Human Ecology in Saint John Paul II and Benedict XVI and its Contribution to the Debate on Sustainable Development

Thesis submitted in accordance with the requirements of
Liverpool Hope University for the
Degree of Doctor of Philosophy in Theology

Jose Ambrozic

October 2018

DECLARATION BY THE AUTHOR

This thesis is my own work and has not been previously submitted for an award of this university or of any other institution. The content of this thesis is legally allowable under copyright legislation.

A temporary restricted access to this thesis of five years, so as not to prejudice the possibility of future publication, is hereby imposed, the author retaining copyright.

Jose Ambrozic

October 11, 2018

Abstract

Human Ecology in Saint John Paul II and Benedict XVI and its Contribution to the Debate on Sustainable Development

Jose Ambrozic

A Catholic Human Ecology is presented as the favorable and healthy conditions for the flourishing and fulfillment of the human person, helping to solve conflicts between human activity and protection of the environment, as well as a healthy approach to social issues. This work argues that the application of Human Ecology -as proposed and developed by Popes John Paul II and Benedict XVI- to the field of Sustainable Development, helps to refocus the policy sciences, economy, politics and development, to the service of the human person. It encompasses the rich Catholic tradition of thought on social issues and provides a harmonious view which integrates and reconciles the natural environment with the human, including the human person, his body, soul and spirit, as well as human activity and its expression in life, technology, development and culture.

Table of Contents

Introduction	5
Chapter 1 Environmental issues and the road to Sustainable	
Development	37
Chapter 2 The challenges for Sustainable Development – SD	88
Chapter 3 Underlying conceptions bearing on Sustainable	
Development	148
Chapter 4 Development of Human Ecology	199
Chapter 5 Human Ecology in John Paul II and Benedict XVI	245
Part A. John Paul II	246
Part B. Benedict XVI	285
Part C. Catholic Human Ecology after John Paul II and	
Benedict XVI	335
Chapter 6 Conclusions	349
Bibliography	373
Tables & Figures	
Table 1 - Chronology of International events on	
Environmental Concerns and SD	69
Table 2 - Distribution of Global Absolute Gains in Income	101
Table 3 - Gross national income per capita 2010 in US\$	105
Table 4 - Projected Population by Development Region	117
Table 5 - AGENDA 21 - Excerpts - Priority Issues and Budgets	120
Table 6 - Average Ecological Footprint	139

Introduction

1. Grasping the concept

The aim of this research is to present the contribution that "Human Ecology", a concept proposed by Pope John Paul II and developed by Pope Benedict XVI, can make to the Evangelization of Culture in the current context of a global secular culture, particularly as applied to Sustainable Development. The initial motivation for this research started with the striking concept of "Human Ecology" in Pope John Paul II's 1991 Encyclical *Centesimus Annus* and the questions that naturally arose. What was the origin of the concept? Why did he use it in such a way? How did it relate with the tradition of Catholic Social Thought? As the reflection deepened, the beauty and brilliance of the concept was more apparent. The word "ecology" has an immediate appeal as it evokes a moral cause that has widespread support as well as a longing for harmony and communion with nature; a communion free from controversy and complications, a longing that can be easily and naturally enjoyed.

Attached to the word "ecology" was the word "human", another word that despite being abundantly used, has currency in today's culture. "Human," as in humanitarian or referring to the humane treatment of animals, has an immediate connotation of good, virtuous, compassionate and ethically appropriate behavior. It evokes the moral high ground as opposed to inhuman, and refers as to what is naturally proper for healthy human beings. Human Ecology is a powerful combination that sparks the imagination and elicits a

5

¹ Pope John Paul II, Centesimus Annus, 1991.

positive emotional response.² The Pope had made a connection with the subject of ecology and tapped a source of abundant concerns, expectations, and commitments in the current global culture.

John Paul II presented Human Ecology not as an alternative or in opposition to natural ecology, but rather as something to complement it,³ advocating "for the defense and preservation of common goods such as the natural and human environments."⁴ It expanded the scope by analogy in applying the same concerns and expectations present in our relationship with nature to the realm of society, culture, and human life. In some way, there was a felt need to recognize the interdependence of natural ecosystems with human action and social realities. This lens or metaphor seemed an adequate way to encompass both worlds seamlessly, presenting a needed and welcomed contribution to the current complexity of social issues. Human ecology offered an ordering set of relevant principles to clarify the discussion. It seemed to have the qualities for these tasks.⁵

At this point, it is useful to explore the origin of the term ecology. Ernst Haeckel coined the term "ecology" in 1866 to describe the "economies" of living forms. The term economy comes from the greek *oikos* which means house,

² The subject is the integral ecology from a human perspective.

³ Pope John Paul II, *Centesimus Annus*, 1991, §§37-38. In 37 he raises "the ecological question ... [and] the senseless destruction of the natural environment". In 38 he adds "In addition to the irrational destruction of the natural environment, we must also mention the more serious destruction of the human environment... [besides] preserving the natural habitats of the various animal species... too little effort is made to safeguard the moral conditions for an authentic "human ecology"."

⁴ Ibid., §40.

⁵ Ibid., §§37-40. This includes man's responsibility for urban planning, family and workplace; (40) the "preservation of common goods such as the natural and human environments", (38) care for "the social structure in which he lives, by the education he has received and by his environment... in accordance with the truth... with more authentic forms of living in community."; (39) where life "can develop in accordance with what constitutes authentic human growth."

⁶ The Stanford Encyclopedia of Philosophy (Winter 2016 Edition), Sahotra Sarkar, "Ecology," ed. Edward N. Zalta, last modified Oct 10, 2016, accessed March 20, 2017. https://plato.stanford.edu/archives/win2016/entries/ecology/.

household or family; referring not only to the physical structure or the individuals involved, but the whole operating unit. Also interesting is the term ecosystem. Although coined in 1935 by Arthur Tansley,⁷ the concept began with Anton Kerner and others in the late 19th century borrowing the human concept of community and applying it to natural environments.8 Summarizing, they pose that organisms sharing the same habitat, as they interacted among themselves and with the environment, would form biotic communities, complex organisms with a life cycle and a degree of stability. The whole would be more than the sum of its parts and environmentalists could make the moral demand that ecosystems had a natural order which should not be disturbed or damaged by human action. Following Aldo Leopold we can say "a thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise."9 This concept provides useful insights for Human Ecology, with the human community formed by different live agents, interacting between themselves and the environment; with interdependence between agents and the environment, the environment being constantly affected and changed by the agents, some discernible patterns or rules of healthy interaction, and finally, a discernible order based on the nature of the agents, which needs to be respected and cultivated.

The concept of Human Ecology, I believe, broadens the community of the creatures that conform the natural environment in three distinct aspects. First, it includes human persons as a key part of the ecological community.

⁷ Ibid.

⁸ Frank Benjamin Golley, A History of the Ecosystem Concept in Ecology (New Haven: Yale University Press, 1993), 1-31.

⁹ Aldo Leopold, *Sand County Almanac* (Oxford: Oxford University Press), 224-225. For Leopold, the "is" of the nature of the biotic community, leads to an "ought" of the "right" and "wrong" of a proper environmental ethic, a debated issue as will be noted later.

Second, it includes not only the material, physical dimension, but also the metaphysical and spiritual, so as to encompass the whole human reality. Third, it the historical/temporal dimension, particularly includes consequences on future generations are factored into the analysis. Including these dimensions is necessary to have a relevant understanding of the dynamics of the environment. It is fairly evident that the actions of the human person can improve or damage the conditions of the environment. Additionally, the thought processes, cultural movements and ideologies, as well as spiritual convictions and commitments of human persons have an impact on their choices and how these affect the environment. Physical processes as well, affect the hopes, expectations, psychological life and culture of peoples. Finally, interdependence of resources and the environment across space and time is constantly becoming more evident. Pope Benedict XVI addresses this when he stresses the need for intra generational and intergenerational solidarity.¹⁰

There are some hurdles to overcome and some confusion to clarify as we approach the concept of Human Ecology. The current debate regarding human nature and social interaction is very polarized ideologically. According to Bloom it is the experience of every university professor that almost every student will come having been taught and believing with moral conviction that truth does not exist and that all is relative. Consequently, no one can affirm what is true or what is good and what is evil, and to pretend to do so is regarded as being intolerant and arrogant.¹¹

_

¹⁰ Pope Benedict XVI, *Caritas in Veritate*. 2009, §§48-50; Pope Benedict XVI. "Peace Message 2010: If You want to Cultivate Peace, Protect Creation," §§2, 7-9.

¹¹ Allan Bloom, *The Closing of the American Mind*, 25-26.

The following description seems to me fairly representative as many more sources could be cited to support it. For decades there has been "an aggressive political class redefining America through the promotion of abortion, feminism, gay rights, cosmopolitanism, and socialist economics"12 as in the rest of the Western world. A "leadership class dominated by progressive elites" ¹³ mainly in the media and academia, but lately also in the corporate world, has limited this discussion. They "will tend to eschew argument or any examination of the ideology's underlying presuppositions or premises, often refusing to concede that greater subtlety may be required," act under "the belief that language was not primarily for the expression of truth but for the acquisition of power," "inflame the passions rather than to engage the logic of the mind... [a]ppeal to fear and play on people's anxiety, never asking them to think about the evidence."14 Empirical science can provide insight into the empirical. However, it is inadequate to illuminate the metaphysical and the supernatural. The contribution of philosophy and theology, through both faith and reason, remain necessary as events "are the result of actions that arise from human choices... [and] while those choices may be economically or politically motivated, they have deeper roots... Questions of human action, that is, moral questions" are epistemological and finally driven by ontological and metaphysical realities.¹⁵

_

¹² Patrick J. Deneen, "Moral Minority," pp. 49-50

¹³ Ibid

¹⁴ Randall Smith, "Ideology and the Corruption of Language".

¹⁵ Mary Taylor, "Environmental Ethics and the Philosophical, Theological, and Literary Foundations for a Metaphysics of Nature." (PhD diss., Universidad Rey Juan Carlos, 2012), 2.

The debate on truth and knowledge, implied in the previous paragraph, is far beyond the scope of this work, but I will have to engage two issues, one epistemological and another anthropological. First, if we are to reach any relevant conclusion regarding what is good for the human person or society, a working concept of truth, is needed. Second, truth is not only a needed practical tool for the human being, but human fulfillment depends on his capacity to attain it. 17

These are issues that cannot be avoided. In talking about Human Ecology, we are dealing with a space that is safe and healthy for the human person, a space or environment that is "good." When we discuss the "good life" or the right of people to pursue happiness, we deal with the desire of human persons to strive for what they consider "good" for themselves. Government and society are established by the people to safeguard their quest for the "good" and protect them from evil. Political authorities have the duty, within their power, to provide for the good and defend from evil, and the people have the right and the duty to hold them accountable. In chapter 4 we will see how Benedict XVI poses to the German parliament the need to debate and agree on what is just and good, opening to other sources of knowledge beyond positivism.

¹⁶ In a broad sense, a realist approach in which truth is present in statements that correspond with reality, which is not restricted to physical. Among the various alternatives presented. Glanzberg, Michael, "Truth", The Stanford Encyclopedia of Philosophy (Winter 2016 Edition), Edward N. Zalta (ed.), URL = ., accessed March 19, 2018">https://plato.stanford.edu/archives/win2016/entries/truth/>., accessed March 19, 2018.

¹⁷ These two issues will come up mostly in chapters 1, 2 and particularly in chapter 4 which shows that Leo XIII considers truth as necessary for the exercise of freedom, and this along with the human existential quest for truth will also come up in the anthropologies of John Paul II and Benedict XVI in chapter 4.

¹⁸ Pope Leo XIII, Rerum Novarum, §§34-35.

In exploring the "good life" for human beings and a "good" model of social organization which can provide the conditions for such "good life," we are inevitably dealing with the truth about the human persons and how they relate to each other. We are talking necessarily about anthropology and ethics. Traditions of thought that have dealt with these issues for centuries will likely have valuable contributions. Peligious traditions that engage in reasonable argument 20 can contribute a unique wisdom developed over centuries, and fill the voids and correct the biases of political ideologies.

2. Three threads leading to Catholic Human Ecology

Taking a closer look, three threads appear to contribute to the Catholic understanding of the term Human Ecology and its relevance: environmental concerns as they gave birth to a discipline; Human Ecology as it evolved through the last century, and Catholic Social Thought rooted in the tradition of the Church and developed explicitly beginning with Leo XIII in the late nineteenth century. The initial step is to review the development and mutual relationship of these three threads.

The development of environmental concerns has grown thicker at an accelerated pace in the last sixty years and reached an important milestone in the 1972 Stockholm Conference where it found global support. However, the issues of development exerted a substantial influence leading to a need to

¹⁹ Pope Benedict XVI, Papal Message to Ghanaian Envoy to Holy See, 2011, "...drawing on the wisdom found in religious traditions, especially when... science and technology provide little or no answer."

²⁰ Such as Catholic teaching, which relies on both faith and reasonable argument as will be seen in chapter 4.

harmonize them with the environmental issues generating the concept of Sustainable Development. Further discussions brought awareness that many of the challenges faced by people in their living conditions were not solved by macroeconomic growth. The importance of the human person came to the fore as Social Development was established as a third pillar of Sustainable Development acknowledging that "human beings are at the center of [its] concerns."21

In the past hundred years, Human Ecology has spawned valuable reflections in the different disciplines that have tried to claim it, as will be shown in chapter 3. At the same time, no discipline has been able to claim it for long. Human Ecology, as it implies the whole of human experience, necessarily draws from many fields of study such as geography, sociology, psychology and architecture, to name a few. The path of Human Ecology yields many insights both into the diverse factors that affect human life, as well as the complex dynamics that their mutual interaction weaves, and the influence on human persons and social processes continually in motion and evolvement. Taken as a whole, the enterprise merits the use of an interdisciplinary approach, at odds with the traditional discipline-centered model more common in most universities.

Finally, I believe that looking at Human Ecology as used in a social encyclical by a philosopher who, as Pope, sought to put the mystery and glory of the human person, ruptured and reconciled, at the forefront of his teaching, naturally evokes the totality of reality bearing on the human person facing the

²¹ UN "Rio Declaration," 1992, §1.

challenge of being, and of leading a worthy life. The interdisciplinary richness involved is enhanced by a rich tradition which has reflected on the human mystery and the human condition for millennia. It brings together the social magisterium under the perspective of seeking the environment most conducive to the authentic flourishing of the human person. The concept of the common good is renewed and all of the social thought and the reflection of the Catholic church on the human person supports John Paul II's Human Ecology.

Although the concept was rich and apparently strategic, and although it was sufficiently meaningful for Pope Benedict XVI to use and develop in important documents, it had at first very little echo in Catholic scholarship. When I formally started the research in 2010, I found nothing significant outside of the papal magisterium and a few documents of the Holy See. More recently, a growing interest has been expressed through different initiatives.²²

3. Catholic "Human Ecology"

Catholic "Human Ecology" as such started with John Paul II's use of the term in his 1991 Encyclical *Centesimus Annus*. However, even if the term was not used before within the Catholic Church, its content has certainly been present in Catholic social thought. The concern for the human person and the conditions appropriate to protect his life and dignity are part of the Jewish tradition in the Old Testament, are the core of the Gospel's message, have been

²² Among other initiatives, in January of 2012 the Pontificia Università San Tommaso d'Aquino, the Institut Français - Centre Saint Louis and the Université Paris Diderot organized in Rome the round table Ecologia umana e sviluppo sostenibile; in March 2016 the Catholic University of America and the Napa Institute organized the conference Human Ecology: Integrating Business and 125 Years of Catholic Social Doctrine.

part of the Church's thought and action during its twenty centuries of existence²³, and have been developed more explicitly in the Church's social teaching since Leo XIII's *Rerum Novarum*. The consistency of this approach along all these centuries is supported by John Paul II's approach of renewal and continuity in social teaching stated in 1987,²⁴ which is consistent with Blessed John Henry Newman's understanding on the development of Catholic doctrine²⁵ and Pope Benedict XVI's hermeneutic of renewal in continuity.²⁶

Nothing human has ever been alien to the Church. As the preface to *Gaudium et Spes* states: "The joys and the hopes, the griefs and the anxieties of the men of this age, especially those who are poor or in any way afflicted, these are the joys and hopes, the griefs and anxieties of the followers of Christ. Indeed, nothing genuinely human fails to raise an echo in their hearts." Some of these concerns, particularly the conditions of the worker and the poor, were already acknowledged by Leo XIII. 28

I argue that Catholic Human Ecology as presented by John Paul II and Benedict XVI encompasses the whole tradition of Catholic social thought. The Catholic Church has always been concerned with "the whole man."²⁹ Expressing the love and concern of Christ for every human person, she is concerned primarily with the salvation of people, with their eternal destiny, but also with

²³ Pontifical Council for Justice and Peace. *Compendium of the Social Doctrine of the Church*, The biblical foundation for social teaching in the Old Testament, New Testament, including the Gospels, is found throughout the text and specifically in the beginning of chapters 6-11; and its presence in the Church's teaching and action in pages 21-31.

²⁴ Pope John Paul II, Sollicitude Rei Socialis, §3.

²⁵ John Henry Cardinal Newman, An Essay on the Development of Christian Doctrine, 169-185.

²⁶ Pope Benedict XVI, Speech to Roman Curia, Traditional Exchange of Christmas Greetings. 2005.

²⁷ Pope Paul VI, Gaudium et Spes, §1.

²⁸ Pope Leo XIII, Rerum Novarum, §§3, 28.

²⁹ Pope John Paul II, Inaugural speech at Puebla, §III.4.

all that affects them, and all that is relevant to their life and dignity.³⁰ The Church is an "expert in humanity"³¹ and as such contributes her wisdom and service to the human rights and dignity of every person and the whole human family.³²

What is the whole of the human person? What elements or dimensions does it encompass and how do we properly prioritize them? John Paul II stated that "one of the most obvious weaknesses of present-day civilization lies in an inadequate view of man." It is "the age of the forms of humanism and the age of anthropocentrism. Nevertheless, it is paradoxically also the age of man's deepest anxiety about his identity and his destiny, the age of man's abasement to previously unsuspected levels, the age of human values trampled on as never before." John Paul II finds the cause in "the inexorable paradox of atheistic humanism. It is the drama of man being deprived of an essential dimension of his being, namely, his search for the infinite, and thus faced with having his being reduced in the worst way." This explains why there is an urgent need for a true anthropology, a true understanding of the human person on which to base a Human Ecology. This, as well, begs for a sound epistemology so we can discern what knowledge about the human person is relevant.

We also need to understand the human person in the context of society, and even more, within the context of his relations with nature, other creatures,

30 Ibid., §III.2.

³¹ Pope Paul VI, Speech at the United Nations, 1965, §3.

³² Pope John Paul II, Inaugural speech at Puebla, §III.3.

³³ Ibid., §I.9.

³⁴ Ibid.

³⁵ Ibid.

and the universe. Catholic teaching clarifies that "the primordial affirmation of this anthropology is that man is God's image and cannot be reduced to a mere portion of nature or a nameless element in the human city."³⁶ In regards to mankind and nature, "what we call 'nature' in a cosmic sense has its origin in 'a plan of love and truth'...'from the free will of God; [Who] wanted to make his creatures share in his being, in his intelligence, and in his goodness' [calling] man and woman, made in the image and likeness of the Creator to 'fill the earth' and to 'have dominion over' it as 'stewards' entrusted by God himself (cf. Gen 1:28)."³⁷ Human persons were "to have exercised their dominion over the earth (Gen 1:28) with wisdom and love. Instead, they destroyed the existing harmony by deliberately going against the Creator's plan, that is, by choosing to sin."³⁸

Therefore, "the increasing devastation of the world of nature... results from the behavior of people who show a callous disregard for the hidden, yet perceivable requirements of the order and harmony which govern nature itself."³⁹ God entrusted man not with power to dominate, but rather to protect and care for; "a duty to exercise responsible stewardship over creation, to care for it and to cultivate it."⁴⁰

36 Ibid.

³⁷ Pope Benedict XVI, Peace Message. 2010, §6.

