cultural evolution. Words are potent triggers of transformative experiences, building the stories that shape how we understand nature and our relationships with the natural world. We are relational individuals. Therefore, if the word *individual* used to mean *indivisible*, expresses this movement from an unaware intrinsic link with nature towards conscious distinction from nature, should we, as relational persons, move towards a conscious relationship with nature, as expressed in the metaphor of

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<sup>148</sup> Charles Magee, “The Age of Imagination: Coming Soon to a Civilization Near You” (paper presented at the Proceedings of the Second International Symposium: National Security & National Competitiveness, 1993). 1.

<sup>149</sup> Peter Abbs, *The Development of Autobiography in Western Culture: from Augustine to Rousseau*, 1986, Unpublished thesis, University of Sussex. p131-2.

communication? What word is at the origin of communication, linking natural and cultural evolutions if not *communion*? And, can we find this word in nature?

### §

Suzanne Simard and co-authors found an actual “wood wide web” in our forests when they studied how fungus form a sort of bond of communion with trees to exchange information about insects, weather conditions, and other perils to help them survive.<sup>150</sup>

In the African savanna, the whistling thorn tree lives in a symbiotic communion with ants. Despite their pointy spines, giraffes find ways to eat them. But ants sheltered by these trees and fed by their delicious nectar secretions go to their rescue when giraffes, and other animals, begin their meal.<sup>151</sup>

The above examples express what the physicist Brian Swimme and eco-theologian Thomas Berry affirmed “*we can see in this activity the cosmological ordering of communion. Here in the life-and-death realities of the natural world we see the bite of ultimacy where communion is a central reality of life.*”<sup>152</sup>

*Communion* is not an exclusive theological word. It means mutual intimate immanence. And one could consider communion as a hermeneutical key that unlocks a new environmental awareness. However, it demands the skill of paying attention.

### §

The Age of Information led to a new economy of attention. The most prominent companies in the world grew because of their ability to capture our attention.<sup>153</sup> Think about the time we spend checking emails, social media, and many other digital interactions with a screen. In the past, parents pull their kids indoor because they were outside most of the time, often in nature. Today, parents push their kids outside the house to move them away from their

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<sup>150</sup> Suzanne W. Simard et al., “Net transfer of carbon between ectomycorrhizal tree species in the field,” *Nature* 388, no. 6642 (1997/08/01 1997), <https://doi.org/10.1038/41557>, <https://doi.org/10.1038/41557>.

<sup>151</sup> Derek Madden and Truman P. Young, “Symbiotic ants as an alternative defense against giraffe herbivory in spinescent *Acacia drepanolobium*,” *Oecologia* 91, no. 2 (1992/08/01 1992), <https://doi.org/10.1007/BF00317789>, <https://doi.org/10.1007/BF00317789>.

<sup>152</sup> Brian Berry Thomas Swimme, *The universe story : from the primordial flaring forth to the ecozoic era--a celebration of the unfolding of the cosmos* ([San Francisco, CA ]: HarperSan Francisco, 1994). p. 133.

<sup>153</sup> Adam Alter, *Irresistible: The rise of addictive technology and the business of keeping us hooked*, *Irresistible: The rise of addictive technology and the business of keeping us hooked.*, (New York, NY, US: Penguin Press, 2017).

screens. This cultural change is noteworthy. The recovery of our attention span led to practicing *mindfulness*, and nature as the best environment to restore our attention.

Ellen Langer, a psychologist at Harvard, develops *mindfulness* as a flexible state of mind in which we are actively engaged in the present, *noticing new things*.<sup>154</sup> Nature is one of the best environments to notice new things and restore our attention. And to demonstrate it, based on the Attention Restoration Theory (ART) developed by Rachel and Stephen Kaplan, researchers from the University of Michigan<sup>155</sup> showed that spending time in natural environments replenishes our attention. However, despite the positive experience of restoring attention with time spent in nature, it is not enough. We also need *awareness* to change our lives.

*Change* is an important word linked with communion. When Teilhard de Chardin S.J. contemplated evolutionary changes, he envisioned how an increase of complexity led to the emergence of the human mind, a sphere of thought beyond biology, a *noosphere*.<sup>156</sup> The practice of regaining our awareness after restoring our attention is *noospheric*. Therefore, there is no mindfulness practice without – I suggest – also practicing *noofulness*, a neologism.

*Noofulness* is a relational state of consciousness in which we are actively aware of the present, questioning new things and bringing them into context. And the first step to practice *noofulness* is *solitude*.

## §

*Solitude* is not loneliness. In loneliness, you isolate yourself from the world. In solitude, you are together with your thoughts. Solitude is a counter-intuitive experience of being in someone's presence, becoming aware of one's deepest thoughts and impulses, enabling an unparalleled experience of unity with nature.

Thinking as an act of love means sharing the consciousness developed through a life of awareness. In this Age of Information, the distractions we experience lead to a lack of

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<sup>154</sup> Cf. Ellen J Langer, *Mindfulness* (Boston, MA: Da Capo Press, 2014). Cf. *Emotional Intelligence: Mindfulness*, (Harvard Business Review Press, 2017).

<sup>155</sup>M. G. Berman, J. Jonides, and S. Kaplan, "The cognitive benefits of interacting with nature," *Psychol Sci* 19, no. 12 (Dec 2008), <https://doi.org/10.1111/j.1467-9280.2008.02225.x>.

<sup>156</sup> James F. Salmon, "Teilhard's Law of Complexity-Consciousness," *Revista Portuguesa de Filosofia* 61, no. 1 (2005).

solitude moments and, consequently, to a lack of environmental awareness. Moments to think about the values that nourish a deep life.

When I see most people in a subway, heads down, consumed by their small screens, I see a mindless landscape of thoughts being controlled by others through technology. When I see people contemplating a sunset, looking at their screen to register the moment, I observe the preference for pixels instead of the mystery unfolding before their eyes.

*“Regular doses of solitude”* — says computer scientist and author Cal Newport — *“give your brain the regular doses of quiet it requires to support a monumental life.”*<sup>157</sup> During Covid-19’s lockdown period, we experienced how people were affected by the lack of solitude practice. Nothing Blaise Pascal hadn’t already warned us when he said — *“all of humanity’s problems stem from man’s inability to sit quiet in a room alone.”* Not in the sense of experiencing loneliness, but in the words of ecologist and farmer Wendell Berry — *“we enter solitude, in which also we lose loneliness.”*

The relational nature of solitude moments is key to a new environmental awareness. It happens every time we enter a contemplative state of mind, letting ideas flow, retrieving memories, or even opening our hearts and minds to the inner voice some acknowledge as God.

Listening to the inner voice in solitude can be an act of contemplation. As written in *“The Cloud of Unknowing”* by an anonymous author, *“the higher part of contemplation (so far as it is attainable on earth) rests entirely in this darkness and in the cloud of unknowing.”*<sup>158</sup>

This darkness is not a blinded sight, but the sense of Mystery revealed in the empty space of an open mind, acknowledging there is so much to know and learn to improve our environmental awareness. However, it also implies practicing *nooffulness* through *habits*.

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*Habits* are the change that begets culture. We all recognize the importance of changing our lifestyle to a more sustainable one. The challenge is in making those changes last. Only habits can do it because habits induce small changes that can make a big difference. Think

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<sup>157</sup> Cal Newport, *Digital minimalism : choosing a focused life in a noisy world* (Portfolio/Penguin, 2019).

<sup>158</sup> *The Cloud of Unknowing*, ed. Patrick J. Gallacher, 1 ed. (Medieval Institute Publications, 1997). <http://www.jstor.org/stable/j.ctv13gvj6j>.

about the 1% daily change. It's almost nothing, but at the end of the year, the impact is 37 times higher.<sup>159</sup>

However, we can think that habits become routines and, eventually, cease to impact the practice of nooffulness. Therefore, I would like to briefly explore only three universal and transformational habits that lead to new environmental awareness.

## **Walking**

The neuroscientist John Medina says — *“the human brain evolved under conditions of almost constant motion.”* Walking is intrinsically human and a habit of the experience of freedom, even in a simple stroll. However, on long walks, we favor the practice of solitude, helping us think and have a healthier life.

In walking, we receive more from nature than we think. Henry David Thoreau says, *“walking magnifies receptiveness: I’m always receiving pure presence by the ton.”*<sup>160</sup> It is what the ancient experience of a pilgrimage is all about. In his “Philosophy of Walking”, Frederic Gros says — *“walking in itself, as it takes time, establishes presence.”*<sup>161</sup> And presence begets awareness of the sense of place.

## **Noticing**

Noticing means stop trying to be productive and make the effort of being more curious. Todd Kashdan, professor and author, defines curiosity as — *“the recognition and desire to seek out new knowledge and information, and the subsequent joy of learning and growing.”*<sup>162</sup> But noticing can also lead to profound spiritual experiences with the natural world.

Chiara Lubich, the founder of the Focolare Movement and source of inspiration to EcoOne's thinking, shared an experience after a stroll in nature, saying — *“I felt that I could perceive, perhaps because of a special grace from God, the presence of God beneath things. Therefore, if the pine trees were gilded by the Sun, if the brooks flowed into the glimmering falls, if the flowers and the sky were all decked out in summer array, stronger than all this*

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<sup>159</sup> See also James Clear, *Atomic habits : tiny changes, remarkable results : an easy & proven way to build good habits & break bad ones* (2018).

<sup>160</sup> In Frédéric Gros, *A Philosophy of Walking* (London: Verso, 2014).

<sup>161</sup> Ibid.

<sup>162</sup> T. Kashdan, “Curious?: Discover the Missing Ingredient to a Fulfilling Life,” (HarperCollins, 2009).

*was the vision of a sun beneath all creation. In a certain sense, I saw, I believe, God who supports, who upholds things.*"<sup>163</sup> She noticed.

## Reading

Reading sharpens the mind, and a sharp mind grows in awareness. Experts say our brains were not made for reading. The habit of reading rewires our brains and opens our minds. People often complain they don't have time to read. It is not true. Just replace the screen-time with page-time, and you'll begin creating the habit of reading.

Everyone has 2 minutes per day to read (fiction or nonfiction). Suppose we increase the reading time by 1% every day. At the end of the year, we could read for 1 hour, 15 minutes, and 34 seconds, which is time well spent to increase awareness. But what do we know about time?

## §

*Time* is a pressing issue when it comes to acting with environmental awareness. And a new environmental awareness implies a better understanding of the meaning of time. What is time? Saint Augustine famously replied — "*If no one asks me, I know; if I want to explain it to someone who does ask me, I do not know.*" The physicist Alan Lightman experienced once how different cultures have different perceptions of time.

The people in Tramung Chrum, a small village in Cambodia, live in single-room huts without electricity and running water. Alan Lightman noticed how each morning, women took their bicycles and went to the market located about 16km from the village. Through a translator, he asked one of these women *how long* lasted the daily trip. She looked puzzled at Alan and said — "*I never thought about that.*"<sup>164</sup>

Techno-cultures live in chronological time. But it is an approach that fragments the way we live, and most of us aren't even aware of it. It took a simple answer to make Alan Lightman realize there were other perceptions and experiences of time. Namely, the time lived in Tramung Chrum was the *right time*. Ancient Greek mythology helps to understand the different perceptions with brothers *Chronos* and *Kairos*.

*Chronos* is the Greek word for sequential time, with one event after the other. It is quantitative, relentless, and ruthless. It has one direction: forward.

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<sup>163</sup> From the Message of Chiara Lubich to the EcoOne Congress in 2005, cited in Luca Fiorani, "Il contributo di EcoOne alla riflessione ecologica," *Nuova Umanità* 24 (2102).

<sup>164</sup> Alan Lightman, *In Praise of Wasting Time* (Simon & Schuster, 2018, 2018).

*Kairos* is the Greek word for the right time. The time created by events, everlasting, time to remember, and being or becoming. A new environmental awareness implies bringing communion to the perception of the chronological and kairological times, which brings us back to the word *communion* as an experience moving us towards a new environmental awareness.

## §

In 2008, I began developing a new vision for the relationship between a person and nature, centered on their communion, i.e., a *communiocentrism*. Communiocentrism is about being curious to know and understand the deep life relationships that connect us to the world. But is communiocentrism just a beautiful thought? Is there a future for centering our actions on establishing ever-greater bonds of communion?

In 2020, a tiny organism made a tremendous cultural change. It produced such a relational impact in our lives that it will take time to heal. It touched our physiology, but especially our spirituality. A communiocentric action can heal the relational wounds of physical and spiritual distance. But what could be the first step to deal with this surprising act of nature?

### **Unlearning**

This step may seem counter-intuitive. However, in the unsettling words of Anthony de Mello S.J. from his book on “*Awareness*” – “*that’s what learning is all about where spirituality is concerned: unlearning, unlearning almost everything you’ve been taught. A willingness to unlearn, to listen.*” Unlearning keeps our minds open because we live in a new world. Unlearning keeps our hearts open to the novelty others and nature means to us. Unlearning keeps our hands open to build the unity we wish to experience in the world.