³⁸ Pope John Paul II, Peace Message 1990, §3.

³⁹ Ibid., §5.

⁴⁰ Pope Benedict XVI, Peace Message. 2010, §6.

4. Why a Catholic Human Ecology?

I will develop these three words to understand how they give meaning and relevance to the concept.

a) Importance of Ecology

Ecology was the subject chosen by John Paul II for his 1990 Peace Message. He saw the lack of respect for nature as a threat to world peace, and also as an expression of a deeper moral crisis reflecting selfishness, dishonesty, disregard for others, contempt for man and lack of respect for life.⁴¹ His message also stresses the interdependence not only of countries and regions, but also of diverse dimensions of life. Worldviews, religious convictions and morals, science and business strategies, war, migration, government policies and international bodies, lifestyles and poverty, urban planning, education and solidarity, family life and the economy; all affect each other. They are affected by and affect the environment. The Pope chose to use the terms "ecosystem" and "delicate ecological balances" 42 to emphasize this interdependence and the unforeseen consequences of actions previously regarded as unrelated. This interdependence, springs from the very nature of the universe. "Theology, philosophy and science all speak of a harmonious universe, of a 'cosmos' endowed with its own integrity, its own internal, dynamic balance. This order must be respected. The human race is called to explore this order, to examine it with due care and to make use of it while safeguarding its integrity."43 Due to this complexity, and to the fact that "the earth is ultimately a common

⁴¹ Pope John Paul II, Peace Message. 1990, §1.

⁴² Ibid., §§6, 7.

⁴³ Ibid., §8.

heritage"⁴⁴ the cooperation of individuals, peoples, states and the international community is needed.⁴⁵ The concern for the environment and the particular role of the human person are already present here and they will be later integrated in the Human Ecology.

The concern for the environment had already been raised in 1971 by Paul VI, calling for a common responsibility in regards to a shared destiny. He warned "that by an ill-considered exploitation of nature [man] risks destroying it and becoming in his turn the victim of this degradation... [even] the human framework is no longer under man's control, thus creating an environment for tomorrow which may well be intolerable. This is a wide-ranging social problem which concerns the entire human family."46 More recently Pope Benedict XVI emphasized the relevance of environmental responsibility for peace: "Respect for creation is of immense consequence, not least because 'creation is the beginning and the foundation of all God's works', and its preservation has now become essential for the pacific coexistence of mankind," and also its connection to man's pursuit of welfare and happiness: "Integral human development is closely linked to the obligations which flow from man's relationship with the natural environment."47

As will be developed in chapter 1, ecological problems involve and threaten all dimensions of human life and peaceful coexistence, from basic access to unpolluted air, water and food, to energy, education, technology and

⁴⁴ Ibid., §8.

45 Ibid., §§9, 15.

⁴⁶ Pope Paul VI, Octogesima Adveniens, §21.

⁴⁷ Pope Benedict XVI, Peace Message 2010, §§1, 2.

development. Through this work I will make evident that they involve the moral and spiritual inasmuch as our lifestyles and choices impact the welfare and even survival of others, both in the present time and in future generations. The way we deal with this responsibility inevitably affects our own lives, not only in physical terms, but also psychologically and spiritually. No one can act with selfishness or indifference to the plight of others without diminishing his own humanity and without harming his own conscience and heart.

The awareness of ecological challenges present in today's world and culture⁴⁸ is also an opportunity to engage people regarding the common good. Many misconceptions and distortions need to be corrected, but ecological awareness has spurred a willingness to act. As people are educated in the complexity and interdependence of factors involved in our ecosystems and the moral nature of the ecological problems, they will be able to respond in a more comprehensive way to these challenges. Some may have replaced their faith and morals by committing to a reductive conception of ecology which allows them to ease their conscience with some environmental measures which do not challenge their lifestyles or other convictions. But they will be challenged in their intelligence and goodwill to recognize the holistic nature of the ecological problems and strive for the changes needed in their lives. The persuasive power of ecology in the present time, and the concept of ecosystem which helps visualize the interdependence of so many factors, can help raise the relevance in today's culture of many social issues so close to the heart of the Church and so relevant to the welfare and flourishing of mankind.

_

⁴⁸ Pope John Paul II, Peace Message 1990, §1.

b) Ecology should be Human

A sound ecology has to be human, because as John Paul II elaborates, the universe does not make sense without mankind: "God entrusted the whole of creation to the man and woman.... [calling them to put] into play those abilities and gifts which distinguish the human being from all other creatures."49 There is an unavoidable difference between humans and the rest of creation. God "established a fixed relationship between mankind and the rest of creation." Made in the image and likeness of God, Adam and Eve were to have exercised their dominion over the earth (Gen 1:28) with wisdom and love."50 This dominion has been misunderstood as exploitation in the modern and postmodern context of the last two hundred years, so fixated with the notions of instrumental logic and power. The word for dominion comes from the latin dominus which relates to house, caring for the house, domesticating, and the mastery, stewardship and responsible care exercised by the Lord and Master Jesus Christ. It implies love, concern and responsibility.⁵¹ Harrison and others make a cogent case that it is actually the rejection of the Catholic view by the Enlightenment and some protestant approaches, which provided the reasoning that allowed the exploitation of nature.⁵²

Lynn White, Minteer and Manning and many environmental ethicists, insist that there is no fundamental difference between humans and other creatures and that proposing a special place for humans reflects an

⁴⁹ Ibid., §3.

⁵⁰ Ibid..

⁵¹ Pope Benedict XVI, Peace Message, 2010, §6; Ricardo Simmonds, "Reconciliation Environmentalism," 25, 81.

⁵² Mary Taylor, "Environmental Ethics," 33-35.

anthropocentric⁵³ bias which abets the abuse of nature.⁵⁴ However, ecological appeals to human action unwittingly acknowledge man's particular relevance by enjoining human persons to act or abstain in issues that affect the environment, which they do not ask or expect of other creatures highlighting this paradox.⁵⁵ Beavers will flood valleys, predators will act as such and species will drive out, exterminate or asphyxiate others without concern for the consequences, much less for biodiversity. It is significant that the criteria we use to determine the value of natural environments in terms of beauty, biodiversity, etc., is unavoidably from a human perspective, and that we, as humans, take upon ourselves the duty of avoiding harmful actions and correcting damage done to the environment. This approach is consistent with having conscience and free will and recognizing our role and duty of dominion as responsibility, but not so much with believing that we have the same responsibility as any other animal or organism. Other creatures are not capable of this, but the human person has the capacity, and therefore the freedom and duty, which gives him a special dignity that sets him apart.⁵⁶ Of course, he can,

_

⁵³ Understood as viewing nature as having only instrumental value for humans. Ibid., p. 36.

⁵⁴ Lynn White, "The historical roots of our ecological crisis," (1967); Mary Taylor, "Environmental Ethics," 35-37.

^{55 &}quot;How can we solve a problem of two opposing philosophies when both are consistent but contradictory between themselves? ... The question, 'Why conserve the ecosystem?' can be answered by the anthropocentrism theory: conserve for man (or for human uses or conservation of man). The question: 'What is man's function on earth?' can be answered by the biocentrism theory: man's role is to conserve. But the first question does not have an answer in the second theory and vice versa." Martinez de Anguita, *Environmental Solidarity*, pre-publication, quoted in Mary Taylor, "Environmental Ethics," 36, note 49.

⁵⁶ Robert Spaemann, *Essays in Anthropology*, 59-60. "The distinction, [of human dignity] it seems to me, lies in the following: non-human beings cannot take ownership of the web of purposes into which they are drawn by external forces. They remain inescapably at the center of their own being. Relating everything else to themselves, to their own genes, their own kind. And what they do to everything else is in turn done to them: they too become material for the development of other beings. Anaximander expressed this by saying that in their disintegration things "pay penalty and retribution to each other for their injustice," and Hegel said that in death all non-human beings respect the truth of the nothingness of finitude. But a human being is one who can stand back and relativize herself. She can, as Christ terminology has it, "die to herself." Put differently, she can submit her own interests and agendas to a wider conversation because she can recognize other people's interests and agendas as being worthy of equal consideration... She does not simply make everything a feature of her own environment. On the contrary, she realizes that she herself constitutes an environment for other things and other people."

and has abused this greater capacity not living up to his dignity. However, for the same reason, he can work to restore it.

c) The Catholic view enriches Human Ecology

How can the notion of Human Ecology profit from a Catholic view? It has had a colorful itinerary, from being focused on the human impact on the environment and then on the environment's impact on the human; to considering human systems such as cities, culture and the psychological; having included geography, sociology, architecture, urban planning and economy, moving from the multidisciplinary to the interdisciplinary towards the end of the 20th century. This has established a strong analogy between the ecology of nature and the human, reflected in many aspects of human life: "The tenor of a marriage - or divorce - creates a kind of 'emotional ecology' for children. Just as a tree is affected by the quality of the air, water and soil in its environment, the emotional health of children is determined by the quality of the intimate relationships that surround them." The ecology of family and its immediate social environment have been proven repeatedly as the key element for the healthy flourishing of children and youth. However, it is still lacking in order and harmony.

The Catholic approach can provide such order and harmony from an integrated perspective. It also provides, since the Church is an "expert in humanity", the truth about God and His design for the universe, man, and his place in it. It contributes to ethical social reasoning as it represents the values

22

⁵⁷ John M. Gottman, What Predicts Divorce?: The Relationship Between Marital Processes and Marital Outcomes.

⁵⁸ Kay S. Hymowitz, Boy Trouble.

of a significant portion of the people, contributes the wealth of centuries of proven and discussed arguments and provides the moral energy to engage people in the works of justice.⁵⁹ The Roman Catholic tradition has from the beginning relied on reasoned inquiry to approach the truth and the good⁶⁰ which allows it to interact with diverse intellectual disciplines.

Catholic thought on social issues is grounded in Sacred Scripture, and along with the Jewish and wider Christian tradition, has shaped its conception of individuals and society for thousands of years. Catholic thought on social issues defends the life and dignity of the human person because of its transcendent nature; it defends the rights implied in that dignity, but also the human ecology, the living conditions that are consistent with it. It affirms that the dignity of individuals implies a transcendent and spiritual purpose that has valuable meaning and that a key part of that purpose is self-giving for the good, life, and dignity of others. As the lives of human persons are aligned with that purpose, they achieve fulfillment.⁶¹

Catholic faith defends the dignity of human persons, and their right for what is true and good. Catholic social ethics is based on the nature of the

.

⁵⁹ Pope Benedict XVI, "Lecture at 'La Sapienza," where he references Rawls supporting the value of faith traditions: "The important thing in this assertion, it seems to me, is the acknowledgment that down through the centuries, experience and demonstration – the historical source of human wisdom – are also a sign of its reasonableness and enduring significance. Faced with an a-historical form of reason that seeks to establish itself exclusively in terms of a-historical rationality, humanity's wisdom – the wisdom of the great religious traditions – should be valued as a heritage that cannot be cast with impunity into the dustbin of the history of ideas."

⁶⁰ Ibid. "The Christians of the first centuries ... received their faith not in a positivistic manner, nor as a way of escape from unfulfilled wishes; rather, they understood it as dispelling the mist of mythological religion in order to make way for the discovery of the God who is creative Reason, God who is Reason-Love. This is why reasoned inquiry concerning the truly great God, and concerning the true nature and meaning of the human being, did not strike them as problematic, as a lack of due religious sentiment: rather, it was an essential part of their way of being religious. Hence they did not need to abandon or set aside Socratic inquiry, but they could, indeed were bound to accept it, and recognize reason's laborious search to attain knowledge of the whole truth as part of their own identity.... Yet truth means more than knowledge: the purpose of knowing the truth is to know the good. This is also the meaning of Socratic inquiry: What is the good which makes us true? The truth makes us good and the good is true: this is the optimism that shapes the Christian faith..."

⁶¹ Webster's *New World College Dictionary* defines "fulfill oneself" as "to realize completely one's ambitions, potentialities, etc.;" and realize as "make real, bring into being." I will use it more narrowly as making real or achieving the fullness of being, realizing the more substantive potentialities of the human person.

human person.⁶² The human person, modeled in the image and likeness of God, who is love, has love at the core of his identity and vocation. The human person is only fulfilled in love. Only the human person can rise above instinct, above self-preservation, and above self-interest. Only the human person can choose to love, to sacrifice, to suffer and even to die for the love and the benefit of others. The human person shares this capacity of conscious and free self-denial for love and for the good of others, with the divine. This vocation, as well as openness to love and to the encounter with God, oneself, others, and creation, is the source of the unbounded genius, richness, and depth of which any human person is capable. That is our glory and dignity.⁶³ That is why every human person is an irreplaceable treasure, worthy of love, respect, and care. The image of the divine is in every person.

As John Paul II comments, recognizing the presence of the divine, which is the Catholic foundation of the dignity of every human person, lay and religious missionaries and volunteers have been energized to preach and educate about the dignity of individuals and to give aid for the sake of that dignity worldwide.⁶⁴ The Catholic Church supports human rights and justice as part of the moral and social ecology appropriate to the dignity of the human

⁶² I have chosen to use the term "human person" instead of "individual" in most occasions to convey the uniqueness of the spiritual and relational nature of each human being. Individual refers to a single, not divisible member or unit of a group or species. Person derives from the Greek "prosopon" which referred to theater masks but has a long theological and philosophical tradition identified with spiritual, rational beings having conscience and free will and with a social disposition.

⁶³ The nature of the vocation and dignity of the human person will be elaborated in the Catholic anthropology in chapter 4, but can also be found in Pope Paul VI. Gaudium et Spes, §§ 22, 24; and Pontifical Council for Justice and Peace. *Compendium of the Social Doctrine of the Church*, pp. 49-52.

⁶⁴ Pope John Paul II, *Centesimus Annus*, §57 "As far as the Church is concerned, the social message of the Gospel must not be considered a theory, but above all else a basis and a motivation for action. Inspired by this message, some of the first Christians distributed their goods to the poor, bearing witness to the fact that, despite different social origins, it was possible for people to live together in peace and harmony. Through the power of the Gospel, down the centuries monks tilled the land, men and women Religious founded hospitals and shelters for the poor, Confraternities as well as individual men and women of all states of life devoted themselves to the needy and to those on the margins of society, convinced as they were that Christ's words 'as you did it to one of the least of these my brethren, you did it to me' (Mt 25:40) were not intended to remain a pious wish, but were meant to become a concrete life commitment."

person and gives them a solid foundation and a moral persuasion.⁶⁵ Justice is to give each person what is due to his full reality.⁶⁶ Theories of the market and of society based on the concept of a social contract and on self-interest explain some of these dynamics, but reducing human experience to these concepts, as will be seen in chapter 2, is overly simplistic. Justice demands that we acknowledge the fullness of the truth and reality of every human person, not merely his economic and political dimensions.⁶⁷

The contribution of the Catholic approach is significant. The Social Doctrine or Social Teaching of the Church is the heritage that deals with the diverse issues involved in human ecology and it stems from applying the Word of God and Magisterium to "the presence of Christians in the midst of the changing situations of the world, in contact with the challenges that result from those situations. This social doctrine involves therefore both principles for reflection and also norms for judgment and guidelines for action." The Church's social doctrine, as part of moral theology provides a theological approach "in contrast both to the 'atheistic' solution, which deprives man of one of his basic dimensions, namely the spiritual one, and to permissive and consumerist solutions, which... seek to convince man that he is free from every law and from God himself, thus imprisoning him within a selfishness which ultimately harms both him and others." It reflects the responsibility that the

⁶⁵ Pontifical Council for Justice and Peace. *Compendium of the Social Doctrine of the Church*, pp. 66-67; Luis Fernando Figari, *La Dignidad del Hombre y los Derechos Humanos*, 23.

⁶⁶ The whole of their reality: physical, moral, social, spiritual.

⁶⁷ Pope John Paul II, Inaugural speech at Puebla, §III.2.

⁶⁸ Ibid., §III.7.

⁶⁹ Pope John Paul II, Centesimus Annus, §55.

Church has towards creation which she must assert in the public sphere as part of her service to humanity, but

[s]he must above all protect mankind from self-destruction. There is need for what might be called a Human Ecology, correctly understood. The deterioration of nature is in fact closely connected to the culture that shapes human coexistence: when "Human Ecology" is respected within society, environmental ecology also benefits... Herein lies a grave contradiction in our mentality and practice today: one which demeans the person, disrupts the environment and damages society."⁷⁰

Here we see that the Church's social doctrine is rooted in **charity** and concern for the **true** reality of the human person.⁷¹ Thus, charity starts with justice, but recognizes the necessity of going beyond justice to build a society that is truly human⁷². The expression of charity implied in the Church's social doctrine includes the common good, "the good that is sought not for its own sake, but for the people who belong to the social community and who can only really and effectively pursue their good within it. To desire the common good and strive towards it is a requirement of justice and charity." ⁷³ This is a responsibility for all, in the measure of their capacity, which extends not only to the immediate society but to the whole human family, and in this the Catholic view

⁷⁰ Pope Benedict XVI, Caritas in Veritate, §51.

⁷¹ Pope Benedict XVI, *Caritas in Veritate*, §6, "'Caritas in veritate' is the principle around which the Church's social doctrine turns, a principle that takes on practical form in the criteria that govern moral action."

⁷² Ibid. "On the one hand, charity demands justice: recognition and respect for the legitimate rights of individuals and peoples. It strives to build the earthly city according to law and justice. On the other hand, charity transcends justice and completes it in the logic of giving and forgiving. The earthly city is promoted not merely by relationships of rights and duties, but to an even greater and more fundamental extent by relationships of gratuitousness, mercy and communion."

⁷³ Ibid., §7, "To take a stand for the common good is on the one hand to be solicitous for, and on the other hand to avail oneself of, that complex of institutions that give structure to the life of society, juridically, civilly, politically and culturally, making it the pólis, or "city". The more we strive to secure a common good corresponding to the real needs of our neighbours, the more effectively we love them. Every Christian is called to practise this charity, in a manner corresponding to his vocation and according to the degree of influence he wields in the pólis. This is the institutional path — we might also call it the political path — of charity, no less excellent and effective than the kind of charity which encounters the neighbour directly"

strengthens the notion that all are co-responsible of the natural and social environment we all share.

Human Ecology requires a complex approach that involves charity and truth, scientific research and moral evaluation, and a score of disciplines properly combined as it seeks the integral good of man, and here is where the Church's social doctrine can be of service, since "among the causes of underdevelopment there is a lack of wisdom and reflection, a lack of thinking capable of formulating a guiding synthesis, for which 'a clear vision of all economic, social, cultural and spiritual aspects' is required."⁷⁴

5. The Environment and Dynamics of Human Ecology

Human Ecology implies an environment, an ecosystem which is not static but at least in equilibrium. I borrow from physics the concept of stable and unstable equilibrium. Something is stable when its dynamics are resilient to external forces and tend to support and restore its balance, such as a gyroscope. It is unstable when its dynamics tend in different directions and although balanced, external forces might easily throw it off balance. Nature's ecosystem has its stable patterns and dynamics. Moreover, it has an active interaction with the human persons. It affects and shapes them but is also affected and shaped by them, specifically their actions. Human action makes this challenge basically an ethical one. Thus, we have to examine it in two aspects, first, the stable conditions needed for the different aspects of a healthy Human Ecology, and second, the complex interaction of active dynamics needed

⁷⁴ Ibid., §31.

to drive the system to a stable balance which fosters those desired conditions. These dynamics are supported or undermined by the decisions of human persons. This involves the ethical and consequently puts the spiritual dimension at the center of the efforts needed to build and develop a Human Ecology.⁷⁵

As will emerge from this work, particularly from chapter 4, as people deal with their interactions with each other and the environment, concepts such as principles, values, rights, duties and justice emerge. To a degree, these values are incorporated in the harder structures of politics, government, laws, the economy and models of development. They are also present in the softer realities of culture, lifestyles, education, family and social life. Ultimately, the real-life expression of these values are all consequence of decisions, choices and actions of human persons. As these expressions respond to the true nature of the human person –Catholics would say according to God's plan– the Human Ecology that they embody, will be healthy and will foster the fulfillment and the integral development of the people. As they diverge from man's true nature, they will be toxic to him, betraying his identity and undermining his realization. From the reflection on the human person we conclude the need to consider the importance of his spiritual dimension to achieve his flourishing and fulfillment. We must also consider his teleological nature, which leads us to consider his purpose and also the path by which he advances to achieve that purpose.