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## **The business enterprise and *Laudato si'*: communion, reciprocity and sustainability**

by John Mundell

### **Introduction**

The publishing of Pope Francis' 2015 environmental encyclical *Laudato si'*, *On Care for Our Common Home*<sup>165</sup>, marked a global inflection point in the level of importance and awareness we give to maintaining the health of the planet and the need for its protection. The Pope's call for an 'integral ecology' in which "*Nature cannot be regarded as something separate from ourselves or as a mere setting in which we live...*"<sup>166</sup>, but as something we are intimately a part of and in constant interaction with, amounts to a rallying cry for changes in attitudes and significant action. This interrelationship allows us, as Francis would say, to see that "*We are not faced with two separate crises, one environmental and the other social, but rather one complex crisis which is both social and environmental.*"<sup>167</sup> In addition, the social ecology Francis calls for recognizes that "*If everything is related, then the health of a society's institutions has consequences for the environment and the quality of human life.*"<sup>168</sup>. No more is this apparent than in the day-to-day operations of the business world. This presentation will focus on the topic of the business enterprise and its role in bringing about an integral ecology. For the last 40 years, I have been an environmental scientist and engineer who has directly witnessed the terrible impacts of industrialization on our planet – contaminated lands and waters, sick children caused by exposure to chemical releases near their neighborhoods, dirty air quality that causes asthma, fish kills in rivers. I have also experienced the joy that comes with cleaning up thousands of properties throughout the world and helping to restore the planet. I have gained an awareness from this work that it is possible to 'reverse' the degradation that has happened if there is the will power and resources to do it.

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<sup>165</sup> Francis, *Laudato si'*, Encyclical Letter, (Vatican City: Vatican Press, 2015). [http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html)

<sup>166</sup> Francis, *Laudato si'*, sec. 139

<sup>167</sup> *ibid*

<sup>168</sup> Francis, *Laudato si'*, sec. 142

For the last 25 of those years, I have been a social entrepreneur, running a small environmental consulting business as part of a large global network of companies called the Economy of Communion, dedicated to creating a more just economy. During this time, this network of businesses has brought about transformational changes within many of their communities, where many small actions by small businesses improved both the environment and the social ecology. With small businesses making up more than 98 percent of all enterprises in the world, this gives us hope that positive change can happen.

In this brief contribution, I want to emphasize three aspects that are highlighted in *Laudato si'* and how those can be viewed within a business enterprise: 1) How we are all 'interconnected' with all life everywhere on the planet<sup>169</sup>, 2) How the development of deep relationships can build stronger communities motivated by gratuity and reciprocity<sup>170</sup>, and 3) How our choice to use 'only what is needed' recognizes the limited nature of our resources and the positive impact the business enterprise can have in creating a sustainable future<sup>171</sup>. I believe these three key elements offer businesses a 'roadmap' to transformational change that allows 'the cry of the Earth and the cry of the poor'<sup>172</sup> to be heard and addressed within normal business operations and activities.

### **We are all connected – business as part of creation**

One of the key themes within *Laudato si'* that Pope Francis returns to many times throughout the document is the idea of how everything on the planet is interconnected – the cities, the forests, the ocean, rural communities, the air. Everything. Specific references in *Laudato si'* include:

"...the conviction that everything in the world is connected..."<sup>173</sup>

"Because all creatures are connected, each must be cherished with love and respect, for all of us as living creatures are dependent on one another."<sup>174</sup>

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<sup>169</sup> Francis, *Laudato si'*, sec. 138

<sup>170</sup> Francis, *Laudato si'*, sec. 240

<sup>171</sup> Francis, *Laudato si'*, sec. 180

<sup>172</sup> Francis, *Laudato si'*, sec. 49

<sup>173</sup> Francis, *Laudato si'*, sec. 16

<sup>174</sup> Francis, *Laudato si'*, sec. 42

“These ancient stories, full of symbolism, bear witness to a conviction which we today share, that everything is interconnected, and that genuine care for our own lives and our relationships with nature is inseparable from fraternity, justice and faithfulness to others.”<sup>175</sup>

“Everything is connected.”<sup>176</sup>

“To seek only a technical remedy to each environmental problem which comes up is to separate what is in reality interconnected and to mask the true and deepest problems of the global system.”<sup>177</sup>

“When we fail to acknowledge as part of reality the worth of a poor person, a human embryo, a person with disabilities – to offer just a few examples – it becomes difficult to hear the cry of nature itself; everything is connected.”<sup>178</sup>

“It cannot be emphasized enough how everything is interconnected.”<sup>179</sup>

“It also entails a loving awareness that we are not disconnected from the rest of creatures but joined in a splendid universal communion.”<sup>180</sup>

“Everything is interconnected, and this invites us to develop a spirituality of that global solidarity which flows from the mystery of the Trinity.”<sup>181</sup>

One of the greatest challenges for business enterprises and especially entrepreneurs to understand is this heartfelt conviction that they are part of something ‘beyond’ just the day-to-day operations of the company, and that what they do can make a big difference. Why is this important? Without this deep felt ‘connection’ to everything outside of themselves, there is no apparent motivation to be concerned about the way business is done. The older ‘classic’ business model is a selfish one, concerning itself only with making a profit and satisfying shareholders, many times at the expense of employees, the local and global communities and the environment. The new (and improved) business model in tune with *Laudato si’*, values people, planet, and profit, with profit seen only as a means of achieving social good, not as an end in itself. This is also the business view supported by Chiara

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<sup>175</sup> Francis, *Laudato si’*, sec. 70

<sup>176</sup> Francis, *Laudato si’*, sec. 91

<sup>177</sup> Francis, *Laudato si’*, sec. 111

<sup>178</sup> Francis, *Laudato si’*, sec. 117

<sup>179</sup> Francis, *Laudato si’*, sec. 138

<sup>180</sup> Francis, *Laudato si’*, sec. 220

<sup>181</sup> Francis, *Laudato si’*, sec. 240

Lubich's 'Economy of Communion'<sup>182</sup> highlighted in Pope Benedict XVI's *Caritas in Veritate*, that represents a '*broad new composite reality embracing the private and public spheres, one which does not exclude profit, but instead considers it a means for achieving human and social ends...as a means of achieving a more humane market and society.*'<sup>183</sup>

The business owner may ask: "*What impact can one small business really have on the quality of life on Earth?*" To the extent that he/she feels when something happens to one person or one part of the planet, it also affects me and my company, then they might also feel that their contribution can make a big difference. When someone or something becomes negatively impacted and harmed, everything around them/it also suffers: a burning forest, a contaminated stream, a strip-mined mountain – all of these have consequences, often for those most vulnerable who pay the price for these kind of damages.

Today, we see daily how global environmental/climate impacts significantly impact business: widespread forest fires, massive flooding, frequent hurricanes, the cause/spread of COVID-19. These significant disruptions can change how the business owner views these events and their own responsibility in contributing to them. This is perhaps the first step in the 'ecological conversion'<sup>184</sup> that Pope Francis calls all of us to undergo – a recognition that the 'common good' of the planet is something we all contribute to and need to work for, and that what we do does matter.