However, stable equilibrium is only one dimension and as we'll see, it is rarely present in real life. Charles Elton says: "The impression of anyone who

⁷⁵ Pope John Paul II, Peace Message 1990, §§13, 15, 16.

has studied animal numbers in the field is that the 'balance of nature' hardly exists, except in the minds of scientists. It seems that animal numbers are always tending to settle down into a smooth and harmonious working mechanism, but something always happens before this happy state is reached."⁷⁶ It is a dynamic equilibrium, subject to shift. The Christian concept of time moved us from a never ending cyclical confinement to the horizon of development and progress towards the plenitude of fulfillment in the end of times. The human person seeks equilibrium at a basic level but harbors in his spirit a longing for that fulfillment where nothing more can be desired. This is expressed in personal lives in the insatiable desire for growth, knowledge and the full unfolding of latent skills, capacities and possibilities, as well as in the craved intensity of life, power, emotions and experiences. In society, from the times of Babel, humanity has sought endless discovery and progress pushing back limits and frontiers. This quest is part of human nature and a healthy Human Ecology will provide the relatively stable conditions for its continual development.

6. Human Ecology, the common good and Sustainable Development

The three are closely related. As will be seen in chapter four, Human Ecology from the Catholic view brings together the rich tradition of Catholic Social Thought, which has the common good as one of its main principles and goals.⁷⁷ A healthy Human Ecology identifies with the common good. It is the

_

⁷⁶ Quoted in Robert Ezra Park, "Human Ecology," §5.

⁷⁷ The common good is the first principle of Catholic Social Doctrine. See Pontifical Council for Justice and Peace. *Compendium of Social Doctrine.* §s 160-169.

environment that best provides for the life and flourishing of all human persons⁷⁸. Many statements and documents of Pope Benedict and of the Holy See establish human ecology as the key foundation for Sustainable Development⁷⁹. The environment for the human is part natural and part the man-made reality of culture and society. In the recent past, the wellbeing of the natural environment has been threatened and damaged by the demands of the man-made environment. The quest for the use of natural resources, the careless disposal of waste, the ever growing presence of human action has negatively affected the natural environment. The concern for the common good, particularly when involving future generations, requires that we harmonize the economic development needed to provide for the material needs of populations, with the conditions that will protect the natural environment so it can continue to provide indefinitely, becoming a Sustainable Development. This will be developed in chapters one and two, along with the inclusion of social development for a more human approach. Social development focuses on the living conditions of people instead of only the macroeconomic figures of economic development. In doing so, it tries to ensure that development actually brings better conditions of life to all people. From a different perspective, Sachs links Sustainable Development to the common good, although he prefers to talk

⁷⁸ The Compendium brings together the three concepts in § 340. It says a business "must move in the direction of a "social ecology" of work and contribute to the common good also by protecting the natural environment." Pontifical Council for Justice and Peace. *Compendium of Social Doctrine*. § 340. Interesting that "a 'social ecology' of work" is referenced in the same paragraph in which John Paul II uses the term "human ecology" for the first time in his magisterium, and used to explain it. In the same context of human ecology, John Paul II talks about the state's role to preserve "common goods such as the natural and human environments." Pope John Paul II, *Centesimus Annus*, §s 38, 40.

⁷⁹ Pope Benedict XVI. Letter to the Ecumenical Patriarch of Constantinople on the Occasion of the Seventh Symposium of the Religion, Science and the Environment Movement, 2007; Pope Benedict XVI, World Day Of Peace, "If You Want to Cultivate Peace, Protect Creation," 2010. § 11; Holy See, Statement to the Third Ministerial Conference of the World Trade Organization. December 2, 1999. §s 2, 7; at the World Summit on Sustainable Development (Johannesburg, South Africa), September 2, 2002; Interventions at: the 11th session of the UN Commission on Sustainable Development. April 30, 2003; the Second Committee of the General Assembly of the UN on Sustainable Development (Item 88), October 5, 2004; the 15th Session of the Commission on Sustainable Development of the UN Economic and Social Council, May 10, 2007; and the 54th General Conference of the International Atomic Energy Agency (I.A.E.A.), September 21, 2010; and Pontifical Council for Justice and Peace - The Fight Against Corruption, Sept 21, 2006. §s 5,7.

about citizens rather than human persons.⁸⁰ An important issue is whether Sustainable Development focuses on the aspects most relevant to the actual wellbeing and flourishing of actual people,⁸¹ rather than on well functioning social models.

7. Taking stock of my own baggage

It is appropriate to acknowledge explicitly some of the views and concerns which I have cultivated and matured through the years and which have found expression in some aspects of this research. Some of them are part of what is common to the general human experience. However, the particular way in which they developed in my own life, shaped the views I contribute to the research of these issues.

Coming of age in the seventies in Latin America was a heady experience. Politically, Marxism and socialism had a strong appeal in the face of the prevalent economic inequality and injustice. Technology was opening astounding possibilities; society and culture were inebriated with the experience of subverting an obsolete and hypocritical establishment and questioning all received wisdom. Everything was up for change, especially moral constraints. As I rediscovered my faith in Jesus Christ, at the age of sixteen, I did not see it merely as a refuge from the surrounding strife and chaos. Rather, I had found in my faith the answer to help change the world in the right

⁸⁰ Jeffrey D. Sachs, *The Age of Sustainable Development*, 11. "Sustainable Development is a way... to define the objectives of a well functioning society, one that delivers wellbeing for its citizens today and for future generations... what a good society should be."

⁸¹ UN, *Our Common Future*, 1987, §8, Cooperation is needed "if global sustainable development is to be achieved... [This concerns] people, whose well being is the ultimate goal of all environment and development policies."

direction. Communists advocated changing the unjust structures. We advocated changing hearts so newly transformed men could then change the structures. Rationalists ridiculed faith. We sought to reconcile faith and reason. I believed that God was the source both of Revelation and of the created realities that science studied, so any opposition was only apparent and it was my task to help solve it. I believed God had designed the universe with harmony and order, and that truth obtained through faith and reason could help us restore it and guide authentic progress. All sciences and disciplines of study, along with faith, had to be brought in harmony to improve society according to God's plan. Human Ecology seems to respond precisely to this challenge.

In the turmoil of those years, many of my loved ones became committed communists, anarchists, cynics or something else. I listened to their souls and pains, ministered to them, often vainly, and grieved, but I could not dismiss or label them. They were human persons struggling with their own issues, but with their dignity and their calling to contribute to a better world. I sought to find ways of making my faith understandable and relevant to them. Dialogue was key, both to bridge the gap in the mutual recognition of the value of our humanity and friendship, and to find ways of cooperating in building a better world. Given that Human Ecology seeks a healthy common space for all, this dialogue is not only a helpful step. It is a necessary space and condition of Human Ecology that allows all of us to participate and take ownership of the world we build. A space of dialogue between Church and world, among believers of many faiths and non-believers of different persuasions is an

unavoidable challenge. I found Pope Benedict had a clear understanding of this need and he seemed to make the adequate efforts to respond to it.⁸²

In the task of bringing sciences and academic disciplines to contribute to the common good, some obstacles were apparent. Disciplines had emancipated themselves from philosophy, disintegrated among themselves, and no longer had a teleology or ethics to guide the direction of their efforts nor an epistemology to provide sound methods and the scope of their object. The humanities lacked a sound anthropology. The only boundaries were political correctness and peer review. Human Ecology can provide the incentive of both contributing to the common good as a common direction and purpose, as well as using reasoned argument to build a consensus on what is good and how to achieve it.

8. Formulating a plan - Methodology

After confirming the aim, the next step was to define the scope and method of the research. Certainly the term Human Ecology in the magisterium opens a vast horizon. Nothing human is alien to it, so the need to circumscribe the study was clear. To start, I defined the theme as Human Ecology in the works of popes John Paul II and Benedict XVI. Pope Benedict XVI's resignation contributed in closing his magisterium. Next, of all the possible issues related to the theme of Human Ecology, the issue of Sustainable Development looked promising, as it had garnered widespread support both in the culture and in

⁸² As the scope of Human Ecology encompasses society, and the free persons in it, the need to create a space for dialogue pursuant to the common good is basic for its success. Chapter 4 argues, that Pope Benedict XVI's speeches at Regensburg, La Sapienza and the German Parliament, are part of a deliberate and reasoned effort in that direction.

official efforts and had the conceptual connections with Catholic social teaching.

Thus, the subject of the research was then defined as *Human Ecology in John*Paul II and Benedict XVI and its contribution to the debate in Sustainable

Development.

Regarding the method, initial conversations with Maryvale faculty advised Historical Research Design. Further conversations with other scholars made me aware that many historians dislike "method" as a bias from empirical sciences. More advice received was to not allow method to rule the process but to guide it, allowing contributions from historical insights, intuition, epistemology and the crosspollination among the different disciplines. The approach was to review the development of the main issues most relevant to the research in each of the three threads, or themes as historically developed, each according to its own nature, starting with *Environmental issues and the road to Sustainable Development*, following with *The path explored by Human Ecology*, and finally *Human Ecology enriched from a Catholic perspective*. Each thread would be examined in itself, but would add its insights to enrich the previous work.

The first thread was developed presenting in chapter one the origins and context, and in chapter two the rationale for the concept of Sustainable Development. Chapter two reviews documents from international conferences and analyzes the three pillars of Sustainable Development: Economic Development, Social Development and Environmental Protection, along with the controversial issues they raised and considers where the contribution of other perspectives could be helpful. Because Sustainable Development has

been framed within the policy sciences with a particular notion of the human person and society which, while apparently innocuous for practical issues, has serious consequences when the integral scope of Human Ecology is considered, the second chapter closes with a section concerning this and the relevance of a sound anthropology.

The third chapter is dedicated to the second thread of Human Ecology which through different phases of study, yielded many insights from different disciplines and perspectives. Interdisciplinary work came up often showing value in integrating knowledge and methods from different disciplines, in a synthesis of approaches. This fits quite well the needs perceived in the issues involved in Sustainable Development. The tendency to a holistic approach, both as a practical need and as a response to the longing for harmony and reconciliation, was also a valuable contribution.

The fourth chapter deals with themes relevant to Sustainable Development and Catholic Human Ecology in the work of popes John Paul II and Benedict XVI. Both popes have written on social issues and the subject of renewal in continuity, and that seems quite appropriate to this subject. Human Ecology is rooted in that tradition of Catholic anthropology and social thought, and synthesizes it, enriched with a new perspective, renewed as a more eloquent voice in the public forum.

Understanding Human Ecology in this way has many advantages: it is grounded in a consistent body of thought articulated and tested through centuries; it appeals to an important common concern in today's culture which is the healthy survival of both our natural and human environments; it puts the

human person and his flourishing as a criteria for discerning what is good and healthy; it moves the debate about the human person and his rights from self-interest to solidarity, to the context of the common good, and concern for the common space we all share. Although this work focuses on the concept of Human Ecology in the works of popes John Paul II and Benedict XVI, *Laudato si* adds elements and nuances which are noted in a section of the fourth chapter.

Both the conclusions and the recommendations are related to the practical aspects in which Catholic Human Ecology contributes to the more evident aspects of the common good, but also to the deeper dynamics that shape society and culture in ways that are very relevant to the wellbeing of human persons. A few are related to promising areas of study to be pursued. A key element is the building of that common space of dialogue and reasoned argument over the common good, which was discussed as part of Pope Benedict XVI's contribution. That space has to be open to all, bringing people together in building the framework, values and vocabulary for reasoned argument over what is the good and the just we must procure as we care for the natural and cultural environment, the Human Ecology we share.

⁸³ Pope Francis, Laudato Si': On Care For Our Common Home, 2015.

Chapter 1.- Environmental issues and the road to Sustainable Development

There is a consensus that we are undergoing an ecological crisis.⁸⁴ This concern has continued to grow since the mid-twentieth century and involves diverse aspects such as chemical pollution or poisoning, endangerment and extinction of species, deforestation, urban sprawl, a menaced ozone layer, an increasing carbon footprint, and climate change. A cursory analysis of these concerns frequently points to humanity as the source of these dangers; such problems would be a direct consequence of human activity and directly proportional to bad human behavior and population growth. However, different narratives try to make sense of the environment and its challenges, offering correspondingly different assessments of what the challenges are, how they relate to humans, and what actions, if any, we should take. Assessing the impact of population growth, for example, entails a view of the human person, society and its relation to the surrounding world.

Presenting a comprehensive assessment of the different approaches is a huge task since "the ecological/environmental field has become a booming growth industry. What began as a small, countercultural fringe group has grown into an extensive academic field with endowed professorial chairs, journals, conferences, and institutes ... The diversity among practitioners and theorists, whether they call themselves environmentalists, ecologists, or

⁸⁴ Jeffrey D. Sachs, *The Age of Sustainable Development*, 34. "humanity has become a serious threat to its own future wellbeing, and perhaps even its survival, as the result of unprecedented human-caused harm to the natural environment."

something else, is immense."85 Zimmerman documents more than two hundred different perspectives and there are many different attempts to classify them, often marked by author bias or preference.86 Some argue for accepting the pluralism and pragmatically using whatever works, without acknowledging that even the assessment whether "something is working" implies purposes and values. Such prolific diversity and controversies stem from an intense interest in these issues, but also as the following text shows, from strong, even ideological positions identifying a wide range of possible culprits.

[The] situation is extremely complex; and even chaotic ... marked by bitter recrimination on all sides... some are determined to dismiss the Judaeo-Christian tradition as inimical to ecological awareness and scientific versions of the cosmos. Religious faith is understood by them as necessarily demeaning the natural in its concern for an other-worldly transcendence... Others reject science itself as a kind of learned stupidity that has lost itself in the parts of reality it explores, to the forgetfulness of the whole... Others reject technology as alien artificiality interfering with pristine nature; while others reject the West, or the North, as imposing oppressive economic structuring on the East or the South. Others single out Capitalism or industrialism or modernity, or post-modernity as the culprit. Then, too, powerful feminist voices among the ecologically minded proclaim the culprits as patriarchy, hierarchy, chauvinism, male domination in all its forms. The most disconcerting rejection is that of humanity itself as some kind of selfish pest infesting the planet and perverting the happy ordering of the natural world.87

This chapter starts by setting the general context in which human ecology and sustainable development can be understood, relying mainly on Mary Taylor's "Overview of Environmental Thought" and her proposal of understanding it through three trajectories, 88 later dealing with relevant anthropological and

85 Mary Taylor, "Environmental Ethics," 26

86 Ibid, 26-27

 $^{\rm 87}$ Anthony J. Kelly, Expanding Theology: Faith in a World of Connections.

88 Mary Taylor, "Environmental Ethics," 25-28

epistemological issues, and how these concerns evolved into Sustainable Development.

1. The main views of nature

The keys issues regarding the environment hinge on what is understood by nature and by humanity, and their mutual relation. We start here by identifying the most prevalent views on nature. Mary Taylor describes three views or trajectories which "are not – or not only – theories, but encompass ways of thinking, of being, of acting, of living... [not] a rigid taxonomy... [but] as Wittgenstein would put it, a family resemblance."89

A common view is *anthropocentrism or scientism*, rooted in modernity's instrumental rationalism, which sees nature as matter subject to empirical science, nothing more. Nature is arranged in different ways and it is debatable whether it arrived at those forms by the design of an intelligence or creator, or by chance or random evolution. This position ignores design, creation, or any implication of a purpose which would then limit what can be done with it. Being matter, some of it comes to form part of living units, be it plants or animals which show some capacity to grow, nourish, protect themselves, evolve and reproduce. Humans can use their reason to understand nature, use it and perfect it in light of the different purposes they might have according to circumstances. No consideration is needed beyond the utility

_

⁸⁹ Ibid, 9

⁹⁰ Ibid, 10, "Too often this trajectory sinks into 'scientism,' as it relies upon a reductionist view of science."

which can be derived from it.⁹¹ In some cases this pragmatic view is made worse by a general disregard for the consequences both to current stakeholders, and to future generations.

Another view is *biocentrism or holism*, which considers nature as a mysterious reality, full of beauty, surprises and possibilities. Ecological balance and harmony, the richness and variety of species, from the complex dynamics of the DNA structure and subatomic particles to the dimensions in time and space of the universe, and its resilience, point to a reality worthy of reverence and admiration. Some versions of this approach veer towards more esoteric notions such as Gaia, Mother Earth, and so on. This mysterious reality claims, if not the superiority of nature over the wanton depredator man, at least, an equivalence, as for example: human life cannot be valued above animal or vegetal life. There is a connection with science in this view – indeed, much of the awe is fed by what science allows us to discover and contemplate. However, much of the narrative is aesthetic and literary and its far-reaching implications lack correspondence with science.⁹²

Both of these views, scientism and holism, are included in the critique by which "ecological postmodernity violently rejects modernity— its "metanarratives," its dualisms, its desire for certainty rather than ambiguity—but some philosophers and theologians maintain that postmodernity, precisely because it is a reaction to modernity, is not radical enough."93

_

⁹¹ Ibid, "It reduces considerations of nature to a cost-benefit analysis of its worth to humans, denying its intrinsic value."

⁹² Ibid, 15, "Holism evinces a longing to return to a golden age of innocence, of harmony with nature, which is neither physically nor logically possible."

⁹³ Ibid, 17.

This work proposes a third view, a *human ecology open to transcendence*, which somewhat resembles Taylor's third view in which nature was designed or created with an order oriented to a purpose. ⁹⁴ According to Taylor's third view, whether it is a Judeo-Christian god, a personal being with intelligence and purpose, or a mysterious "force" that orders the universe, there is an underlying logic and structure that makes sense, which needs to be discovered or unveiled. That order or structure defines a relationship between humans and nature, as there is no reason to extricate humanity from nature. Additionally, human experience suggests that the whole of reality is more than matter and biology, much more than what falls within the object of empirical science. Human and social sciences, metaphysics and theology have to be included, encompassing the natural and the supernatural.

Although there are elements of this reality readily available, it is not something to be grasped and easily manipulated with certainty, but rather, approached with reverence and humility. The instrumental reason of the first view, and the relationality of the second view are not denied but integrated in a richer, broader approach, in which empirical science is acknowledged but complemented with deeper dimensions of meaning, and relation's proclivity for harmony points towards unity and communion, even with the source of creation. Naturally, in the measure that consciousness and freedom are recognized as part of the human experience, ethics and moral theology come into play. In that context, it is understandable to consider human action as

⁹⁴ Ibid, 20-22.

virtuous, even as inspired by love and the quest for communion through solidarity.

The approach of a *Human Ecology open to transcendence* seeks to reconcile and harmonize valid aspects of the first two views, but for this purpose, some issues have to be clarified. Biocentrism and anthropocentrism are not necessarily opposed, particularly as each encompasses a breadth of positions. Biocentrism can recognize humans as part of the fabric of life, even with their own profile. Anthropocentrism can view the harmony of that same fabric, with humans bearing the tasks of stewardship for the rest of nature with awe and responsibility. Distortions have to be identified and refocused. Wanton exploitation or abuse, and its roots in instrumental logic are inimical to this harmony, but they are not an intrinsic feature of anthropocentrism, rather a distortion. Similarly, the beauty and harmony of nature, and the recognition of its inherent value, can be a guide to a healthy integration of human life in the whole. Regarding humanity as a pest to be exterminated or contained is not a required feature of biocentrism, but again, a distortion.

Reconciling biocentrism and anthropocentrism presents opportunities as well as difficult challenges. As Kate Soper shows, even the most radical biocentrists remain committed to a hierarchical ordering of nature which values higher animals more than lower ones, and describes maltreatment as "cruel," carrying in all this a human based perspective. The notion of intrinsic value, and avoiding an instrumental approach, subordinating self-interest to the interests of nature, are both rooted in perspectives only ascribed to

_

 $^{^{95}}$ lbid, 36. "Depending on how the terms are understood, while anthropocentrism and biocentrism are mutually exclusive, their concerns are not."

humans.⁹⁶ Whether a particular landscape or ecosystem is worth the effort of protecting because of its "beauty" or "biodiversity," is a human judgment from a human perspective, as is the preference for preserving cuddly puppies over cockroaches. The moral outrage displayed to protect animals or condemn carbon emissions are likewise a human expression which highlights the absurdity of claiming the moral high ground in these issues while rejecting the humanity which provides them the capacity for moral discernment.

A romantic view of nature cannot obscure the fact that animals will pursue their own interest regardless of the consequences to other beings, while humans, capable of the worst destruction, remain the only beings who seem able to reflect on their actions and consequences and to change their ways, not only to avoid doing damage, but even to sacrifice their own interest and pursue the good of other species and the whole of nature. That is why, humans, interrelating with nature and being part of the fabric of this world, occupy a different category which requires concepts beyond the natural sciences. The complex reality of freedom and moral choice exceeds what empirical science and technology can process. They are valuable but need to be integrated in a transdisciplinary approach. Some of the issues that are relevant to this integration are discussed in the next section.

2. Nature and Human Nature

Nature can be understood in at least two different ways meaningful to this discussion: the physical world collectively, distinct from humans and

-

⁹⁶ Ibid. 38.

human creation; and the basic inherent features of something. There is nature as the physical world, having its nature or inherent features, and humans and their creations having their inherent features, which cannot be distanced from nature as they share much of the same physical and biological nature. Human reality includes other dimensions, such as psychological life, reason and spirit, with philosophical, ethical and theological implications, which are different but not separated from its physical nature. These dimensions are not alien to reason and their nature or inherent features can be apprehended, reasoned and related to the rest of reality that, as a whole, has harmony and sense.

We know that nature acts for an end not because it always succeeds but because it sometimes fails. If the results of its operations were identical in every single instance, it could be attributed to the necessity of matter... Likewise, if nature exhibited no regularity whatever, if anything could come about at any time as in fairy tales, if acorns gave birth to oaks one day and to elephants the next, if all events were chance events (in which case we could not identify them as chance events), in short, if there were no "natures", the question of finality would not arise.⁹⁷

Fortin argues here that there is a "nature" in nature, a harmony and consistency which reveals an underlying order of causes and ends. The consistency reveals law and the harmony reveals not random disorder but purpose and ends. Modernity's approach to science identifies the laws but is blind to the harmony and purpose. "In Spinoza's words: 'The term law, taken in the abstract, means that by which, an individual, or all things, or as many things as belong to a particular species, act in one and the same fixed and definite manner, which manner depends either on natural necessity or on human decree'"98 Modernity is blind to nature's purpose because its instrumental logic

97 Ernest L. Fortin, Collected Essays, 116.

98 Ibid, 117, quoting Benedict De Spinoza, A Theologico-Political Treatise, 1883.

has its own purpose and its very restrictive method. Now, science was made possible by Catholic thought,99 but modern science broke away from the Catholic reverence for God's gift of nature which implies a holistic view, and restricted itself to the empirical. In modern science, regretfully,

Baconian mastery... is achieved by... doing violence to it... The Moderns... are the ones who put nature on the rack and thereby set up adversarial relationship between the investigator and the object of his investigation... Underlying the new outlook is the view that nature is inimical or at least indifferent to human purposes and hence something to be beaten into submission and forced to yield to the will of a shrewder opponent. The same negative attitude toward nature shows up again, among other places, in Hegel, about whom Emile Meyerson has written: 'his contempt for nature is absolute.¹⁰⁰

Ernest Fortin quotes Walker Percy to portray in "vivid fashion the full import of the divorce between our dehumanized natural science and our concerns as human beings... [and relate it to] the typical modern scientist's lack of self-knowledge."101 It is not surprising that the same lack of reverence which blinds the instrumental logic of modernity to teleology in this "scientific" approach to nature, also blinds the instrumental logic employed by political liberalism to a teleology in the human person and society.

Instrumental logic which comes from the uncritical embracing of modernity and technology is the approach denounced by Virgil Gheorghiu in

⁹⁹ Ibid, 122. "Alfred North... Whitehead's main point is that 'faith in the possibility of science' depended on the medieval belief in the rationality of God as well as in the orderliness and predictability of nature... the same point had already been made by Nietzsche who argued that science, long looked upon as Christianity's mortal enemy, is not a genuine alternative to Christianity but a parasite that lives off of it. 'Strictly speaking,' he wrote, 'there is no such thing as science 'without any presuppositions'... It is still a metaphysical faith that underlies our faith in science.'" Emphasis in the original.

¹⁰⁰ lbid, 124-25. "We do not believe that in the entire immense Hegelian corpus, although it pretends to embrace the whole of man's spiritual activity, can be found one sentence, one expression testifying that the spectacle of nature moved him or provoked his admiration in the slightest... Little wonder that Hegel, a major contributor to the development of modern aesthetics, should have seen fit to deny the imitative character of art and proclaim its independence from nature.

¹⁰¹ Ibid, 129

his novel *The Twenty-fifth Hour*.¹⁰² Its approach is pragmatic and cares only for what it considers useful. Even human beings are seen as parts of a system and valued only for their perceived usefulness in the system. Further meaning is considered inexistent or irrelevant. If we remove the blinders of these perspectives as we approach nature and man, harmony and consistency are revealed. We also become aware of realities that are supernatural and metaphysical which cannot be directly perceived by our physical senses, but can be inferred by reason or perceived by intuition and other non-physical senses, and are the object of our moral, psychological, intellectual, and spiritual lives.

These are part of individuals and their social relations and also have a "nature," a term which Rawls uses regarding the human person. As there is an order in nature, there is an order in all that is part of human nature, including and integrated with the moral and spiritual. Fortin, referencing the *Physics* of Aristotle says: "Given the manifest presence of finality in some of [nature's] parts it is hard to see why it would not be present in other parts as well."103 Rawls also alludes to this when he affirms that "necessary conditions for a liberal conception of justice ... must rely on the actual laws of nature"104 The use of freedom cannot avoid the moral dimension implied in the consequences of our actions.

An obstacle to a more holistic understanding of the world has been the positivist approach which excluded anything that was beyond the empirical or

¹⁰² Virgil Gheorghiu, The Twenty-Fifth Hour, 34-43.

¹⁰³ Fortin, 118

¹⁰⁴John Rawls, The Law of Peoples, 12.

functional, and any discipline that attempted to deal with it. Pope Benedict XVI explains how this limits any discussion to the functional or pragmatical.

The idea of natural law is today viewed as a specifically Catholic doctrine, not worth bringing into the discussion in a non-Catholic environment.... Fundamentally it is because of the idea that an unbridgeable gulf exists between "is" and "ought." An "ought" can never follow from an "is," because the two are situated on completely different planes. The reason for this is that in the meantime, the positivist understanding of nature has come to be almost universally accepted... A positivist conception of nature as purely functional, as the natural sciences consider it to be, is incapable of producing any bridge to ethics and law, but once again yields only functional answers. The same also applies to reason, according to the positivist understanding that is widely held to be the only genuinely scientific one.

There is a nature, to both the natural and the human made world, that has to be understood, acknowledged, respected and taken into account as we seek the common good and our common goals in society, and in our world as a whole.

As Benedict pursues his argument, it is interesting to see that it is the ecological movement that challenges the positivist approach:

I would say that the emergence of the ecological movement in German politics ... was and continues to be a cry for fresh air ... Young people had come to realize that something is wrong in our relationship with nature, that matter is not just raw material for us to shape at will, but that the earth has a dignity of its own and that we must follow its directives... We must listen to the language of nature and we must answer accordingly. 106

Acknowledging something is wrong implies it could be right, that there exist criteria to discern right from wrong and a consequent moral obligation to pursue what is right in a reasonable and proportionate way. Taylor quotes Holmes Rolston III regarding environmental ethics to show that there is a path from "is" to "ought" that recognizes values in the environment which are the

 $^{^{\}rm 105}$ Pope Benedict XVI. "Speech at the Bundestag."

¹⁰⁶ Ibid.

basis for an environmental ethics.¹⁰⁷ In the harmony and beauty present in nature and in natural ecosystems we can find wisdom and value. There lies the root of a duty to protect and preserve what is good. The natural world even allows us to discern the nature and purpose of the God that would have created them, allowing us to discern a natural order and our vested duty to care for it. Having bridged the gap between the natural world and the human, and between the empirical and the ethical, we can better understand human's role within ecology.

3. The place of the human person

In his much-cited essay published in 1967 on the historical roots of the environmental crisis, historian Lynn White jr., makes the well known argument that Judeo-Christianity conflicts with environmental concerns, arguing that the main lines of Judeo-Christian thinking had encouraged the abusive exploitation of nature by legitimising the superiority of humans over all other forms of life on earth, and by presenting all of nature as created for the use of humans. He uses the Bible and the works of the Church Fathers to support his case. Consistent partly with White's premises – not necessarily his conclusions-, Thomas Aquinas (Summa Contra Gentiles, Bk. 3, Pt 2, Ch 112) argued that nonhuman animals are "ordered to man's use".

The Judeo-Christian tradition affirms that humans are created in the image and likeness of the transcendent supernatural God. This God who is

¹⁰⁷ Mary Taylor, "Environmental Ethics," 13.

¹⁰⁸ Lynn White, "The Historical Roots of Our Ecological Crisis," 1206-1207.

different from nature and all created beings, made humans themselves different and superior to nature. According to White, this opened the way for the unrestricted exploitation of nature. Modern Western science itself, White argues, was "cast in the matrix of Christian theology" so that it inherited the "orthodox Christian arrogance toward nature," 111 and Judeo-Christianity's original deep-seated drive to unlimited exploitation of nature. His ideas have had a widespread impact, but "White's claims about both Christianity and about anthropocentrism have been repudiated by some of the best recent ecological and religious scholarship." 112

His "essay has been roundly criticized as unsophisticated and naïve on many levels" by reducing exploitation to Christianity and the West, assuming a necessary negative approach of Christianity to the environment, failing to distinguish Catholics from Protestants, and rereading history from current ideologies. "[C]alling Christians before the Reformation 'anthropocentric' is an anachronistic error, and their beliefs about the natural world were non-exploitative." The approach of "dominion" before the Reformation was not for exploitation but responsible stewardship as seen in the land management

_

¹⁰⁹ Ibid, 1203-1204, White does recognize that "widespread practice of the Baconian creed that scientific knowledge means technological power over nature can scarcely be dated before about 1850" which with the fusion of science and technology in the middle of the 19th century he describes as "our ecological crisis is the product of an emerging, entirely novel, democratic culture."

¹¹⁰ Ibid, 1206.

¹¹¹ Ibid, 1207.

 $^{^{\}rm 112}$ Mary Taylor, "Environmental Ethics," 31.

¹¹³ Ibid, 31-32.

¹¹⁴ Ibid, 33.

that pursued survival rather than amassing wealth, and as J. Baird Callicott and Robin Attfield conclude, White's accusations are generally unfounded. 115

In sharp contrast to White, Pope John Paul II explains in his 1987 encyclical *Sollicitudo Rei Socialis* that humans were given dominion over other creatures and "nature" because they were inherently superior, made in the image and likeness of the Creator. Consequently, humans should use the gifts of God... to fulfill their unique mission of self-perfection. They have the calling of being co-creators with God; it is their duty to cultivate and watch over and so, to shape the world. This higher spiritual calling is the basis of their responsibility over nature and their right and duty to its proper use. In the modern world, this is expressed in "development" which the pontiff identifies as part of God's plan. While development presents humans with the constant temptation to arrogance, idolatry and infidelity to God's will, as in the Tower of Babel, humans are meant to be its chief protagonists. They are defined by their work which transforms the natural world. In the natural world. In the natural world. In the are defined by their

However, dominion in this sense is not "anthropocentric" in the common sense, but really "theocentric". John Paul II writes:

The dominion granted to man by the Creator is not an absolute power, nor can one speak of a freedom to "use and misuse" or to dispose of things as one pleases. The limitation imposed from the beginning by the Creator himself and expressed symbolically by the prohibition not to "eat of the fruit of the tree" (cf. Gen 2:16-17) shows clearly enough that, when it comes to the natural world, we are subject not only to biological laws but also to moral ones, which cannot be violated with impunity.¹¹⁸

¹¹⁵ Ibid, 33-35.

¹¹⁶ Pope John Paul II, Sollicitudo Rei Socialis, §29.

¹¹⁷ Ibid, 30.

¹¹⁸ Ibid, 34.

Thus when humans use the gifts of nature to higher ends they conform to God's will which is to redeem both humanity and all creation in Christ.¹¹⁹ The idea that "man" can "make arbitrary use of the earth, subjecting it without restraint to his will" is rooted in a widespread "anthropological error."¹²⁰ The modern attitude is idolatrous because humans have set themselves in God's place, making their desires absolute. Humanity's obligation to respect nature and the natural order of the cosmos is rooted in God's command.¹²¹

Pope Benedict XVI also affirmed the importance of Sustainable Development as part of man's responsibilities. In his letter to the 13th Session of the Pontifical Academy of Social Sciences in 2007, he first established that "man himself and his irreducible dignity must be at the centre of political and social life." He continued noting the great challenges facing the world in pursuing justice and charity.

The first among them concerns the environment and sustainable development. ... 'the destruction of the environment, its improper or selfish use, and the violent hoarding of the earth's resources...are the consequences of an inhumane concept of development. Indeed, if development were limited to the technical-economic aspect, obscuring the moral-religious dimension, it would not be an integral human development, but a one-sided distortion...¹²³

This highlights the very special role of humans, employing both their technical and ethical views to development, while not abetting any abuse of nature. This implies both the care for both the natural and the human and

51

¹¹⁹ Pope John Paul II, "Peace Message 1990," §4.

¹²⁰ Pope John Paul II, Centesimus Annus, §37.

¹²¹ Seljak, article in Spiritual Heritage.

¹²² Pope Benedict XVI, "Letter to the 13th Plenary Assembly of the Pontifical Academy of Social Sciences," 2007.

¹²³ Ibid.

moral dimensions: "In meeting the challenges of environmental protection and sustainable development, we are called to promote and 'safeguard the moral conditions for an authentic "Human Ecology"." 124

4. Environmental debate and the truth

It is almost too obvious that to achieve results in solving the challenges mentioned, the decisions have to be based in truth. But what is truth? Pilate's famous dismissive question feeds Ratzinger's reflections, which, in turn, help Simmonds deal with the truth in regards to Climate Change, a key current issue in regards to the environment. But as the reality implied is not merely material but involves human conscience and choices, Habermas also weighs in to connect the moral and other human dimensions and truth.

It is assumed that science will provide facts, and accordingly, appropriate action must follow. However, it would be misleading to assume that what science provides are merely facts and assume that content as truth. Habermas explains that scientism blurs the boundary between natural scientific knowledge and a naturalistic synthetic worldview, devaluing all that is not based on direct empirical observation, such as legal, moral, religious, or philosophical reasoning, holding science as the only explanation for all

¹²⁴ Ibid.

¹²⁵ Ricardo Simmonds, *Truth and Climate Change*, (Saarbrucken: LAP Lambert Academic Publishing, 2013), 2: "One important theme that underlies the Habermas-Ratzinger debate is truth, and their common approach to truth can be used to navigate the controversies and contradictions of our modern world."

¹²⁶ Jurgen Habermas, *Truth and Justification*. (Cambridge, MA: MIT Press, 2003).

reality.¹²⁷ However, as Roger Pielke has noted, science is conflated with politics and so has become deeply polarized.

Simmonds also notes that "Hilary Putnam has convincingly shown how science is infused with values at its very foundation and Latour and Woolgar have demonstrated the constructivist nature of science knowledge formation." After referencing Dewey to this effect, Putnam states "that value judgments are essential to the practice of science itself" 129; he argues referencing his pragmatist teachers that "knowledge of facts presupposes knowledge of values" and criticizes with irony "the whole dogma (the last dogma of empiricism?) that facts are objective and values are subjective and "never shall the twain meet."" 131

Simmonds engages the policy sciences to uncover the truth concepts that ground it in American pragmatism. Transempirical arguments—metaphysical, moral, religious—are dismissed and values are reduced to a desired object or situation, while "the goals chosen should be the ones that are useful, and solve problems, revealing a certain pragmatism and instrumentality." Lasswell's disregard for any assessment or deeper analysis of his own value set is noteworthy. He writes, "My moral value is that of the individualistic society in which I have been reared, and to which I am loyal: The

_

 $^{^{\}rm 127}$ Jurgen Habermas, Between Naturalism and Religion, (Cambridge: Polity Press, 2008), 140.

¹²⁸ Simmonds, Truth and Climate Change, 5-7.

 $^{^{129}}$ Hilary Putnam, The Collapse of the Fact / Value Dichotomy and other Essays, (Cambridge MA: Harvard University Press, , 2002), 135.

¹³⁰ Ibid., 145.

¹³¹ Ibid.

¹³² Ricardo Simmonds, Truth and Climate Change, 33-40.

dignity of the human personality"¹³³ and "Our own values are those of the citizen of a society that aspire towards freedom," and yet he writes that he is "not concerned with the justification of democratic values; their derivation from some metaphysical or moral base."¹³⁴

The arrogance of the phrase is noted, but something similar will be found in chapter three in Rawls and Rorty. There is an uncritical adherence to certain values¹³⁵, no moral theory, and arbitrariness and ambiguity in the unstated values—individualism, social mobility, freedom, democracy, pragmatism and consensus—that may unconsciously guide policy scientists as they negotiate real life problems. "What becomes apparent is the utter absence of theories for explaining the choice of values and truths that guide policy orientation... [absent]moral theory... it is hard to imagine how personal and transempirical beliefs are prevented from 'contaminating' outcomes... [and the unstated] philosophy that did adjudicate between moral questions."¹³⁶

Exploring Abraham Kaplan, Simmonds concludes this gnoseological relativism hinges on instrumentalism, truth as mere usefulness. Usefulness for what? "The good for Kaplan is defined by experience," thus, ushering in moral relativism.¹³⁷ This pragmatist view has a critical bias, an anthropological error,

¹³³ In 1943, Lasswell clarified for himself and other his personal career objectives: "Memorandum 1 October 1943", Lasswell Private Papers, Yale University, quoted in Harold D. Lasswell: An Annotated Bibliography, ed. Rodney Muth, Mary Finley, Marcia Muth, (New Haven CT: New Haven Press, 1990), 17.

¹³⁴ Harold D. Lasswell and Abraham Kaplan. Power and Society, (New Haven, CT: Yale University Press, 1950), xiii.

¹³⁵ It is even questionable what is meant by values as in this definition: "A value is a desired event – a goal event... and we speak of the object or situation desired as the "value".", ibid, 16.

 $^{^{\}rm 136}$ Simmonds, Truth and Climate Change, 42.

¹³⁷ Ibid, 43.

which must be corrected for Human Ecology and for the environment.¹³⁸ Pragmatism repudiates an appeal to anything transcendent¹³⁹: pragmatism sees itself "incompatible with religions or philosophies that embrace a metaphysical realism."¹⁴⁰ Thus, pragmatism does not modestly recognize a limited object and method, but sees fit to deny anything it cannot understand. The next chapter will examine how this distortion, as the core of policy sciences, remains the unacknowledged foundation for UN policies, including Sustainable Development.