### **Everything is a Gift – Business as Communion**

*Laudato si'* has increased our awareness that "*Care for nature is part of a lifestyle which includes the capacity for living together and communion.*"<sup>185</sup> *Laudato si'* reminds us that creation can only be "*understood as a gift from the outstretched hand of the Father of all, and as a reality illuminated by the love which calls us together into universal communion.*"<sup>186</sup> And, as part of creation we are "*linked by unseen bonds and together form a kind of universal*

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<sup>182</sup> Chiara Lubich, *L'economia di comunione (storia e profezia)* (Rome: Città Nuova, 2001).

<sup>183</sup> Benedict XVI, *Caritas in Veritate*, Encyclical Letter, (Vatican City: Vatican Press, 2009). [http://www.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf\\_ben-xvi\\_enc\\_20090629\\_caritas-in-veritate.html](http://www.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20090629_caritas-in-veritate.html) ; XVI, *Caritas in Veritate*. 46

<sup>184</sup> Francis, *Laudato si'*, sec. 111

<sup>185</sup> Francis, *Laudato si'*, sec. 228

<sup>186</sup> Francis, *Laudato si'*, sec. 76

*family, a sublime communion which fills us with a sacred, affectionate and humble respect.*"<sup>187</sup>

Living for communion in business means seeing the world through a new set of glasses and recognizing the potential for deep relationships within the company and its supporters (e.g., the employees, the vendors, the clients), at the local geographic level (with the nearby neighborhood, the city, and other surrounding businesses) and at the global level (with those on other continents, supply chains, those in need). This recognition creates an awareness of the significant role that even small businesses can play in a global movement to revitalize communities and protect the planet.



Figure 1. Relationships of reciprocity in business.

A business lifestyle of communion encourages each one to go the extra mile with those that are in contact with the company each day (see Figure 1). In doing this, we should, as Saint Pope John Paul II has suggested, *“think of our brothers and sisters...as ‘those who are a part of me’.* This makes us able to share their joys and sufferings, to sense their desires and attend to their needs...to see what is positive in others, to welcome it...as a gift from God...as a ‘gift for me’.”<sup>188</sup> Chiara Lubich, founder of the Economy of Communion, emphasized the basis of this communion in business: *“Love your employees, even your*

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<sup>187</sup> Francis, *Laudato si*, sec. 89

<sup>188</sup> John Paul II, *Novo Millennio Ineunte* Encyclical Letter, (Vatican City: Vatican Press, 2001). [http://www.vatican.va/content/john-paul-ii/en/apost\\_letters/2001/documents/hf\\_jp-ii\\_apl\\_20010106\\_novo-millennio-ineunte.pdf](http://www.vatican.va/content/john-paul-ii/en/apost_letters/2001/documents/hf_jp-ii_apl_20010106_novo-millennio-ineunte.pdf)

*competitors, your clients and suppliers too, love everyone. The life-style of the company has to change.*"<sup>189</sup>

In doing this, a business enterprise with *Laudato si'* values experiences everyone and everything it encounters, even difficult ones, as a gift: competitors become friends who push us to be better; failures are viewed as lessons learned to improve quality; late payments from clients come as reminders to improve communication. When this kind of 'gift' awareness begins to take root, an atmosphere of gratuity and reciprocity grows, and a culture of giving becomes the norm, and we begin to accept and embrace the entire world as "*a sacrament of communion, as a way of sharing with God and our neighbors on a global scale.*"<sup>190</sup>

In business, when we are authentically open to universal communion, "*this sense of fraternity excludes nothing and no one.*"<sup>191</sup> This is an important point, because one of the distinguishing characteristics of a business intent on living out the values of *Laudato si'* is the fact that behind each moment of each business day, the business owner and employees try to live with a continuous awareness of the other person in order to create and maintain a workplace and business *of communion*. Chiara Lubich reminded entrepreneurs of the Economy of Communion, that "*Every person on Earth has inscribed in the depth of his or her being, whether believer or non-believer, the vocation to communion and love.*"<sup>192</sup>

There are many, many business owners in the world, and many socially-responsible companies that do 'good works' with 'good hearts'. But that alone for a business based on *Laudato si'*, is not enough. Pope Francis reminds us: "*The human person grows more, matures more and is sanctified more to the extent that he or she enters into relationships, going out from themselves to live in communion with God, with others and with all creatures.*"<sup>193</sup>

Practical examples of this for a business take many forms – purchasing all supplies it needs from only local vendors, even if they are more expensive; contributing to community-wide efforts to enhance the local environment with community cleaning events and trees plantings; and support for locally-grown produce. It may also mean participating in business

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<sup>189</sup> Lubich, *L'economia di comunione (storia e profezia)*. p23.

<sup>190</sup> Francis, *Laudato si'*, sec. 9

<sup>191</sup> Francis, *Laudato si'*, sec. 92

<sup>192</sup> Lubich, *L'economia di comunione (storia e profezia)*.p25

<sup>193</sup> Francis, *Laudato si'*, sec. 240

'green programs' that reduce the company carbon footprint, minimize waste generation and water usage (see Figure 2)<sup>194</sup>, and support the seven "R's" of sustainability - Rethink, Refuse, Reduce, Reuse, Repurpose, Recycle, and Rot<sup>195</sup>.

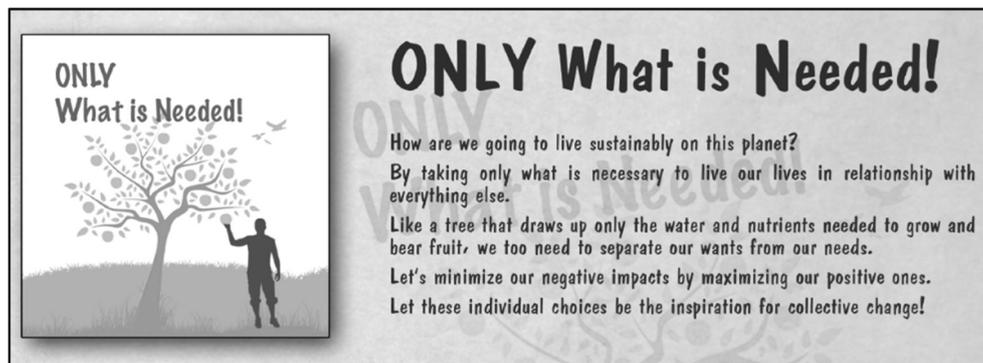


Figure 2. Use only what is needed!