In practice, its instrumentalism regards communities, individually and collectively, as laboratories which yield information on what actually works in their paradigm. In the case studied by Simmonds, that of the Andean village of Vicos in Perú, power of governance was not assigned democratically but to self-selecting individuals committed to human dignity as understood by the policy scientists. The villagers "were part of a laboratory experiment in anthropology and development," the realization of a "popular democratic ethics that devolved power to natives and along with it, freedom," revealing how the policy scientists' "distinctive American values... are considered fundamentally 'true,' to the point that they have no problem imposing them upon Peruvian natives." ¹⁴¹ The project was questionably loaded with "ideological

-

¹³⁸ John Paul II, *Centesimus Annus*, §37, "At the root of the senseless destruction of the natural environment lies an anthropological error... Man thinks that he can make arbitrary use of the earth, subjecting it without restraint to his will."

¹³⁹ This might be related to Laswell's uncritical appraisal of the atheist Marx: "Marx was a brilliant scholar who subjected himself to the discipline of examining the physical, biological, and cultural disciplines of his day. His monumental formulation was no fruit of elementary wish-fulfillment." Harold Lasswell, A preview to the Policy Sciences, (Chicago: American Elsevier Publishing, 1971), 67-68.

¹⁴⁰ Simmonds, Truth and Climate Change, 45.

¹⁴¹ Ibid, 48-50.

commitments," became a political football, and eventually failed.¹⁴² The use of these communities as laboratories and the imposition of American values, among other aspects, contradicts the stated valuing of the human dignity of these villagers.

The problem is not so much bias, but the concealment or denial of bias. Policy science, as a tool, can be useful as long as it is "decoupled from pragmatism as a philosophy... to rid the policy science from the pragmatist ideological baggage." ¹⁴³ If pragmatism is inherent to policy sciences, we have to get rid of them as well, since the anthropological flaws of pragmatism—as it denies anything transcendent or spiritual—make it inimical to human dignity and to any healthy Human Ecology. If the moral and spiritual dimension is the core of human dignity, ignoring or denying it will have disastrous consequences, as Simmonds further explains:

A philosophy that tacitly denies the existence and knowledge of God and the value of religion does so at the expense of reason's own limitations, and furthermore promotes a vision of reality that could be deeply warped. If Ratzinger is right, "Godless" ideas and actions cause great harm to the world. To the extent that pragmatism proposes an interpretation of reality devoid of God, even if under the guise of a "reasonable agnosticism," those who embrace this position should be willing to accept the responsibility for the negative consequences of their views and actions.¹⁴⁴

This problem is also recognized in Ratzinger and Habermas's joint work, as follows. As reason "discovers that it owes its origin to something else...[and] becomes aware of its limitations"¹⁴⁵ in realms of morals, and even religious or suffering experience, "philosophy has good reasons to be willing to learn from

.

¹⁴² Ibid.

¹⁴³ Ibid, p. 55.

¹⁴⁴ Ibid, p. 68.

¹⁴⁵ Jurgen Habermas and Joseph Ratzinger, The Dialectics of Secularization, (San Francisco: Ignatius Press, 2006), 40.

religious traditions." ¹⁴⁶ Even more "the expectation that there will be continuing disagreement between faith and knowledge deserves to be called "rational" only when secular knowledge grants that religious convictions have an epistemological status that is not purely and simply irrational." ¹⁴⁷ True neutrality of the state must guarantee "the same ethical freedom to every citizen. This is incompatible with the political universalization of a secularist world view." ¹⁴⁸ It is also incompatible for the state or secularized citizens to refuse "believing fellow citizens the right to make contributions in a religious language to public debates." ¹⁴⁹ A "philosophical system that rejects religious insight and contradicts the dictates of reason runs the risk of being pathological." ¹⁵⁰ Pragmatism certainly qualifies as such, which taints the policy sciences based on it, and the government bodies, such as the United Nations system, to the degree that they employ them.

The alternative Simmonds proposes is the basis of philosophical realism, as the conforming of the intellect with reality, which presupposes the objective existence of a world independent of ourselves and the capacity to know it in some degree. More complex realities, such as social, moral or interpersonal, must be engaged from our own landscape of meaning, bringing ourselves into the process. Here friendship, and the reverence and openness that come with it, establish the hermeneutics of encounter, where all involved "must be willing"

¹⁴⁶ Ibid., 42.

¹⁴⁷ Ibid., 50-51.

¹⁴⁸ Ibid., 51.

¹⁴⁹ Ibid., 51.

¹⁵⁰ Simmonds, Truth and Climate Change, 68.

Pope John Paul II. Fides et Ratio, §33, "the teaching of the ancient philosophers who proposed friendship as one of the most appropriate contexts for sound philosophical enquiry."

to confront not only their minimal interpretations but their *ideological* commitments at large in a spirit of friendship.¹⁵²

Chapter five will show this space of dialogue in goodwill as key to building a Human Ecology. "Paraphrasing Thomas Merton... The way one lives one's life has a profound effect on one's own landscape and how one reads reality." This is particularly true of the effort and sincerity we put into our search for truth about ourselves, others, the world, and God or the ultimate meaning of life. Our future "hinges on conscience because it is the place where human beings appropriate the truth and use it in judgment. It is the inner sanctum of mankind where we encounter the truth... [which has] an innate openness for the truth and seeks assistance from the outside: from others, from authority and from God," 154 not subordinate to political or selfish interests, but formed and habituated to seeking truth for itself.

Distortions in the quest for truth in the issues of climate change

Problems raised in the previous section are manifest in the climate change debate: the pragmatism of seeking merely effective solutions, allowing ethical shortcuts in order to achieve results, even using science to push agendas, and relegating its role to that of providing allegedly unbiased facts to support those agendas. The lack of a robust metaphysics and epistemology also yields confusing results. Part of this was evident in "the complete meltdown of global"

¹⁵⁴ Ibid, 86-87.

¹⁵² Simmonds, Truth and Climate Change, 82.

¹⁵³ Ibid, 85.

climate policy at Copenhagen and the disarray that followed" which "completed the sense of utter failure that was Copenhagen." More issues appeared as

in November 2009 someone stole or released more than a thousand emails from a server at the University of East Anglia in the United Kingdom that showed private discussions among climate scientists going back more than a decade. Some of these discussions showed scientists in a rather poor light. Soon thereafter, the Intergovernmental Panel on Climate Change (IPCC) faced criticism after an obvious error was identified in its 2007 report... further revelations showed a series of errors in the report and breakdowns in its review process. Its chairman was accused of having conflicts of interest.¹⁵⁶

All of which shows that neither scientists nor scientific organizations are free from errors, biases or corruption, due to human fallibility, sometimes influenced by faulty epistemologies, ideologies, lack of character, or even personal and political interests. As Pielke observes, "science can alert us to a potential problem and provide some insight about the consequences of different policy choices, but science cannot decide what choices we ultimately make." ¹⁵⁷ But politicians and scientists, being human, go off-script and "political battles have been fought through science since 1988." ¹⁵⁸ In the climate change debate in the 1990s "[p]oliticians sought to stage-manage the scientific community to support their political ambitions. Leading scientists willingly played along, enthusiastically lending the authority of science to the political campaign." ¹⁵⁹

Part of the issue is the very complex nature of climate change, the many perspectives and the uncertainties that ensue; " a situation that science policy

157 Ibid, 2-3.

¹⁵⁵ Roger Pielke Jr., The Climate Fix, (New York: Basic Books, 2010), ix-x.

¹⁵⁶ Ibid, x.

¹⁵⁸ Ibid.

¹⁵⁹ Ibid.

expert Dan Sarewitz has characterized as an 'excess of objectivity' in which there is a sufficient distribution of scientific perspectives to allow political advocates to pick and choose based on political or ideological convenience."160 It is not uncommon that "two different research teams using very similar methods and just by varying assumptions about 'deep uncertainties' arrived at results that are completely at odds with each other."161 The pragmatism that seeks political expediency often overlooks real contingencies: "Policy making is replete with lessons of unintended consequences resulting from the failure to appreciate the complexity of complex, open systems in favor of simple but potentially misleading simplifications." 162 Thus, some politicians, and scientists invest huge political capital in policies to confront problems seen as urgent, employing any means to achieve the results they regard as necessary, and seeing as enemies all who do not fully agree.

This does not help reasoned assessment since "much of the public discussion takes place as a Manichaean debate of skeptics and deniers versus consensus defenders and alarmists (with the choice of group labels a function of where you stand on the issue)... difficult territory to navigate for those espousing a more nuanced perspective."163 Valuable voices are alienated since those labeled as deniers can include those "analysts convinced of the urgency of the problem while remaining profoundly skeptical of the proposed solution."164 This skews the role in which scientists should contribute.

¹⁶⁰ Ibid, 31.

¹⁶¹ Ibid, 127.

¹⁶² Ibid, 128.

¹⁶³ Ibid, 19, 197.

¹⁶⁴ Ibid, 209. Steve Rayner of Oxford quoted here by Pielke.

"[James] Hansen went so far as to allege that scientists at the IPCC and the prestigious journal *Nature* made decisions about what climate science to highlight based on their political preferences... [ignoring or criticizing his paper that criticized the Kyoto Protocol, as they] saw our paper as potentially harmful to the Kyoto discussions... [with backing of organizations and publications] who had previous editorial positions favoring the Kyoto Protocol." According to Pielke:

in early 2010 when it was widely recognized that the IPCC had made a series of egregious errors in its 2007 report on the melting of the Himalayan glaciers... the basis for the claim was an offhand comment made by an Indian scientist to a reporter in 1999 with no basis on the peer-reviewed literature... [with critical reports being] harshly dismissed by the chair of the IPCC as "voodoo science" and the stuff of "climate change deniers and school boy science." The mistake also revealed... that the IPCC failed to live up to its own standards and its chairman loudly derided those complaining about the error... the mistake may not have been an innocent one... [but] resulted from an effort to influence political outcomes on climate change. 166

The effort to influence policy seems a common pattern. "Richard Tol, a Dutch economist... suggests that the 450 ppm target may be simply a negotiating position in the international climate policy process... McKibben... explains that a 350 ppm target offers greater political traction in the debate." Similarly, in a comment "that reflects the all too common practice of scientists' seeking to influence political outcomes through their science—Crutzen explained... his paper was in fact designed to motivate efforts to reduce emissions." 168The leak of infamous emails from the University of East Anglia

165 Ibid, 20-21.

166 Ibid, 207.

¹⁶⁷ Ibid, 13, ppm means 'parts per million' and refers to Carbon Dioxide concentration in the atmosphere. Pre-industrial level was 280 ppm, but in early 2010 it was 388 ppm and is calculated to currently increase 2 ppm per year. The numbers referred are desirable targets for stabilization. A lower target demands greater efforts.

¹⁶⁸ Ibid, 125.

showed compromised "standards of intellectual openness and honesty" as they tried "to game the system of peer-review in scientific publishing such that their opponents were denied a chance to publish their work in scientific journals or... cited in the reports of the IPCC, while the scientist's allies had a much easier time" advancing "their own views of climate science" and defeating the skeptics by not allowing the views they did not agree with, to be published and used by political opponents. 169 "The stabilization wedges and the IPCC have shaped the policy debate on decarbonization away from technological innovation, under an assumption that we have all the technologies we need."170 Stephen Pacala, said in a 2008 interview that the "purpose of the stabilizationwedge paper... was in fact entirely political... [it] was written to counter the influence in the policy debate of the work of Marty Hoffert and his colleagues, who... argued persuasively that we currently do not have the technologies... The problem, Pacala said, was not that Hoffert's work was necessarily wrong... [but that it] was being taken seriously in the political process by opponents to action."171 Pacala basically aimed to produce a short term political outcome which he effectively did, at the expense of the long term damage of drawing attention away from developing the technologies needed.

There is also "a pattern of unsupportable and just plain incorrect representations of the science of disasters and climate change in the Stern Review Report, the reports of the IPCC, and the U.S. government climate science

169 Ibid, 191-195.

¹⁷⁰ Ibid, 57.

¹⁷¹ Ibid.

reports."¹⁷² This inaccurate portrayal of disasters has contributed to fear and the use of fear is "[o]ne of the most common tactics used in the climate debate in an effort to motivate action," such that "fear and alarm have been central to advocacy for action in climate change... with ever-more alarming warnings put forward in an effort to get the desired response from the public."¹⁷³ However, "this scary scenario is not actually corroborated by existing scientific studies"¹⁷⁴ and "data suggest that invoking fear and alarm serves most to undermine perceptions of science and offers precious little benefit to motivating action."¹⁷⁵

In the particular aspect of decarbonizing the global economy, Pielke seeks to disprove three important assumptions: a) that climate policies fail for lack of political will, b) that economic growth and action on climate change are incompatible, and c) that we have all the needed technology. The argues that insisting on these arguments would lead to force through the political process the acceptance of significant trade-offs, such as reducing the economy and subsidizing any technology available. This seems more ideological than scientific, which might be explained in that some technical solutions are "undesirable because it is in fact societal change that they seek to motivate via

-

¹⁷² lbid, 186. There was frequent reliance on a small number of non-peer-reviewed, scientifically unsupportable studies, on non-peer-reviewed work conducted by the authors of the assessment reports, and on a small number of secondary or tertiary sources, while questions raised in the review process of these reports were ignored or were responded to with incorrect and misleading information. Also in 174, "Research on floods does not support the hypothesis that greenhouse gas emissions have led to a discernible increase in flood losses."

¹⁷³ Ibid, 196-198.

 $^{^{\}rm 174}$ Guruswamy, International Environmental Law, 214.

¹⁷⁵ Pielke Jr., *The Climate Fix*, 201.

¹⁷⁶ Ibid, 35-60.

the issue of climate change... social change is a desired end in addition to addressing accumulating carbon dioxide"177 Why let a good crisis go to waste?

Pielke suggests why researchers risk effective results by pursuing controversial societal change. "A 2009 poll found that only 4 percent of researchers in the geoscience (a category that includes most climate scientists) self-identified themselves as Republicans and 62 percent as Democrats."178 A prominent liberal commentator voiced a strategy to delegitimize alternative opinions. This might explain why many activist bloggers and scientists "seek to close down any semblance of debate on issues of climate change" 179 threatening "dissenters" with ostracism. 180 It is true that problems can be approached either through social engineering, asking people to behave more 'reasonably', or through technological fixes that avoid changing people's habits motivation. 181 Here it might seem that many have additional unacknowledged ideological baggage that has found its way into the debate. Mike Hulme says climate change is a magnifying glass which "enables us to examine the consequences of our short-term decisions for how we wish to live. As a mirror it forces the values that we share and do not share into the open."182

Some of those values forced in the open are not pretty. Beyond the need to confront human forcings on the environment, some unfair policies are

¹⁷⁷ Ibid, 121.

--- IDIU, 121

¹⁷⁸ Ibid, 210. ¹⁷⁹ Ibid, 211.

¹⁸⁰ Ibid.

 181 Ibid, 122, quoting Weinberg.

¹⁸² Ibid, 122, quoting Mike Hulme.

pushed due to greed and self-serving politics. As an example, the cap-and trade programs:

Even with the many failures, inefficiencies, and outright corruption demonstrated to result from cap-and-trade programs, they are unlikely to disappear anytime soon... [its] advocates have invested an enormous amount of social and political capital into carbon trading... [also] there is an enormous amount of money involved, with an almost unlimited potential for carbon traders to make huge profits whether emissions actually go up or down... [and] some involved in the international process care more about promises than actual performance...¹⁸³

Or the interests of more powerful nations as in 2009, reflecting the agenda of developed countries, the International Energy Agency (IEA)

published an aggressive emissions reduction scenario... [which] incredibly... reduced the number of people worldwide without access to electricity by less than 14 percent from 2008 levels, leaving 1.3 billion people in the dark... [indicating] of developed nations... a total refusal... to countenance the circumstances facing developing ones. Connie Hedegaard, Denmark's energy and climate minister and host of the 2009 Copenhagen climate meeting, expressed [regarding] the need for developing countries to reduce their emissions that "China and other emerging nations must accept it even if it isn't fair." ¹⁸⁴

However, there also appears to have been dubious activity among those more skeptical of climate change. Recent evidence shows that "the petroleum industry was conducting climate research as early as 1957 and knew about the potential for catastrophic climate risks" as a 1968 Stanford Institute Research Report forecasted a level of 400 ppm Carbon Dioxide by the year 2000.¹⁸⁵ The report also indicated that damage to the environment could be severe and advised that CO2 emissions be brought under control.¹⁸⁶ There seems to be growing evidence which

184 Ibid, 65-66,

65

¹⁸³ Ibid, 111.

 $^{^{185}}$ UCS, New Evidence Reveals Fossil Fuel Industry Funded Cutting-Edge Climate Science Research Dating Back to 1950s.

¹⁸⁶ Ibid.

demonstrates that Exxon and other oil companies understood climate risks by the 1980s, yet spent millions to sow uncertainty and misinformation about climate science.... evidence uncovered in the last year has revealed that, even as they funded climate denial campaigns, Exxon and other oil companies had a sophisticated command of climate science by the 1980s... used climate science to inform and shape their own business decisions even as they promoted scientific uncertainty and climate skepticism...¹⁸⁷

all of this might imply that in "the U.S., a long-term campaign of disinformation funded by the fossil fuel sector has given rise to a large group of climate-change naysayers, although their numbers may be shrinking." ¹⁸⁸

Which goes to show that both sides of the debate are not being helpful to arrive at an objective view of the issues. In summary, as Pielke observes: "[c]limate science is today a fully politicized enterprise, desperately in need of reform if integrity is to be restored and sustained." 189

5. Key issues and challenges in Sustainable Development - SD

The 1950s and 1960s witnessed an awareness of chemical pollution, the depletion of natural resources, loss of plant and animal biodiversity, the degradation of ecosystems, and climate change. Environmental ethics responded to this challenge, by creating awareness about new moral obligations in public consciousness, an awareness which was later incorporated into public policy and law. In 1956, serious contamination was detected in marine species and fishermen in Minamata Bay, Japan. Methylmercury was thrown into the drain of the Chisso chemical plant. 190

-

¹⁸⁷ CIEL, "Smoke & Fumes," https://www.smokeandfumes.org/fumes

¹⁸⁸ Robert Looney, "Democracy Is the Answer to Climate Change."

¹⁸⁹ Ibid, 191.

¹⁹⁰ Gerald Marten, Human Ecology, 8.

Nevertheless, the government did not stop the pollution until 1968. Even today, informal mining dumps huge amounts of mercury into our waters and soils. Governments have yet to act more urgently and decisively.

July 1962 marked a milestone in humanity's awakening to the realization that we were poisoning and therefore destroying our own home. Rachel Carson published *Silent Spring*, first as a series of articles in *The New Yorker*, and then as a book. "Intoxicated with a sense of their own power," she writes, "[Mankind] seems to be moving further and further with experiments for the destruction of themselves and their world." She denounces the irresponsibility of the chemical industry which under the aura of science and technology and driven by the desire for profit, spread chemical pesticides in the fields without considering the consequences and long-term accumulation in the soil, crops, livestock and water sources. She also questions the government's moral right to approve the use of these products without any control mechanism, leaving people vulnerable to substances which they could not physically avoid nor publicly denounce. 192

Her passionate writing caused a rude awakening. The chemical industry invested a quarter of a million dollars of the time to discredit her, but the warning was given. The notion that not only the earth was damaged, and moreover, that these poisons returned to us in our food, air and water, undermined the idea that scientific progress could be only beneficial. It also dissolved the border between man and nature, bringing awareness that we are part of the same ecosystem, permeable to whatever good or bad it may

191 Rachel Carson, Silent Spring.

¹⁹² Ibid.

contain.¹⁹³ There are also strong dissenters to Carson's assertions¹⁹⁴ which might reflect the distortion of activist scientists we've noted before.¹⁹⁵

In the late 1960's, industrial emissions of sulphur dioxide in the United Kingdom, were carried by winds and generated acid rain which precipitated in large quantities in Sweden, damaging forests and lakes. In 1972, Sweden hosted in Stockholm the first UN conference on the environment. Since then conferences have been conducted every ten years. Awareness of being stewards of the environment globally has joined the concern for the development of peoples producing the fragile consensus called Sustainable Development.¹⁹⁶

Contamination is commonly understood as chemical or organic emissions or residues that harm other life forms or unbalance ecosystems. Contamination can come from human or natural sources. The use has been extended by analogy to other sources of harm on the surrounding environment, such as in visual pollution, noise, or even the impact of sensationalistic journalism or crass reality shows in culture. The visual pollution of advertising in urban areas and roads not only detracts from the landscape but also distracts, impairs concentration and raises stress levels. Excessive lighting prevents stargazing; when it includes rapid changes in intensity and color designed to attract attention, it can result in numb reflexes, disorientation and

-

¹⁹³ Ambrozic, "La Humanidad despierta a la Ecología"

¹⁹⁴ Maureen Mullarkey, "The Toxic Legacy of Rachel Carson," Citing a number of sources, says: "Rachel Carson did untold damage to millions of the world's poor... [in] Carson's claims to the original studies she cites as sources... [has been] found a pattern of misrepresented studies or claims taken out of context in order to exaggerate the dangers of pesticides... sacrificing disciplined scientific methodology to advocacy."

¹⁹⁵ Robert Zubrin, "The Truth About DDT and Silent Spring," "Silent Spring was very poor science ... Carson abused, twisted, and distorted many of the studies that she cited, in a brazen act of scientific dishonesty... anti-DDT claims made by Carson and other activists are all false."

¹⁹⁶ Ambrozic, "Hombre y Contaminación"

stress. Noise also causes stress and often damages hearing. The aggressiveness of auditory and visual media, can stun, stress and offends the sensibilities of people, whether the content is political, shocking news, or in conflict with morality. We can understand that part of the Human Ecology would be a healthy cultural environment.

Table 1 - Chronology of International events

Environmental Concerns and SD

- 1972 Club of Rome publishes *Limits to Growth*Stockholm UN Conference on the Environment
- 1982 UN Convention on the Law of the Seas (UNCLOS)
- 1987 Brundtland Commission publishes *Our Common Future*Montreal Protocol on Chlorofluorocarbons CFCs
- 1988 Creation of Intergovernmental Panel on Climate Change
- 1992 Rio UN Conference on Environment and Development (Earth Summit)

 Creation of UN Framework Convention on Climate Change (UNFCCC)
- 1995 Copenhagen World Summit for Social Development
- 1997 Kyoto Protocol
- 2000 UN Millennium Declaration
- 2002 Johannesburg World Summit on Sustainable Development (WSSD)
- 2012 Rio UN Conference on Sustainable Development
- 2015 Sustainable Development Goals

a) The winding road to SD

Responding to increased concerns regarding the environment, the UN organized the 1972 Stockholm Conference on the Human Environment. "While concern about the environment motivated many rich, industrialized countries...

[f]or developing countries, poverty and the alleviation of misery remained a more poignant and real problem... [arguing] that the worst pollution was caused by poverty." Developing countries felt that their circumstances and needs, including the need for development, were not given serious consideration, and Guruswamy gives a clear account of how the arguments and emotions involved led to the result:

They were particularly scornful of the claim that industrialized countries were genuinely trying to steer them away from pitfalls into which the industrialized countries had already fallen. Developing countries also expressed resentment over the fact that industrialized countries—whose drive toward wealth had already consumed a great part of the earth's resources and led to devastating pollution—were now asking the developing countries to remain poor, and, more gallingly, to pay for the clean-up, restoration and conservation of the earth. Moreover, many developing countries feared that new environmental standards adopted by industrialized countries would effectively bar the entry of their goods into industrial markets.¹⁹⁸

A compromise was needed, given that the two goals were not necessarily incompatible, so the Stockholm declaration stated "that development could proceed provided it avoided damaging the environment" and even exhorted industrialized countries "to reduce the developmental gap between themselves and the developing countries." The harmonizing of these goals was an important result of Stockholm, and a 1980 document is cited

¹⁹⁷ Guruswamy, International Environmental Law, 36.

¹⁹⁸ Ibid.

¹⁹⁹ Ibid, 37.

by Jeffrey Sachs as the first one to use the term Sustainable Development.²⁰⁰ In 1983 the UN created the World Commission on Environment and Development (Brundtland Commission) and entrusted it "with proposing long-term strategies for sustainable development (SD)... [which]was not defined by the UN and, despite the efforts of the Bruntland Commission and the 1992 Earth Summit, still eludes satisfactory definition."²⁰¹

According to Guruswamy, the Brundtland Report, *Our Common Future*, ²⁰² saw that "economic growth was both desirable and possible within a context of SD." ²⁰³ *Our Common Future* set the criteria for both intra and intergenerational solidarity:

SD calls for developmental policies and for economic growth that can relieve the great poverty of the developing countries, while simultaneously protecting the environment from further damage. Such development and growth should be based on policies that sustain and expand the environmental resource base in a manner that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.²⁰⁴

The same report "called for an international conference to act as a successor to the Stockholm Conference and carry forth its legacy" drawing up a global plan for SD.²⁰⁵ The 1992 Rio Conference continued the effort, but apart from the creation of the United Nations Framework Convention for Climate Change – UNFCCC, its results are not impressive. The Rio Conference did affirm the right of developing nations to economic development, while maintaining

71

²⁰⁰ International Union for Conservation of Nature, *World Conservation Strategy: Living Resource Conservation for Sustainable Development.* Gland, Switzerland: IUCN, 1980, quoted in Sachs, *The Age of Sustainable Development*, p. 5.

²⁰¹ Guruswamy, International Environmental Law, 42.

²⁰² UN, Our Common Future, 1987.

²⁰³ Guruswamy, International Environmental Law, 42.

²⁰⁴ Ibid, 43.

²⁰⁵ Ibid.

environmental protection, but it

arguably weakened international efforts to secure environmental protection... the nascent right to a wholesome environment... [in] Stockholm... was abandoned in favor of a right to development... the obligation not to cause transboundary damage... [Stockholm 21] was weakened in Principle 2 of the Rio Declaration by the addition of crucial language authorizing states "to exploit their own resources pursuant to their own environmental and *developmental* policies" [emphasis added]... the obligation to conserve... is replaced in the Rio Declaration by a right to *consume* or develop.²⁰⁶

The Rio Conference also established the principle of common but differentiated responsibility (CBDR) in nations' obligations regarding the environment, later applied by the UNFCCC in "mandating different requirements for industrialized and developing countries" ²⁰⁷ and requiring "industrialized countries to promote SD and to weave renewable and sustainable energy into the fabric of SD." ²⁰⁸

b) Inclusion of Social Development in Sustainable Development - SD

Adding Social Development as a third "pillar" of Sustainable Development was certainly an improvement, and in tune with the first principle of the "Rio Declaration": "Human beings are at the center of concerns for sustainable development." However, the origin of the concept has a different source. There is a body of documents or tradition of sequenced documents related to the environmental summits building on each other, citing them and continuing to develop concepts and approaches, particularly that of sustainable development. There are, in the United Nations system, other bodies of

²⁰⁷ Ibid, 220.

²⁰⁶ Ibid, 44-47.

²⁰⁸ Ibid, 242-243.

²⁰⁹ Rio Declaration, 1992, §1.

documents. Different bodies often reference relevant documents from other traditions, so it is noteworthy when a glaring omission occurs, such as the body of environment and sustainable development not recognizing the origin, definition or even notable developments on Social Development as a third "pillar" of Sustainable Development. The 1995 World Summit on Social Development and its Declaration, are generally ignored.²¹⁰

The 1992 Rio conference produced two documents, the "Rio Declaration on Environment and Development" or "Rio Declaration" and *Agenda 21*; both consider SD as economic development and environmental protection. More recent UN publications portray *Agenda 21* as specifically encompassing the three dimensions of Sustainable Development,²¹¹ but the document itself does not support that assertion. In section I, chapter 2, Development is understood as economic policies for growth, particularly liberalization of world trade. The section "Combating Poverty" in chapter 3 focuses on economic growth and relevant structures to provide sustainable livelihoods as a means of eradicating poverty. Education, health, empowerment of women and communities, improved governance and related issues are mentioned as contributing to a sustainable model but fall short of being recognized as part of Social Development, the third pillar of SD.²¹²

The first document in the environmental and SD tradition that explicitly includes Social Development as the third pillar of Sustainable Development is the "Johannesburg Declaration on Sustainable Development" issued at the

-

 $^{^{\}rm 210}$ UN, "Copenhagen Declaration on Social Development."

²¹¹ UN, "World Economic and Social Survey 2013," 23

²¹² United Nations Conference on Environment & Development, *AGENDA 21*, (Rio de Janeiro, Brazil, June 1992). http://www.un.org/esa/sustdev/agenda21.htm.

World Summit on Sustainable Development in Johannesburg in 2002. Following the cornerstone statement of the "Rio Declaration" that "Human beings are at the center of concerns for sustainable development,"²¹³ the Johannesburg Declaration says in its second principle: "We commit ourselves to building a humane, equitable and caring global society, cognizant of the need for human dignity for all,"²¹⁴ and in the fifth principle, that it commits "to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development—economic development, social development and environmental protection."²¹⁵

Nevertheless, Social Development is neither defined nor delimited in its scope or purpose. The declaration references the challenges of poverty, inequality, women's rights, gender equality and human development as well as the specifics of "basic requirements as clean water, sanitation, adequate shelter, energy, health care, food security and the protection of biodiversity," and "severe threats to the sustainable development of our people, which include: chronic hunger; malnutrition; foreign occupation; armed conflict; illicit drug problems; organized crime; corruption; natural disasters; illicit arms trafficking; trafficking in persons; terrorism; intolerance and incitement to racial, ethnic, religious and other hatreds; xenophobia; and endemic, communicable and chronic diseases, in particular HIV/AIDS, malaria and tuberculosis." ²¹⁶

-

²¹³ UN, "Rio Declaration," §1.

²¹⁴ UN, "Johannesburg Declaration," §2.

²¹⁵ Ibid, §5.

²¹⁶ Ibid, §§5, 18-19.

The Implementation Plan focuses chapter 2 on "Poverty" and chapter 6 on "Health." Although chapter 3 is dedicated to the issues of unsustainable consumption and production, it focuses on policies and their environmentally desirable outcomes.²¹⁷ The impact of consumerism lifestyles on the lives of people and the social fabric is totally absent. The introduction does mention that the results of the Summit "should benefit all, particularly women, youth, children and vulnerable groups", fostering "Peace, security, stability and respect for human rights and fundamental freedoms, including the right to development, as well as respect for cultural diversity" and "the importance of ethics."²¹⁸ The overall focus is on government policy and the environment and the aspects related to the human persons are focused on material and basic needs.

The Rio + 20 Conference on Sustainable Development in 2012 followed roughly the same approach producing "The Future We Want" document which states that "eradicating poverty is the greatest global challenge facing the world today" and its commitment to "reducing inequalities, raising basic standards of living, fostering equitable social development and inclusion, and... human development."²¹⁹ It repeats the themes of Johannesburg. Again, no precision can be found as to definition or scope of Social Development. One difference is the concern for unemployment, likely due to the financial crisis.

Social Development as the "third pillar" of SD was mentioned earlier in a body of documents on social issues. In March, 1995, in Copenhagen, "For the

²¹⁷ Ibid, §§14-23.

²¹⁸ Ibid, §§3,5, 6.

²¹⁹ UN, Rio + 20 Conference. *The Future We Want*, §§2, 4.

first time in history... heads of State and Government [gathered] to recognize the significance of social development and human well-being for all and to give to these goals the highest priority."220 This meeting produced the "Copenhagen Declaration on Social Development," which states: "We are deeply convinced that economic development, social development and environmental protection are interdependent and mutually reinforcing components of sustainable development, which is the framework for our efforts to achieve a higher quality of life for all people,"221 making it the first clear statement about the pillars of SD. Even if not setting a definition for Social Development, it set within its scope "an urgent need to address profound social problems, especially poverty, unemployment and social exclusion... the material and spiritual needs of individuals, their families and the communities in which they live... democracy and transparent and accountable governance... social development and social justice... peace and security... all human rights and fundamental freedoms."222

Noteworthy is the reference to spiritual needs, not only of individuals, but also of their families and communities, therefore their public expression, counter to the general trend to ignore, obscure or deny all that is transcendent, rendering a mutilated approach to the human person and society. The UNGA Resolution 47/92 which convened the World Summit on Social Development in December of 1992, does not reference the Rio Conference on Environment and Development, but traces the origin of this concern to sources, some of which are prior to the Rio Conference, including ECOSOC decisions of 1991 and 1992,

_

²²⁰ UN, "Copenhagen Declaration on Social Development," §1.

²²¹ Ibid, §6.

²²² Ibid, §2-5.

the support of non-aligned countries expressed in September 1992 and other resolutions of its own from 1987, 1990 and 1991.²²³

The "Johannesburg Declaration" in 2002 is the first environmental summit to state the three pillars of SD,²²⁴ but makes no reference to the 1995 "Copenhagen Declaration," although it cites from very diverse UN documents; this omission is also true of the "Johannesburg Implementation Plan."²²⁵ Likewise, the Rio + 20 conference in 2012 issued a document where it repeatedly mentions the three dimensions of SD,²²⁶ referencing a score of diverse documents, but not the "Copenhagen Declaration." In addition to the documents from the SD summits, the rich content of the "Copenhagen Declaration on Social Development" can help clarify the concept and scope of Social Development.

6. Continuing efforts and related concerns

As has been mentioned, international efforts associated with SD have developed in different tracks, each generating each its own tradition and sets of documents, with different degrees of success and interaction among them. Economic and social development during the 1990s, "took the form of advocacy for 'human development,' which crystallized in the Millennium Development Goals... [which are] focused on some aspects of economic and social

²²³ UN, UNGA Resolution 47/92.

on, onga kesolution 47/92

²²⁴ UN, "Johannesburg Declaration," §5, mentions the "reinforcing pillars of sustainable development - economic development, social development and environmental protection."

²²⁵ UN, "Johannesburg Implementation Plan."

²²⁶ UN, Rio+20, "The Future We Want." As in the "need to further mainstream sustainable development at all levels, integrating economic, social and environmental aspects" in §3, but also §§4,6,10,11.

development, which are both dimensions of sustainable development. However, they were weak on environmental protection."227 UN development goals are not limited to Millennium Development Goals (MDGs), but broader macroeconomic goals tended to obscure the real conditions of less advantaged sectors of the population. The MDGs sought to emphasize the social development of people, rather than the economy as a whole, so that "economic development goals are not explicitly encompassed by the Millennium Development Goals. Instead, they are implicit, in the sense that achievement of the Millennium Development Goals would require, among other things, an increase in per capita income, the traditional indicator of economic development."228

The MDGs "became the centerpiece of the development effort for poor countries around the world... [helping] a marked acceleration of poverty reduction, disease control, and increased access to schooling and infrastructure in the poorest countries of the world... as a result of the MDGs."²²⁹ Goals, in general, help in developing consensus "for social mobilization... [generating international] peer pressure... mobilizing *epistemic communities*... [and] stakeholder networks."²³⁰

At the Rio + 20 summit "leaders looked at the MDGs and saw how successful they had been in scaling up the world's efforts to fight extreme poverty... since their adoption in September 2000. The leaders agreed that the

²²⁷ UN, "World Economic and Social Survey 2013," 24.

.

²²⁸ Ibid, 24.

²²⁹ Sachs, The Age of Sustainable Development, 490.

²³⁰ Ibid, 490-491.

world now urgently needs a similar approach of scaling up the world's efforts on sustainable development."²³¹ Not all are as enthusiastic.²³² The 2030 Agenda for Sustainable Development in 2015 makes the commitment "to achieving sustainable development in its three dimensions—economic, social and environmental—in a balanced and integrated manner."²³³ In this it refrains from adding as a fourth pillar the dimension of governance as was being advocated by Jeffrey Sachs.²³⁴ In the task assigned to Sachs by Ban Ki-moon for creating the Sustainable Development Solutions Network-SDSN, they proposed 10 SDGs.²³⁵ The original ten inform the seventeen SDGs finally approved, with the exception of the added 10th Goal, "Reduce inequality within and among countries."²³⁶ The result is "17 Sustainable Development Goals with 169 associated targets which are integrated and indivisible."²³⁷ 169 targets might be too many to track, but most are worded in aspirational terms. An important inclusion is the SDG 7th Goal ensuring access to energy for all, a right long unrecognized.²³⁸

The goals are mostly worthy, addressing urgent concerns and deserving

²³¹ Ibid, 483-484, child deaths, although still 6.5 million yearly before their 5th birthday, have been halved since 1990.

²³² UN, "World Economic and Social Survey 2013," 26.: "despite progress, the overall rate of poverty reduction is proving too slow to be satisfactory."

 $^{^{\}rm 233}$ UN, "Transforming Our World: The 2030 Agenda for Sustainable Development," 2015, 2.

²³⁴ Sachs, *The Age of Sustainable Development*, 502, "I see four major dimensions of sustainable development. There are the traditional three –economic development, social inclusion, and environmental sustainability. But those three require in all cases the underpinning of the fourth dimension: good governance... [which] will play a central role in the eventual success or failure of the SDGs" (Ibid,485-6); Sachs seems to speak in a semi-official role as after Rio + 20, UN Secretary General Ban Ki-moon tasked Sachs with the "creation of a new global network of sustainable development problem solving... *Sustainable Development Solutions Network* (SDSN)... [which also advises] the UN General Assembly and the UN secretary-general on what the new SDGs might be"; (Ibid, xi) and Ban Ki-moon wrote the Foreword for this back as well

²³⁵ Sachs, The Age of Sustainable Development, 486-489.

²³⁶ UN, "2030 Agenda for SD," §14.

²³⁷ Ibid, §18.

²³⁸ Guruswamy, Energy Poverty, 139-161.

the total support of the international community and stakeholders worldwide. Nevertheless, policy sciences remain basically pragmatic, instrumental, and morally relativistic, and as a matter of principle deny any transcendent content, spiritual reality, religious insight, and metaphysical realism. The document on SDGs falls in that pattern, adding ideologically driven policies, such as those promoting reproductive health-care (which many understand as including abortion) while overlooking the family. The "family" is mentioned only five times in the entire document: twice in reference to promoting family planning (26, goal 3.7), once referring to family farmers (goal 2.3), once referring to gender equality (goal 5.4), and finally in the one goal cognizant of values (25) to "provide children and youth with a nurturing environment ... through safe schools and cohesive communities and families." ²³⁹ It is well documented how stable families with both a father and a mother have the highest correlation with educational and economic success and the least with delinquency and other deviant behaviors. ²⁴⁰

It is significant, then, that this issue is overlooked. Sports are mentioned in a positive way,²⁴¹ but there is absolutely no reference to moral, spiritual or religious realities. While the "Copenhagen Declaration" is mentioned, it is not cited, seemingly disregarded as in earlier documents.²⁴² The "Copenhagen Declaration" affirms a series of values systematically disregarded by the prevalent body of UN documents, which might explain why the document has

-

²³⁹ UN, "2030 Agenda for SD," §§25, 26, goals 2.3, 3.7, 5.4.

²⁴⁰ Daniel P. Moynihan "The Negro Family: The Case For National Action," Office of Policy Planning and Research. United States Department of Labor. March 1965; but also referring to the general population, Daniel P. Moynihan, "Defining Deviancy Down," American Educator. American Federation of Teachers. Winter 1993/1994. Pp. 10-18.

²⁴¹ UN, "2030 Agenda for SD," §18.