### **Only what is needed – business as a sustainable partner**

*Laudato si'* reminds us of our obligation to protect the planet for the sake of those who will come after us: "Once we start to think about the kind of world we are leaving to future generations, we look at things differently; we realize that the world is a gift which we have freely received and must share with others."<sup>196</sup>

There are many ways a business enterprise can choose to operate to encourage long-term sustainability of our natural resources and to minimize climate impacts. A simple list of questions can provide insight into the direction the company can take to improve its environmental footprint: How has the company's operations locally affected the natural habitat? Is the area air clean to breath and the water clean to drink, swim in and fish? Has the company enhanced the natural environment or destroyed it? What can be done to mitigate any negative impacts? These are real concerns that are shared by everyone in

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<sup>194</sup> "The Earth Cube®," accessed 05/11/2021, 2021, <https://theearthcube.org/about-earth-cube/> (The Earth Cube is a motivational tool for supporting a healthy and sustainable planet. Its objective is to bring about a personal and collective attitude transformation. It encourages a relationship-centered and action-oriented response to the needs of the environment.).

<sup>195</sup> "<https://theglobalhues.com/7-rs-of-waste-management-steps-to-sustainability/>," accessed 05/11/2021, 2021, <https://theglobalhues.com/7-rs-of-waste-management-steps-to-sustainability/>.

<sup>196</sup> Francis, *Laudato si*, sec. 159

the community around a company, and a certain amount of self-examination by the company must be done to respond well.

A company must distinguish itself not by simply following the 'minimum' acceptable practices for environmental stewardship, but by determining what its unique contribution to the planet could be. This is often dictated by the company's geographic location, its specific product or service, and the desires of its workers. Taking the 'initiative' in pro-environmental activities always is a positive. Being pulled along by others to barely comply with standard practices is not. What is important is this – create something unique for the business that benefits the environment, motivates employees, and sets the company apart from others. The kinds of environmental activities practiced by each company will be dependent on their size and financial resources available to them. Large companies with significant resources now have dedicated full-time professional staff to environmental compliance and sustainability issues, so many programs are possible. Small companies often do not have this luxury and must find simple ways to address sustainability concerns within limited budgets and no professional staff. What is important here is this – action! In exploring new ways of doing business and incorporating those ideas into your ordinary day-to-day operations, a company can realize the ideals of *Laudato si'* and become an active participant in answering the cry of the Earth and the cry of the poor (see Figure 3).

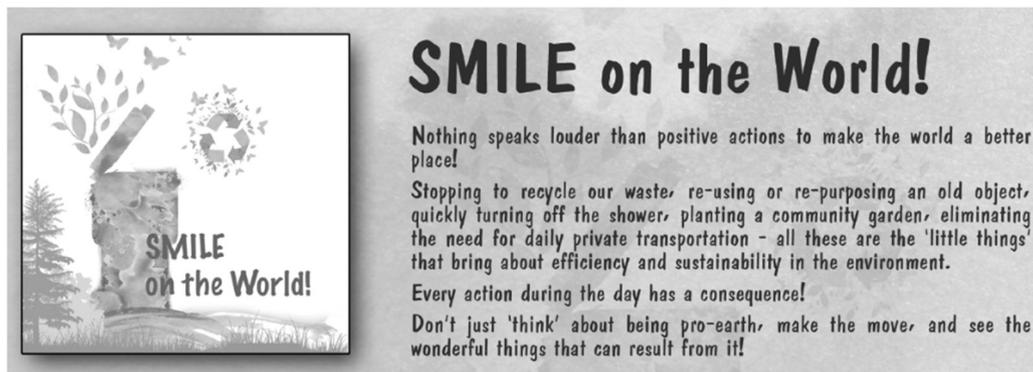


Figure 3. Environmental action is important.

“The Earth Cube®.” accessed 05/11/2021, 2021, <https://theearthcube.org/about-earth-cube/> (The Earth Cube is a motivational tool for supporting a healthy and sustainable planet. Its objective is to bring about a personal and collective attitude transformation. It encourages a relationship-centered and action-oriented response to the needs of the environment.).

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## **For a human ecology at the time of Covid-19: integral ecology between vulnerability and care**

*by Antonio Lupia*

“For weeks now, it seems that evening has fallen. Thick darkness has thickened over our squares, streets and cities; it has taken over our lives filling everything with a deafening silence and a desolating emptiness.”<sup>1</sup> With these words Pope Francis described, in March 2020, the feeling that has spread in the current pandemic context, in the face of the overwhelming reality and awareness of the fragility of human beings.

In this year dedicated to the celebration of the fifth anniversary of *Laudato si'*, we intend to offer some considerations on human ecology in the light of the global situation and in the horizon of integral ecology. We were stimulated by the “virtual” participation (but no less real than the physical one) in the unique meeting promoted by EcoOne 2020, in which countless ideas were offered on the new paths towards integral ecology. This allows us to rediscover interspecific and intraspecific relationships: “We exist only through relationships: with God the Creator, with our brothers and sisters as members of a common family, and with all creatures who inhabit our same home.”<sup>2</sup>

### **A system in crisis**

Today we are forced to think why is it that we are not able to fully know what happens to us<sup>3</sup>. The strong anthropocentrism of modern thought has been put in crisis by a “small” virus. Science, in which everyone seemed to have unwavering faith as the solution to every problem, is seen as powerless in the face of an unknown as Covid-19, despite the new algorithms for analyzing health trends and the efforts of researchers to invent possible antidotes. All this leads to reflections on human identity and behavior.

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<sup>1</sup> Francis, “L’umanità nella tempesta. Momento straordinario di preghiera sul sagrato della basilica di San Pietro, 27 marzo 2020, in «Il Regno - Documenti» 7 (2020),” *Il Regno* (Documenti), 2020, <https://ilregno.it/documenti/2020/7/lumanita-nella-tempesta-francesco>.

<sup>2</sup>“Message for World Day of Creation 1 Sep,” Libreria Editrice Vaticana, 2020, [https://www.vatican.va/content/francesco/en/messages/pont-messages/2020/documents/papa-francesco\\_20200901\\_messaggio-giornata-cura-creato.html](https://www.vatican.va/content/francesco/en/messages/pont-messages/2020/documents/papa-francesco_20200901_messaggio-giornata-cura-creato.html).

<sup>3</sup>Alessandro Llano, “Il rinnovamento dell’antropologia alla luce del Verbo incarnato” (paper presented at the Secondo simposio presinodale, Vaticano, 1999).