²⁴² Ibid, §11.

been buried. It recognizes "material and spiritual needs of individuals, families and the communities in which they live" 243 and "all rights and fundamental freedoms." 244 It states commitment to an "ethical and spiritual vision for social development that is based on human dignity, human rights, equality, respect... and full respect for the various religious and ethical values and cultural backgrounds of people." 245 It will act to recognize "the family as the basic unit of society and acknowledge that it plays a key role in social development and as such should be strengthened." 246 It recognizes that "strategies, policies, programs and actions... should take into account... full respect for the various religious and ethical values, cultural backgrounds and philosophical convictions of its people." 247

It seeks to "[r]ecognize and respect cultural, ethnic and religious diversity, promote and protect the rights of persons belonging to national, ethnic, religious or linguistic minorities, and take measures to facilitate their full participation in all aspects of the political, economic, social, religious and cultural life of their societies and in the economic progress and social development of their countries."²⁴⁸ It commits to "recognizing the rights, duties and responsibilities of parents and other persons legally responsible for children consistent with the Convention on the Rights of the Child."²⁴⁹ All these values seem to be inimical to the general UN agenda. This is supported by the

-

²⁴³ UN, "Copenhagen Declaration on Social Development," §3.

²⁴⁴ Ibid, §5.

²⁴⁵ Ibid, §25.

²⁴⁶ Ibid, §26 (h).

²⁴⁷ Ibid, §28.

²⁴⁸ Ibid, Commitment 4 (i).

²⁴⁹ Ibid, Commitment 6 (l).

notion that this predominant view no longer sees itself merely as a limited but useful tool to achieve necessary goals, but as a "normative or ethical view of the world, a way to define the objectives of a well-functioning society, one that delivers wellbeing for its citizens today and for future generations... [and which] urges us to have a holistic vision of what a good society should be."²⁵⁰

This holistic view ignores any metaphysical, moral, spiritual or religious concern, as well as family or life values which might pose an obstacle to pragmatic solutions. Of the three pillars of SD, environment, economic development and social development, the third can be charged with including the wellbeing and fulfillment of the human person, but in the UN agenda, all this is reduced to "the term social inclusion."²⁵¹ The relativistic view has taken over, dismissing transcendent values and enforcing its pragmatic and ideological agenda, notably in environmental, social and population issues.

A controversial issue has been population growth. Malthus, The Club of Rome and Paul Ehrlich, all made dire predictions about the consequences of excess population. None came to be true. Paul R. Ehrlich, "a Stanford University biologist [warned] in [h]is 1968 book, *The Population Bomb*,... that humankind stood on the brink of apocalypse because there were simply too many of us... that hundreds of millions would starve to death in the 1970s, that 65 million of them would be Americans, that crowded India was essentially doomed... that 'sometime in the next 15 years, the end will come.'"²⁵² However, "[h]umanity has managed to hang on, even though the planet's population now exceeds

²⁵⁰ Sachs, The Age of Sustainable Development, 11.

²⁵¹ Ibid. 12.

²⁵² Clyde Haberman, The Unrealized Horrors of Population Explosion.

seven billion, double what it was... [then, but] Dr. Ehrlich, now 83, is not retreating from his bleak prophesies."²⁵³ In what seems a more ideological position, he insists that population control is "required, preferably through voluntary methods. But if need be, he said, he would endorse 'various forms of coercion'."²⁵⁴

Mara Hvistendahl, a progressive feminist in good standing, "has a long, devastating interview with Ehrlich in which she reveals him to be a doddering, foolish, old man wedded to a political ideology and with no interest in science, demographics, or even basic math."²⁵⁵ Nevertheless, "the elite caste has showered Ehrlich with awards and honors... in actual opposition to, both science, evidence, reason, and good faith... an indictment of the bien pensant progressive order."²⁵⁶ The general consensus, including the United Nations, estimates "a peak of about nine billion around 2050... To some extent, worrying about an overcrowded planet has fallen off the international agenda."²⁵⁷ Fred Pearce states that the problem is not overpopulation but, rather, overconsumption, with most of it in rich countries: "The world's richest half billion people — that's about 7 percent of the global population — are responsible for half of the world's carbon dioxide emissions. Meanwhile, the poorest 50 percent of the population are responsible for just 7 percent of emissions."²⁵⁸ It is important to recognize that while some resources are

_

²⁵³ Ibid.

²⁵⁴ Ibid.

²⁵⁵ Last, Jonathan V. Paul Ehrlich: Even Worse than the New York Times Says He Is. Weekly Standard. Jun 02, 2015.

²⁵⁶ Ibid

 $^{^{\}rm 257}$ Clyde Haberman, The Unrealized Horrors of Population Explosion.

²⁵⁸ Ibid.

renewable, others are not, and "richer people consume more natural resources than poorer people... so overpopulation in the industrialized countries is the most important population problem." ²⁵⁹

Malthus was mistaken as he "did not foresee the dramatic impact technological advances would have on food production" and now Neo-Malthusian, Economic Transition and Redistributional theories compete in explaining and forecasting different approaches to a sustainable society combining population growth, technical development, and resources distribution. Different initiatives have been fostered by the UN to curb population growth, particularly through the UNFPA, but "[t]here is international consensus, falling short of unanimity, that coercion should be skewed as a method of family planning." This has not stopped the UN in trying to promote "reproductive health" (including abortion) as women's rights, 262 trying to promote these rights for female minors disregarding parental consent; promoting the coercive one-child policy in China with the support of USAID as well as sterilization, even coercively (as in the 1990s in Peru), and funding local NGOs in many countries to promote contraception and abortion.

Continuing to affirm the Vatican's constant position, Archbishop Auza, its representative, "to the United Nations denounced population control

²⁵⁹ Guruswamy, International Environmental Law, 127-129.

 $^{^{260}}$ Ibid, 136-140.

²⁶¹ Ibid, 142.

²⁶² Lisa Bourne, "As Pope, other Vatican officials champion UN Goals, Holy See instead has moral objections," "Two of the SDG's 17 goals have targets that call for 'universal access' to 'sexual and reproductive health' and 'reproductive rights.' The UN defined these terms at its 1994 Cairo conference to denote providing women with 'modern contraception' for 'family planning' and with 'safe abortion' anywhere the procedure is legal."

²⁶³ Shenan J. Boquet, "By Their Fruits (and Their Names) You Shall Know Them."

before... this week's 50th Session of the Commission on Population and Development at the UN... [and]on the subject of changing population age structures and sustainable development... [he] criticized prosperous nations that withhold authentic aid from developing nations as a form of coerced population control."²⁶⁴ Surprisingly, in 2017, Dr. Paul Ehrlich, was invited to speak at a Vatican "Biological Extinction" conference. Ehrlich has defended compulsory population-control laws, including compulsory abortion.²⁶⁵ The Holy See seems to hold different and incompatible positions on the subject.

Sachs has also been a frequent guest at the Vatican. Possibly because he is sponsored by the UN secretary-general Ban Ki-moon, he toes the UN line warning that "countries that have made a transition from high fertility rates to low fertility rates have tended to have an advantage in economic development, while countries that have very high fertility rates tend to have much lower economic growth." 266 Sachs states that Africa's "unprecedented rise in population would almost surely put prosperity out of reach... Success will depend on today's high fertility countries reducing the high fertility rates on a voluntary basis through public policy and changing cultural attitudes." 267 He even makes a strong effort to bolster the assertions of Malthus regarding hunger due to excess population. 268 In this issue it is more evident that the controversy hinges more on anthropological views and moral values, well beyond the pay grade of policy sciences.

. .

²⁶⁴ Lisa Bourne, "Pope's emissary slams UN population control efforts."

²⁶⁵ Ibid

²⁶⁶ Sachs, The Age of Sustainable Development, 123.

²⁶⁷ Ibid, 125.

²⁶⁸ Ibid, 206-207.

There has been much activity regarding environmental protection, as

concerns regarding the environment (global warming, for example) were reflected in the United Nations Framework Convention on Climate Change, which was opened for signature at the 1992 Rio Conference. This was followed by the adoption, in 1977, of the Kyoto Protocol to the United Nations Framework Convention on Climate Change, by the Conference of the Parties to the Convention at its third session. Another response to environment-related concerns was the Convention on Biological Diversity, which was also opened for signature at the Rio Conference. Yet another example of global environmental protection effort is the United Nations Convention to Combat Desertification. Also, the United Nations Environment Programme (UNEP) has been working on environmental issues since 1972.²⁶⁹

We can see that there has been no lack of efforts given the importance that environmental issues are given in governments and international bodies. However, the much promoted Kyoto Protocol has been largely a failure, for both lack of commitment and a faulty assessment of unintended consequences as is described here:

several countries that had ratified the Kyoto Protocol for its first commitment period withdrew from it and decided not to join the second commitment period... the greenhouse gas reduction goals set out in the Kyoto Protocol remain largely unachieved... Countries that apparently have achieved their targets have often done so mainly through offshoring greenhouse gas-intensive production operations to developing countries... [which being] generally more greenhouse gas-intensive... has led to an increase rather than a decrease in the total (global) volume of emissions, thus frustrating the very purpose of the Protocol.²⁷⁰

The Hartwell group argues that the failure of Kyoto, as well as that of the 2009 climate conference in Copenhagen are merely symptoms of a policy that was structurally flawed "because it systematically misunderstood the nature of climate change as a policy issue... [but had] acquired immense political

86

 $^{^{\}rm 269}$ UN, "World Economic and Social Survey 2013," 24.

²⁷⁰ Ibid, 25.

momentum because of the quantities of political capital sunk into it."271 Just as Pielke advocates the need to reframe climate policy by decoupling "carbon dioxide policy from other aspects of climate policy,"272 so, "The Hartwell Paper," in its own terms "advocates a radical reframing—an inverting—of approach: accepting that decarbonisation will only be achieved successfully as a benefit contingent upon other goals which are politically attractive and relentlessly pragmatic."273

These social development and environmental tracks were undertaken in different domains

For example, the domain of action of the Millennium Development Goals was confined to developing countries. By contrast, the Kyoto Protocol, following principle 7 on common but differentiated responsibilities of the Rio Declaration on Environment and Development (United Nations, 1993), required only developed countries to undertake greenhouse gas emissions reduction targets, while exempting developing countries from the requirement of undertaking such targets.²⁷⁴

However, the SDGs synthesize the different aspects of SD. It remains to be seen how the stakeholders of different nations will interact and which, of the 169 targets of the SDGs, will eventually capture the attention and resources to develop real progress. In the next chapter, the complex challenges and dynamics of Sustainable Development will be explored.

²⁷¹ Gwyn Prins, et al. "The Hartwell Paper," 5.

²⁷² Pielke, The Climate Fix, 160.

²⁷³ Gwyn Prins, et al. "The Hartwell Paper," 5.

 $^{^{\}rm 274}$ UN, "World Economic and Social Survey 2013," 24.

Chapter 2.- The challenges in the three pillars of Sustainable Development (SD)

Whereas the last chapter followed the growth of environmental concerns to a global issue focused on Sustainable Development, this chapter turns to examine the complex challenges and dynamics of Sustainable Development.

Over time, Sustainable Development has come to have three pillars: economic, social, and environmental as demonstrated in the previous chapter. SD is not a specific goal that can be finally attained. It is a happy state, the result of many factors in constant flux and interaction. It is a complex set of conditions which foster healthy development for individual people and societies as a whole, while preserving the environment. According to Sachs, the complexity of SD makes it difficult to define.²⁷⁵ As seen in chapter 1, political interests lead occasionally to surprisingly biased views and even unethical behavior. Thus, political issues and the technical complexity of diverse, mutually interacting, and changing challenges in all three dimensions of sustainable development—economic, social and environmental—undermine agreement in SD.

Most organizations and initiatives active in SD, focus on the economic pillar.²⁷⁶ The economic aspects might be the most urgent. However, this tends to render irrelevant in the discussion the other important aspects, and the next

 $^{^{\}rm 275}$ Jeffrey D. Sachs, The Age of Sustainable Development, 7.

²⁷⁶ For example, see UN, "World Economic and Social Survey 2013," v.

chapter will link this tendency to a prevailing view of humans and society that is reductive and detrimental to their development.

Turning to the impact of economic issues on the life of individuals, particularly the less fortunate, we should note the United Nations Millennium Declaration adopted in September 2000 by world leaders establishing the Millennium Development Goals (MDGs) and a global consensus on the importance of poverty reduction and human development.²⁷⁷ Since then, through dynamics already underway, poverty has been reduced. The UN and related parties proudly present this achievement as "the global community [having] managed to uplift a large segment of the poor and vulnerable."²⁷⁸ According to World Bank statistics, the number of people living on less than \$1.25 per day²⁷⁹ has decreased dramatically, from half the citizens in the developing world in 1981 to 21 percent in 2010, despite a 59 percent increase in its population. However, a new analysis shows that there are still 1.2 billion people living in extreme poverty, and despite recent impressive progress, Sub-Saharan Africa still accounts for more than one-third of the world's extreme poor.²⁸⁰

Nonetheless there has been progress on poverty issues but more significant efforts need to be made to accelerate progress, regardless of MDGs being reached by the 2015 deadline, given that: "current development strategies will not suffice to achieve SD beyond 2015." Those goals are

²⁷⁷ UN, Resolution adopted by the General Assembly-55/2. United Nations Millennium Declaration.

89

²⁷⁸ UN, "World Economic and Social Survey 2013," v-vi, 3.

 $^{^{279}}$ \$1.25 a day in 2005 US dollars is one of different options calculated as the poverty line.

²⁸⁰ World Bank Group, "Remarkable Declines in Global Poverty, But Major Challenges Remain."

²⁸¹ UN, "World Economic and Social Survey 2013," vi.

crucial for the billion people still living in extreme poverty.²⁸² "[But they] not only reflect economic targets, global justice, and human rights—they also are vital to international and national security and stability... Poor and hungry societies are much more likely than high-income societies to fall into conflict over scarce vital resources"²⁸³ Additionally, it has become increasingly clear that macroeconomic figures such as GDP per capita do not reflect accurately the economic reality and wellbeing of the population.²⁸⁴ We need to understand human development fully so as to promote the policies truly effective in addressing poverty and other critical goals in a sustainable way.

One outcome of the 1992 UN Conference on Environment and Development held in Rio, was *Agenda 21*, which constituted a comprehensive foundation for SD. *Agenda 21* underlined the need for cooperation among governments and the main aspects of SD. It broadened the issue from economic growth to specific issues of poverty. The concern that economic goals did not reflect key social issues was building and contributed to the MDGs, focused on more urgent efforts for the well-being and dignity of people, which had not been adequately addressed previously in SD initiatives concerned mostly with economic growth and environmental protection. MDGs advanced the recognition of social development as a new pillar of SD, which was made explicit in the 2002 Johannesburg World Summit on Sustainable Development.²⁸⁵ Economic, social and environmental implementation efforts

-

²⁸² Extreme poverty can be defined as "poverty that kills" forcing the people to focus on survival in the context of hunger, disease, and environmental hazards.

²⁸³ UN, "Investing in Development," 8.

²⁸⁴ Simon Kuznets, "National Income, 1929–1932," 6–7. "Economic welfare cannot be adequately measured unless the personal distribution of income is known... The welfare of a nation can, therefore, scarcely be inferred from a measurement of national income as defined above."

²⁸⁵ UN, "Johannesburg Implementation Plan," §2, "These efforts will also promote the integration of the three

had to be reintegrated and the MDGs evolved in 2015 to the Sustainable Development Goals (SDGs) as part of SD.²⁸⁶

SDGs aim to respond to new challenges, arising from "multiple financial, economic, food and energy crises, which have threatened the ability of all countries to achieve sustainable development."²⁸⁷ These challenges to SD are driven by broad underlying economic, social, technological, demographic and environmental megatrends, major shifts in economic, social and environmental conditions which change societies and substantially impact people at all levels. The UN survey identifies four current megatrends: globalization, inequalities, major demographic changes, and accelerating environmental degradation.²⁸⁸

The 2012 UN Conference on SD held in Rio highlighted a range of interlinked challenges which claim priority attention, including decent jobs, energy, sustainable cities, food security and sustainable agriculture, water, oceans and disaster readiness.²⁸⁹ These interacting factors and agents, and having the human person at the center of its concerns,²⁹⁰ make for a strong connection of the three pillars of SD with Human Ecology, which will be explored as follows in this chapter. This also requires an analysis of the underlying conceptions of SD which will be done in the next chapter.

components of sustainable development - economic development, social development and environmental protection - as interdependent and mutually reinforcing pillars."

²⁸⁶ UN, "World Economic and Social Survey 2013," vii.

²⁸⁷ Ibid., vii.

²⁸⁸ Ibid., 3.

²⁸⁹ UN, Rio + 20 Conference on Sustainable Development: "The Future We Want," 2012.

²⁹⁰ UN, Rio Declaration, §1: "Human beings are at the center of concerns for sustainable development."

1. Economic development

Economics has a "political, normative and moral purpose.... [seeking what] bring us closer to a ideal society... [an] unabashed aspiration to study good and evil."²⁹¹ Unfortunately, it can be shown that economists have wasted too much energy "on pure theoretical speculation... To be useful, economists must above all learn to be more pragmatic... [and] work more closely with other social science disciplines."²⁹² Regretfully, both Piketty and the economists that he faults for excessive theoretical speculation, miss the mark. More or less practical, they concentrate on method and process, but ignore purpose. Understanding economy²⁹³ as: the careful and systemic management of income, expenditure, wealth and resources to satisfy the needs of constituents in the most efficient way, would align with the common good and refocus its purpose and place in human activity.

Today's economy is marked by globalization, which besides the expansion of trade and investment flows, includes changes in global production patterns, driven partly by the rise of transnational corporations and global value chains, "accounting for much of the overall progress in the global fight against poverty." A favorable global political environment has reduced barriers to trade and investment. The new transportation, information and

²⁹¹ Thomas Piketty. Capital in the Twenty-First Century, 574.

²⁹² Ibid., 574-575.

²⁹³ Webster's doesn't define a purpose and neither does the Stanford Encyclopedia of Philosophy. http://www.yourdictionary.com/economy / https://plato.stanford.edu/entries/economics/

²⁹⁴ UN, "World Economic and Social Survey 2013," 3.

communications technologies have made the diffusion of information easier, and facilitated access by developing countries to the global knowledge pool.²⁹⁵

However, assessing whether this growth is beneficial necessarily hinges on how we define Economic Development. The Stockholm Declaration addressed development as alleviating the inadequate living conditions of millions in developing countries,²⁹⁶ measured with GDP and later documents have focused on macroeconomic issues such as international trade, finances, policies and planning.²⁹⁷ Some argue that economic development "should be measured by the extent to which a society has achieved a desirable distribution of advantage... [including] both efficiency and justice or fairness."²⁹⁸ Justice implies exploring the underlying ethics, where "the most common measure of economic development, GDP per capita, is based upon the utilitarian ethic, which computes the level of social welfare as the average of the utilities in the population, where utility is taken to be proportional to income."²⁹⁹

According to Roemer, utilitarian and consequentialist approaches rely on measuring outcomes but an equal opportunity approach would be arguably fairer since it distinguishes between circumstances and effort, seeking to equalize the effect of the former and reward the latter. This would be ethically superior and also endorsed by members of many societies.³⁰⁰ This issue will be revisited in the section discussing poverty and inequality within SD. This

²⁹⁵ Ibid., 4.

²⁹⁶ UN, "Stockholm Declaration," §4.

²⁹⁷ UN, *Agenda 21*, chapters 2, 8; UN, Rio + 20, "The Future We Want," §§11, 19, 20, 26, 281.

²⁹⁸ John E. Roemer, "Economic Development as Opportunity Equalization," 9.

²⁹⁹ Ibid., 9.