### *Modernity in the face of human vulnerability*

“Since the Enlightenment, the project of modernity has consisted in the attempt to eliminate, if not to reduce altogether, the vulnerability of death, disease and social problems, in the name of faith in science and ‘technical-instrumental reason.’”<sup>4</sup> Faced with the evidence of its vulnerability, humanity has tried to make itself stronger, to the point of forgetting that vulnerability is its own “ontological” characteristic. Scientific progress has been seen as progress in “omnipotence.” “Never has humanity had so much power over itself and nothing guarantees that it will use it well”<sup>5</sup> : vulnerability has been considered, in modern times, more than a characteristic linked to the human condition, “a kind of path error, to be eliminated through scientific progress and social reforms.”<sup>6</sup>

This perception has conditioned the human being in his relationships. Starting from the vision of the person as the summit of the universe, the so-called anthropocentrism, there are at least two different ways of interpreting this centrality: the Christian vision, that of weak anthropocentrism, underlines not only the centrality of the person in creation, but also the presence of the divine instance (theocentric foundation) and the ethical limitations of human action; while the vision of the so-called strong anthropocentrism does not consider any instance superior to the human person, who becomes in this way master of the world, even of his fellow men<sup>7</sup>.

### *Strong anthropocentrism and technocracy*

Pope Francis emphasizes: “our immense technological development has not been accompanied by a development in human responsibility, values and conscience.”<sup>8</sup>

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<sup>4</sup> W.T. Reich, “Vulnerabilità,” in *Nuova enciclopedia di bioetica e sessuologia*, ed. G. Russo (Torino: Elledici-Velar, 2018).

<sup>5</sup> Francis, *Laudato si'*, Encyclical Letter, (Vatican City: Vatican Press, 2015). [http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html) Sec. 104

<sup>6</sup> Reich, “Vulnerabilità.” P. 2301

<sup>7</sup> V. Mele, “Comunità umana e antropocentrismo: il paradigma dell’interconnessione nella bioetica personalista,” *Keiron* 3 (2001), [http://www.psichenatura.it/fileadmin/img/V.\\_Mele\\_Comunita\\_umana\\_e\\_Antropocentrismo..pdf](http://www.psichenatura.it/fileadmin/img/V._Mele_Comunita_umana_e_Antropocentrismo..pdf). Cf. V. Mele,

<sup>8</sup> Francis, *Laudato si'*. Sec. 105

In the strong anthropocentrism “nature has no value: man can dispose of it at his complete pleasure.”<sup>9</sup> The Hobbesian paradigm of the war of all against all as a natural condition is established. This model has led the reflection of philosophical ethics to be based on the power and autonomy of man, putting aside his vulnerability and the need for care<sup>10</sup>. But, in fact, “deviant anthropocentrism [...] by placing the individual at the center of its project, destroys relationships with himself, with others, with the environment and with God.”<sup>11</sup> Science and technology have been sources of progress and improvement in the living conditions of mankind. However, they are also used for purposes other than care<sup>12</sup>. They “have given those with the knowledge, and especially the economic resources to use them, an impressive dominance over the whole of humanity and the entire world”<sup>13</sup>. In fact, the Pontiff “indicates the root of the current crisis by identifying it in the ‘technocratic paradigm’, produced by an ‘anthropological excess.’”<sup>14</sup>

### *Capitalism in relationships and the culture of discarding*

What the Pope called “excessive anthropocentrism”<sup>15</sup> carries within itself a logic, “whereby man no longer recognizes his proper position in relation to the world and assumes a self-referential position, centered exclusively on himself and his own power.”<sup>16</sup> From this mentality arises directly a “disposable logic” that justifies any kind of waste, environmental or human, which treats the other and nature as a simple object.<sup>17</sup>

This throwaway culture has its own remote economic ascendancy, as it is based on “capitalism in relationships.” “Capitalism has transformed our emotionality, changing human

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<sup>9</sup> Mele, “Comunità umana e antropocentrismo: il paradigma dell’interconnessione nella bioetica personalista.” cit., p. 168.

<sup>10</sup> Cf. Reich, “Vulnerabilità.” cit., p. 2297.

<sup>11</sup> D. Notarfonso, “Laudato si’. cultura della cura e opzione preferenziale per i poveri. Una critica radicale al modello di sviluppo consumistico e individualista,” *I Quaderni di Scienza & Vita* 16 (2016), <http://www.scienzaevita.org/wp-content/uploads/2016/06/Scienza-e-vita-Quaderno-n.-16.pdf>. D. Notarfonso, p. 33.

<sup>12</sup> Cf. Francis, *Laudato si’*. Sec. 103-104

<sup>13</sup> Francis, *Laudato si’*. Sec. 104

<sup>14</sup> F. Santoro, “Uomo, ambiente, lavoro,” *I Quaderni di Scienza & Vita* 16 (2016). p. 71.

<sup>15</sup> Francis, *Laudato si’*. Sec. 116.

<sup>16</sup> P. Binetti, “Riflessioni sull’ecologia umana alla luce dell’enciclica *Laudato si’*,” *I Quaderni di Scienza & Vita* 16 (2016), <https://www.nuoveartiterapie.net/new/pdf/rivista/21-NuoveArtiTerapie.pdf>. p. 42.

<sup>17</sup> *ibid.*

relationships even in the affective sphere, which has borrowed from the economic one the rules of production and consumption.”<sup>18</sup> In short, costs and benefits are calculated even in interhuman relationships. It is a “consumerism of relationships” because they appear “marked by a phenomenology of the consumption of the other”<sup>19</sup>: everything is based on the logic of domination and the search for one’s own omnipotence. From capitalism in relationships to the throwaway culture, the passage is short. “This same “use and throw away” logic generates so much waste”<sup>20</sup>: human and non-human, without even considering the possibility of re-use and redevelopment of waste. Without fear of contradiction, it is possible to say: “It is precisely the logic of technocratic domination that leads to the destruction of nature and to the exploitation of the weakest people and populations.”<sup>21</sup>

In the face of recent history, a stronger fear of the future seems to be spreading, due to the acquired awareness that the human being is not as omnipotent as he probably thought. The promises of techno-industrial progress seem to be shattered in a humanity that not only has not become better, but risks being mercilessly decimated by an endless contagion. If the Holy Father in *Laudato Si’* emphasized that “It becomes difficult to pause and recover depth in life”<sup>22</sup>, today it seems that we are given the opportunity to do so. today it seems that we are given the opportunity, from the unexpected silence to which we are forced by the provisions of containment of the pandemic, precisely to reflect that “the scientific and technological progress cannot be equated with the progress of humanity and history”<sup>23</sup>, if they are used to enslave the human race.

### **Between vulnerability and care**

Reflections on the vulnerability of human existence, on the collapse of the myth of progress exclusively scientific and not human, must not, however, fall into catastrophism. In fact, in the response to the problem of vulnerability is played the anthropological conception and from it, consequently, the moral reflection of the person today. If the most widespread

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<sup>18</sup> R. De Leonibus, “Per un’ecologia della relazione di cura,” *Nuove arti terapie* 21 (2013), <https://www.nuoveartiterapie.net/new/pdf/rivista/21-NuoveArtiTerapie.pdf>. p. 26.

<sup>19</sup> *ibid.*, p. 27.

<sup>20</sup> Francis, *Laudato si’*. Sec. 123.

<sup>21</sup> Binetti, “Riflessioni sull’ecologia umana alla luce dell’enciclica *Laudato si’*.” *cit.*, p. 42.

<sup>22</sup> Francis, *Laudato si’*. Sec. 113.

<sup>23</sup> *ibid.*

response is the attempt to eliminate vulnerability through the pursuit of human power, it should not be forgotten that there is another way.

### *Weak anthropocentrism*

Weak anthropocentrism assigns to each entity its specific value, inherent in its very essence. The human being, in this way, has its value as the “summit” of creation and as its administrator. Every person has the same dignity. Even nature has its value: “every reality, by the fact that it is a created being, possesses its own meaning, ontological stability or nature.”<sup>24</sup>

Catholic ethics, whose specificity consists above all in emphasizing the presence of God as the ultimate reference point for both the cosmos and the human person, is part of this context. This ethics, says V. Mele, is not only anthropocentric, but also theocentric in its foundation<sup>25</sup>. Everything must be considered a gift of God, *first of all* one’s own existence: the other person is a brother given by God; nature is a gift to be administered.

### *From the productivity model to the gift paradigm*

All of this, in addition to changing the reference capitalism into a *circular economy*, allows us to “move from the productivity model to the paradigm of the gift; from the cold environment of scientific objectivism to the lively and varied atmosphere of metaphysical realism that does not allow methodological imperialism or arbitrary reductions.”<sup>26</sup> Giving the right value to the other stimulates me to change my lifestyle and to base it on the right relationships: *solidarity and care*.

A similar discourse can be made for nature, which is also a gift: “creation can only be understood as a gift from the outstretched hand of the Father of all.”<sup>27</sup> The ethics that develops from this conception is an ethics of stewardship.<sup>28</sup>

This different anthropological approach also makes it possible to overcome consumerism in relationships. The logic, that pushes to use the other as if it were an economic good from

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<sup>24</sup> Llano, “Il rinnovamento dell’antropologia alla luce del Verbo incarnato.”, cit., p. 73.

<sup>25</sup> Cf. Mele, “Comunità umana e antropocentrismo: il paradigma dell’interconnessione nella bioetica personalista.” cit., p. 169.

<sup>26</sup> Llano, “Il rinnovamento dell’antropologia alla luce del Verbo incarnato.”, cit., p. 74.

<sup>27</sup> Francis, *Laudato si’*. Sec.76.

<sup>28</sup>Cf. Mele, “Comunità umana e antropocentrismo: il paradigma dell’interconnessione nella bioetica personalista.”, cit., p. 169.

which to gain profit, does not hold up in front of the awareness of the other as gift. R. De Leonibus, wisely, affirms that “the relationship [...] is a good that does not submit to the laws of the exchange between giving and having because it does not produce profits, nor material wealth, but it is itself a good.”<sup>29</sup>

The individual, “being in relationship,” thus rediscovers the intrinsic value of the relationship with his fellow human beings, who have the same dignity as he does. It is the relationship of fraternity many times emphasized by Pope Francis, who makes it a real medicine to solve ecological problems, both human and environmental, from the perspective of integral ecology<sup>30</sup>: “The Gospel proposes the divine charity that emanates from the Heart of Christ and that generates a search for justice that is inseparably a song of fraternity and solidarity.”

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### *Vulnerability and care*

It is precisely in the relationship with the other that the human being becomes aware of his vulnerability. Already E. Lévinas already underlined that in the face of the other we discover the call to take care of him<sup>32</sup>. This is the opposite perspective to the conception previously highlighted. *Vulnerability* is an essential condition to be taken into account, also from the perspective of the integral ecological balance.

An important document for the promotion of this category is the Barcelona Declaration of 1998.<sup>33</sup> The text states: “In the application and advancement of scientific knowledge, medical practice and associated technologies, human vulnerability must be taken into account.”<sup>34</sup> This new ethical criterion allows to reformulate the way of acting of man, who acquires a deeper understanding of himself. “We are all in some way vulnerable. Because

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<sup>29</sup> Leonibus, “Per un’ecologia della relazione di cura.” cit., p. 28.

<sup>30</sup> Cf. Erio Castellucci, *La tela sfregiata. La responsabilità dell’uomo nel creato* (Assisi: Cittadella, 2019). pp. 53-57.

<sup>31</sup> Francis, *Querida Amazonia*, Post-synodal apostolic exhortation, (Libreria Editrice Vaticana, 2020). [https://www.vatican.va/content/francesco/en/apost\\_exhortations/documents/papa-francesco\\_esortazione-ap\\_20200202\\_querida-amazonia.html](https://www.vatican.va/content/francesco/en/apost_exhortations/documents/papa-francesco_esortazione-ap_20200202_querida-amazonia.html). Sec. 22.

<sup>32</sup> Cf. Reich, “Vulnerabilità.”, cit., p. 2298.

<sup>33</sup> Cf. Reich, “Vulnerabilità.” p. 2296.

<sup>34</sup> Cf. G. Miranda, “Come nacque il “principio di vulnerabilità”,” *Studia Bioethica* 4, 2 (2011). p. 5.

of our human condition we are fragile in the face of suffering, illness, pain and death.”<sup>35</sup> Awareness of our condition of fragility allows us not to forget the presence of people or groups who are more vulnerable.<sup>36</sup>

This cognition opens the human heart to *take care* of the other. Well: “vulnerability represents the ultimate foundation of categories such as *care, solidarity and empathy*.”<sup>37</sup> With it can come a *solution* to the anthropological and environmental disaster. If the response of strong anthropocentrism to vulnerability was the culture of discard, that of theological anthropocentrism is *care*.<sup>38</sup> The recognition of the other as a brother and of creation as a gift places man in a dimension of responsibility: first of all towards his fellow man, then towards nature: “The Lord, who first takes care of us, teaches us to take care of our brothers and sisters and of the environment that he gives us every day.”<sup>39</sup>

The category of care opens up to solidarity: it “gives particular emphasis to the intrinsic sociality of the human person, to the equality of all in dignity and rights.”<sup>40</sup> Finally, care is linked to empathy, which allows us to share the feelings and sufferings of others. In this way we can practice solidarity and take care of our brother or sister.<sup>41</sup>

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<sup>35</sup> Joseph Tham and Gonzalo Miranda, “Il Principio di vulnerabilità. Le religioni a confronto,” *Studia Bioethica* 4, 2 (2011). , p. 3.

<sup>36</sup> Cf. *ibid.*

<sup>37</sup> Reich, “Vulnerabilità.”, p. 2299.

<sup>38</sup> Significant are the considerations on care that, in the medical field, outlines L. Romano: “There are at least four senses, to be attributed to the to care (to take care) in the context of medical activity: compassion, assistance in the activity, safety, competence”; Lorenzo Chieffi and Alberto Postigliola, eds., *Bioetica e Cura*, vol. 3, Quaderni di bioetica (Mimesis Edizioni, Centro Interuniversitario di Ricerca Bioetica, 2014)., p. 131.

<sup>39</sup> Francis, *Querida Amazonia*. Sec. 41.

<sup>40</sup> *Compendium of the social doctrine of the church*, (Libreria Editrice Vaticana, 2004). [https://www.vatican.va/roman\\_curia/pontifical\\_councils/justpeace/documents/rc\\_pc\\_justpeace\\_doc\\_20060526\\_compendio-dott-soc\\_en.html](https://www.vatican.va/roman_curia/pontifical_councils/justpeace/documents/rc_pc_justpeace_doc_20060526_compendio-dott-soc_en.html). Sec.192.

<sup>41</sup> Cf. “This is the true path to peace [...] possible only from a global ethic of solidarity and cooperation at the service of a future shaped by interdependence and co-responsibility in the entire human family”; Sec. 127. Francis, *Fratelli Tutti*, Encyclical Letter, (Libreria Editrice Vaticana, 2020). [https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20201003\\_enciclica-fratelli-tutti.html](https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20201003_enciclica-fratelli-tutti.html).

## *Human ecology*

All this is explained by the expression human ecology: “Wherever there is a lack of a true human ecology, that is, where people live only for themselves, in a “horizontal” way, forgetting about transcendence [...], without taking care of creation, themselves and the human family, then a deleterious ‘culture of waste’ prevails.”<sup>42</sup> Human ecology is the recognition of the other and of creation as a gift from God<sup>43</sup>, or rather the recognition of their value. It is the synthesis of attitudes of care towards man and the environment that develop from man’s self-awareness as a brother, as a steward of nature. It reminds us that human existence is based on three relationships: with God, with other human beings and with creation.<sup>44</sup>

The attitude of care, which stems from human ecology, implies a change in people (here is the integral ecology that expands the horizon). The Holy Father emphasizes that “there will be no healthy and sustainable ecology capable of changing something if people do not change.”<sup>45</sup> It is the heart of people that must welcome positive feelings.<sup>46</sup> “Being protectors, then, also means keeping watch over our emotions, over our hearts, because they are the seat of good and evil intentions: intentions that build up and tear down!”<sup>47</sup> The responsibility of caring, of taking care of others, also implies taking care of ourselves, of our feelings, which lead us to act.<sup>48</sup>

## **Conclusion**

Pope Francis emphasized how this moment of crisis can be an opportunity for conversion: “the storm unmask our vulnerability and leaves uncovered those false and superfluous

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<sup>42</sup> Massimo Losito, “l’ecologia umana nel magistero pontificio,” *Studia Bioethica* 8, no. 2 (2015), [http://www.mofratoscana.it/sito/wp-content/uploads/documenti/scuola2016/ecologia\\_umana.pdf](http://www.mofratoscana.it/sito/wp-content/uploads/documenti/scuola2016/ecologia_umana.pdf), p. 72.

<sup>43</sup> Cf. *ibid*, p. 73.

<sup>44</sup> Cf. Massimo Losito, “L’ecologia umana al cuore dell’ecologia integrale nel magistero di Papa Francesco,” *Studia Bioethica* 9, no. 2 (2016), <https://riviste.upra.org/index.php/bioethica/article/view/3435/2575>. p. 56.

<sup>45</sup> Francis, *Querida Amazonia*. Sec. 58.

<sup>46</sup> Cf. Francis, *Querida Amazonia*. Sec. 59.

<sup>47</sup> Francis, “Homily of Pope Francis, ,” in *Mass, imposition of the pallium and bestowal of the fisherman’s ring for the beginning of the Petrine ministry of the bishop of Rome* (Libreria Editrice Vaticana, 19 March 2013 2013). [https://www.vatican.va/content/francesco/en/homilies/2013/documents/papa-francesco\\_20130319\\_omelia-inizio-pontificato.html](https://www.vatican.va/content/francesco/en/homilies/2013/documents/papa-francesco_20130319_omelia-inizio-pontificato.html).

<sup>48</sup> Cf. *ibid*.

securities with which we have built our agendas, our projects, our habits and priorities.”<sup>49</sup> The pandemic situation that afflicts us offers us the possibility of changing our lifestyle and embracing one of solidarity. With it, “the makeup of those stereotypes with which we used to mask our ‘egos’ has fallen [...]; and we have discovered, once again, that (blessed) common belonging from which we cannot escape, belonging as brothers.”<sup>50</sup> Then, the call to conversion sounds strong!

Humanity can come out of this Covid-19 test changed, beginning by abandoning the logic of strong anthropocentrism, of the culture of waste, of capitalism, of selfishness, to open up to a logic of solidarity and care. If “we have realized that we are all in the same boat, all fragile and disoriented, but at the same time important and necessary”<sup>51</sup>, an attitude of care must arise spontaneously. Four attitudes must be overcome: “*indifference, selfishness, division, forgetfulness.*”<sup>52</sup> Let us strive for “*ecological conversion*”<sup>53</sup> by committing ourselves, each one in his own specific way, without delegating to others, stimulated by the words of Father Giustiniani: “If the future of human nature were left in the hands of a few de-signers, or even of the votes of parliamentary majorities, not only social coexistence, based on the symmetry of relationships, but also the symmetry of responsibility between human beings, the sphere of life and the cosmic sphere, could be blown up.”<sup>54</sup>

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<sup>49</sup>Francis, “L’umanità nella tempesta. Momento straordinario di preghiera sul sagrato della basilica di San Pietro, 27 marzo 2020, in «Il Regno - Documenti» 7 (2020).”, p. 194.

<sup>50</sup> *ibid.*

<sup>51</sup> *ibid.*

<sup>52</sup>Francis, “Urbi et Orbi,” in *Message of his holiness Pope Francis Easter 2020* (Libreria Editrice Vaticana, 12 April 2020). [https://www.vatican.va/content/francesco/en/messages/urbi/documents/papa-francesco\\_20200412\\_urbi-et-orbi-pasqua.html](https://www.vatican.va/content/francesco/en/messages/urbi/documents/papa-francesco_20200412_urbi-et-orbi-pasqua.html).

<sup>53</sup> Cf. Francis, *Laudato si’*. Sec. 216-221.

<sup>54</sup> P. Giustiniani, “Etica, salute e ricerca: Termini da ripensare in ottica ambientale?,” in *Bioetica, ambiente e alimentazione: Per una nuova discussione.*, ed. F. Del Pizzo and P. Giustiniani (Milano: Mimesis Edizioni, 2014). p. 34.

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