³⁰⁰ Ibid., 10.

section questions whether mere economic growth can qualify as Economic Development, examining the following four interrelated and problematic areas: convergence, global financialization, growth itself, and persistent inequalities. Each unit is treated in turn to demonstrate the overall complexity of the problem.

a) The limits of convergence

Convergence, understood as decreasing the gap between developed and developing economies, results from accelerated growth in developing economies and involves shifts in trade patterns, in the balance of economic power and in areas of economic influence, all of which have an impact in political alignments. "As a result of rapid growth in developing and emerging economies, the world economy is becoming more multipolar, which inevitably leads to the creation of a world that is more multipolar politically." 301

globalization has provided opportunities for emerging economies and developing countries, and in recent years their growth rates have been consistently higher than growth rates in the developed world... [but]It has not made developing countries immune to cyclical shocks: indeed, globalization has increased countries' vulnerabilities; and it is far from uniform, with some developing countries not only excluded from this convergence process but falling further behind. Average per capita growth also hides increasing inequalities within countries... A significant part of the global population therefore does not benefit from convergence.³⁰²

Thus, convergence has come with greater vulnerabilities such as a more demanding and competitive economic environment, more exposure to the shocks and distortions in the global economy and increasing inequalities. In the

_

³⁰¹ Ibid., 7-8

³⁰² Ibid., 7.

next section we will look at financialization, deeply embedded in these distortions.

b) Global financialization³⁰³

"Globalization has progressed furthest, perhaps, in finance, where the liberalization of capital markets and short-term capital flows has been promoted since the 1980s, most prominently by the International Monetary Fund (IMF)."304 This liberalization has increased macroeconomic instability at national and global levels because, among other things, "capital flows are procyclical and thus exacerbate the business cycle.305 At the same time, they limit policymakers' ability to use macroeconomic policies to smooth out the business cycle."306 So, this "progress" requires a critical approach.

According to the "World Economic and Social Survey 2013, "[coming from] advanced economies, financialization was driven by financial interests that sought profitable investments in the context of slowing economies." This led to changes in investing and corporate behavior with shorter term expectations for realizing gains, "changes in financial markets which facilitated increased indebtedness and asset-price bubbles, and changes made in economic policy, not least of all to facilitate financial globalization." The source and motives of the initiative for financialization is also confirmed asking

³⁰³ Ibid., 6, "financialization entails the increasing role of financial motives, actors, markets and institutions in the economy"

³⁰⁴ Ibid., 5-6

³⁰⁵ Graciela Kaminsky, "When It Rains, It Pours," "Capital flows are procyclical when the correlation between the cyclical components of net capital inflows and output is positive. The economy thus borrows from abroad in good times (i.e., capital flows in) and lends/repays in bad times (i.e., capital flows out)."

³⁰⁶ UN, "World Economic and Social Survey 2013," 6.

³⁰⁷ Ibid., 6

³⁰⁸ Ibid.

*cui bono,*³⁰⁹ as the increasing role of financial motives and actors in the economy, has resulted "in the increase in profits of financial institutions relative to non-financial corporations and the overall increase in rentiers' share of national income."³¹⁰ The rationale given, however, was different:

[it intended] to provide developing countries ... with access to scarce savings. The actual outcome of financial liberalization was quite different, however... increased volatility of capital flows, global macroeconomic imbalances, and multiple financial crises—typically followed by severe recessions, most recently on a global level.³¹¹

So, the rationale given was the generous concern for developing countries, while the real motives were the financiers' expectation of faster profits, regardless of the risks to the economy. Crises are predictable. "Capital inflows based on market optimism fuel credit bubbles, leading to increases in the values of real estate and the currency; but over-indebtedness soon undermines the capacity to repay.

Once the bubble bursts, capital inflows stop and the ensuing credit crunch leads to economic contraction."³¹² Consequences are severe: "Since the onset of the global financial crisis, the median output loss from systemic banking crises... has amounted to 25 per cent of GDP... [building] international reserves to protect [from] volatile capital flows [has led to] massive increase in reserves held by developing and emerging countries—which amounted to \$7 trillion in 2011."³¹³ This has contributed to global macroeconomic imbalances. In reaction, "financial regulation is being strengthened worldwide... and major

96

 $^{^{\}rm 309}$ or in more colloquial terms: follow the money.

³¹⁰ UN, "World Economic and Social Survey 2013," 6.

³¹¹ Ibid., 5.

³¹² Ibid., 6.

³¹³ Ihid

advocates of financial globalization have modified their position... highlighting the risks."314 of rapid capital inflows and outflows.

Even worse, it seems that "coalitions of stakeholders orchestrated by political leaders"315 acted knowingly:

The resulting 2007-08 financial and economic crisis demonstrated that political leaders and allied stakeholders, including bankers, borrowers, brokers, guarantors, and regulators who worked together in the pursuit of this desirable social objective and acted in their respective interests, manufactured a systemic risk event with catastrophic consequences for the financial system and the economy.³¹⁶

Even after the crisis.

Political leaders did not offer true reform, however, because they failed to recognize that they themselves had established and supported the mispricing of financial guarantees supporting subsidized loan programs and that such mispriced guarantees had fueled a boom that could only lead to a market crash and a banking crisis. Out of their lack of understanding, or leadership, they failed the community.³¹⁷

The consequences to other countries were also severe, "as evidenced by the frequency of financial crises in recent years and the contagion effects arising from such crises."318 The impact of the estimated 25% loss of GDP translates in dramatic injury to the lives of tens of millions and their families, extremely high rates of unemployment, especially among the youth, loss of hope and self-esteem, stress in personal lives and families, strained relationships and increased incidence of unhealthy and dysfunctional behavior. We cannot be insensitive to the plight of hundreds of millions, innocent victims of the wanton and reckless irresponsibility of a few.

³¹⁴ Ibid.

³¹⁵ Jean-Pierre Berliet, Risk shifting, Justice, and Solidarity in Catholic Social Teaching, 47.

³¹⁶ Ibid., 45.

³¹⁷ Ibid., 57.

³¹⁸ UN, "World Economic and Social Survey 2013," 8.

If the proper legal instruments to assign responsibility and extract financial compensation are not in place, at least we should ensure that international initiatives are developed to avoid this from happening again. A parallel might be drawn with acid rain originating in the UK's emissions, polluting Sweden's lakes and forests.³¹⁹ This prompted the first environmental conference in Stockholm, Sweden in 1972 and the subsequent progress in global concern and action. In the case of financialization, the damages are considerably greater and consequently merit more decisive action.

Abuses in financial liberalization have negative consequences on markets. Policies consistent with Human Ecology should foster an economy that grows at the pace of the growing demand for goods and services that people really need, not consumerism. Then, the alignment and integration of entrepreneurship, human work, technology, capital, intermediate goods, and natural resources can generate value which accrues to people and society.

Financial activity should be a part of this process, supporting financial needs such as credit, collateral, cash-flow, transactions, and investment. When financial activity is not geared to providing services but rather exploiting the imbalances of markets, or even generating imbalances for that purpose, it no longer serves society. It should be regarded as a risky activity, just as extreme sports, smoking, or gambling are, and highly regulated so as to constrain its risk to willing and informed agents, and certainly, not entitled to protection from failure, even less, protection funded by taxpayers.

³¹⁹ Guruswamy, International Environmental Law, 35, or the Trail Smelter case, 500.

Of course, risky activity that harms innocent bystanders should be prohibited and penalized. A government fails its duty to protect the common good, when it does not protect the savings and livelihoods of people, by allowing or even encouraging the risk-prone behavior of financial agents with misaligned incentives, leading to bubbles, systemic crises and market failures. If, additionally, it has yielded to pressures or incentives from the financial industry, it is guilty of mendacity and corruption.

The underlying factors, however, are a significant challenge. Unlimited growth in the economy and in profits are basically non-negotiable foundations of the current system. The actions to control the 2008 financial crisis

were largely regarded as temporary measures, necessary evils in the restoration of a free-market economy... Their ultimate goal was to protect the pursuit of economic growth. Throughout the crisis, that was the one non-negotiable: that growth must continue at all costs. Renewed growth was the end that justified interventions unthought of only a few months previously. No politician seriously questioned it.³²⁰

There is unwillingness to acknowledge that the prevailing economic paradigm's flaws produced the crisis.³²¹ The fingerprints of the financial sector are in the deregulation that ushered the crisis. Jackson affirms: "The growth imperative has shaped the architecture of the modern economy. It motivated the freedoms granted to the financial sector. It stood at least partly responsible for the loosening of regulations, the over-extension of credit and the proliferation of unmanageable (and unstable) financial derivatives."³²² The more proximate cause being "that the unprecedented consumption growth

99

³²⁰ Tim Jackson, Prosperity Without Growth, 21.

 $^{^{321}}$ lbid., 21, "And yet allegiance to growth was the single most dominant feature of an economic and political system that led the world to the brink of disaster."

³²² Ibid.

between 1990 and 2007 was fueled by a massive expansion of credit and increasing levels of debt"³²³, but the root cause is the unquestioned goal of growth itself: "the roots of the economic crisis... lie at least in part in the concerted effort to free up credit for economic expansion across the world... The very policies put in place to stimulate growth in the economy led eventually to its downfall. The market was undone by growth itself."³²⁴ Growth is not bad in itself, but uncritical support for it is not healthy as we'll see in the following section.

c) The question of growth

As we see, the uncritical option for growth by governments and international institutions, is a serious challenge. "Economically, continued growth in emerging economies in particular, can be an engine of growth for the world economy and provides opportunities for other developing countries." 325 Growth can be good, providing income which trickles down 326 to improve the income of the poor, generating more income for taxes and pension funds and fueling the cycle of consumption and production generating jobs and income. However, growth can also be a misaligned incentive for exploitation and squandering of natural resources, unsustainable lifestyles and development policies, debt, corruption and distorted political influence.

Given that continued economic growth is emphasized to achieve the SD goals, it is important to assess if this growth can continue as planned, and can

³²³ Ibid.

³²⁴ Ibid., 30.

 $^{^{\}rm 325}$ UN, "World Economic and Social Survey 2013," 8.

³²⁶ Trickle down is posed as market-generated benefits for all in society, but as will be argued, ineffective.

be effective in achieving those goals. "There are concerns not only about external shocks, but also about heterogeneity in growth experiences, i.e., about the fact that progress is not uniform." To reduce all extreme poverty, current growth rates are not enough: "of every \$100 worth of growth in world per capita income, the poor received only ... \$0.60 during 1990-2001." 328

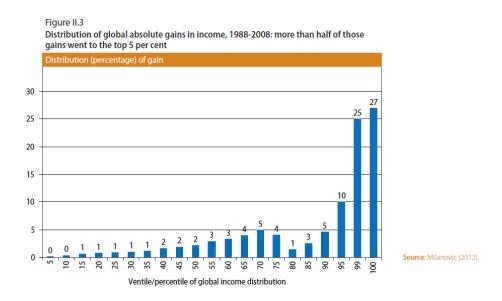


Table 2 - Source: Milanovic (2012).329

Doubling the world per capita income would raise the income of the poor in only 15 cents of a dollar per day. ³³⁰ Relying on growth to eradicate poverty is, therefore, not a serious solution. ³³¹

Although growth is assumed to be good, there are distortions when growth is not directly related to supplying real needs of the population. The tendency "is to cast prosperity in economic terms and to call for continuing

³²⁹ Ibid., 29.

³²⁷ UN, "World Economic and Social Survey 2013," 6.

³²⁸ Ibid., 28.

³³⁰ Figures for 2010: yearly \$9097, per day \$24.92. World Bank Development Indicators 2010 at http://siteresources.worldbank.org/DATASTATISTICS/Resources/GNIPC.pdf

 $^{^{331}}$ Other views for addressing the issue of poverty are explored further in Section 2, Social Development, c) The Poverty and Inequality Challenge..

economic growth as the means to deliver it. Higher incomes mean increased choices, and improved quality of life for those who benefit from them... A rising per capita GDP, in this view, is equivalent to increasing prosperity."332 This is a reductive concept of authentic wellbeing, but "undoubtedly one of the reasons why GDP growth has been the single most important policy goal across the world for most of the last century."333

Starting in the mid-1990s, discussion arose regarding the "relationship between economic growth and well-being... [because] beyond a certain point of economic growth measured in terms of GDP, GNP, or GNI, the quality of life needs to become a higher priority in development" or it begins to deteriorate.³³⁴ Higher GDP or GNP "only reflects increased spending of a nation, whether that spending is good or bad. It ignores the social and environmental costs (externalities) associated with growth and therefore can be a misleading measure of progress and well-being."335

Luxury or entertainment goods and services can enhance quality of life. When elites enjoy them with restraint and display an austere, industrious attitude, society maintains a sober balance. As elites indulge wantonly, expectations rise and frustration and disorder grows. Nowadays, easier credit, resulting from looser financial regulation, has allowed many people to indulge beyond their means with dire consequences, both for them and society as a whole.

³³² Jackson, *Prosperity Without Growth*, 3.

³³³ Ibid.

³³⁴ Amadei, Engineering for Sustainable Human Development, 62.

³³⁵ lbid., 62. Amadei stated (in private conversation, 2014), as an example, that when crime grows, GDP grows as well.

If most consumption is absorbed by luxury or entertainment goods and services, financial resources (credit or cash) are squandered, wealth diminished, human work and natural resources spent and gone. To facilitate disposable income, debt is enabled, even irresponsibly. Another distortion is using natural non-renewable resources to fuel growth, without trading for renewable, productive value such as education, useful public infrastructure, or capacity building. Government deficits add to this due to large bureaucracies, waste and corruption, reducing wealth instead of increasing it.³³⁶

Encouraging consumerism to fuel growth is irresponsible and ultimately weakens the economy and society. Government and business leaders must discriminate between good and bad growth and measure it reliably.³³⁷ As Amadei notes, qualities "of economic growth are as important as growth itself... If growth negatively affects the environment,...[or] produces junk products and services,...[or] concentrates wealth in the hands of a few,...[or] is controlled by a powerful few,...[or] is about consumerism, it is not development."³³⁸ "The vision of social progress that drives us—based on the continual expansion of material wants—is fundamentally untenable. And this failing is not a simple failing short from utopian ideals. It is much more basic. In pursuit of the good life today, we are systematically eroding the basis for well-being tomorrow."³³⁹

-

³³⁶ Frank Shostak, "What is up with the GDP?" "If a government embarks on the building of a pyramid, which adds absolutely nothing to the well-being of individuals, the GDP framework will regard this as economic growth. In reality, however, the building of the pyramid will divert real funding from wealth-generating activities, thereby stifling the production of wealth."

³³⁷ Ibid., "The GDP framework cannot tell us whether final goods and services that were produced during a particular period of time are a reflection of real wealth expansion, or a reflection of capital consumption."

³³⁸ Amadei, Engineering for Sustainable Human Development, 61.

³³⁹ Jackson, *Prosperity Without Growth*, 2.

Considering the finite nature of resources³⁴⁰, it is a valid question "whether economic growth is still a legitimate goal for rich countries, when huge disparities in income and well-being persist across the globe and when the global economy is constrained by finite ecological limits."³⁴¹ More worrying is that rich countries set the trends and standards for desirable lifestyles for developing countries, not only by example, but even deliberately as a strategy to grow their markets for consumer goods. "Unfortunately, the old paradigm of economic growth as the only measure of economic success is still deeply rooted in the minds of policy makers, economists, and development agencies, But... a consensus seems to exist that alternatives to these purely economic development indices need to be considered and that 'we need to re-think the economic sources of well-being' in rich and poor countries alike."³⁴² The factors that determine the rate and nature of healthy growth have to be discerned and managed accordingly.

We have seen in these previous sections, the ambiguities and harmful consequences of the much promoted goals of globalization's convergence and economic growth, and even more so, the damage as a consequence of unfettered financialization. These are often misleadingly presented as solutions to poverty and inequality. The next section deals with the challenge of growing and persistent inequalities that undermine a healthy human environment.

_

³⁴⁰ UN, "Agenda 21," §4.6. Some economists are questioning traditional concepts of economic growth and underlining the importance of pursuing economic objectives that take account of the full value of natural resource capital.

 $^{^{341}}$ Jackson, Prosperity Without Growth, 17.

³⁴² Amadei, Engineering for Sustainable Human Development. 66

d) Persistent inequalities

By the standard of achieving US\$1.25/day, poverty and global income inequality has receded slightly in recent years, but inequalities within many countries have been rising³⁴³.

Table 3 - Gross national income per capita 2010 in US\$

AREA	PER YEAR	PER DAY
World	9,097	24.92
Low income	510	1.40
Lower middle income	1,658	4.54
Low & middle income	3,304	9.05
Middle income	3,764	10.31
Upper middle income	5,884	16.12
High income	38,658	105.91
East Asia & Pacific	3,691	10.11
Europe & Central Asia	7,214	19.76
Latin America & Caribbean	7,802	21.38
Middle East & North Africa	3,839	10.52
South Asia	1,213	3.32
Sub-Saharan Africa	1,165	3.19
Euro area	38,580	105.70

Being more specific, "[m]ore than two thirds of global inequality is explained by differences in income between countries, and only one third by the distribution patterns within countries.... At the same time, financialization

³⁴³ World Bank Group "Africa Continues to Grow Strongly but Poverty and Inequality Remain Persistently High."

has increased executive compensation and wages at the very top of the income distribution."³⁴⁴ A worldwide comparison is given in the chart of the previous page.³⁴⁵

In developing countries, inequality is related to lack of job opportunities, particularly if growth is related to commodity exports. "In East and South-East Asia, structural change from a primarily agricultural to a modern economy... is an important driver of inequality."³⁴⁶ These inequalities are complex and driven by direct and indirect impacts of globalization and "many, often structural and country-specific factors, and they are tightly linked to social, environmental and political inequalities... Left unaddressed, these inequalities threaten sustainable development prospects in multiple ways"³⁴⁷

In terms of social development, large inequalities constrain life choices for individuals and perpetuate unequal economic and social opportunities, i.e., inequality of outcome translates into inequality of opportunity... persistent inequalities increase the chances of lower development outcomes in health, including under-nutrition and stunting, and in education, including school enrolment and learning outcomes.³⁴⁸

Inequality also contributes to social tension, conflicts, and is one of the most significant factors undermining wellbeing and happiness. In *The Spirit Level*, Pickett and Wilkinson show the "pernicious effects that inequality has on societies: eroding trust, increasing anxiety and illness, (and) encouraging excessive consumption"³⁴⁹. The work identifies multiple health and social problems including drug abuse, imprisonment, obesity, social mobility, violence,

³⁴⁸ Ibid., 10.

 $^{\rm 349}$ Richard Wilkinson, The Spirit Level.

106

³⁴⁴ UN, "World Economic and Social Survey 2013," 9.

³⁴⁵ World Bank Development Indicators 2010.

³⁴⁶ UN, "World Economic and Social Survey 2013," 10.

³⁴⁷ Ibid., 9.

^{. . . ,}

and teenage pregnancies. For each of these, "outcomes are significantly worse in more unequal rich countries". 350

Economic development is necessary but its reliance on current dynamics of growth and global markets should be revised to align it better with the common good. The political efforts supporting globalization and growth argue that their purpose is to fight poverty and inequality, but as we have seen, this is not supported by the data, and to be honest a more direct and effective approach is needed.

2. Social Development and the Human Person

As we saw in chapter 1, the pragmatism that dominates the policy sciences considers only the basic material and economic aspects of the human person, ignoring the moral and spiritual. Even the cultural is reduced to its picturesque expressions. In developing countries, the UN with USAID have promoted contraception, sterilization, abortion, and a sexual education which promotes sexual liberation and gender ideology, without any regard for local cultural values. Likewise, in a way evocative of past colonialism, president Obama's 2011 Memorandum promoting LGBT rights as a cornerstone of its foreign policy ignored differing views in other countries.³⁵¹ Enacting this policy, USAID promotes allies and local organizations in foreign countries, demanding

-

³⁵⁰ Richard Wilkinson, "Why is Equality Better for Everyone?" See also Richard Wilkinson, "Beware False Rebuttals," and a supporting independent study by Karen Rowlingson, "Does Income Inequality Cause Health and Social Problems?"

³⁵¹ Barack Obama, Presidential Memorandum, "International Initiatives to Advance the Human Rights of Lesbian, Gay, Bisexual, and Transgender Persons."

legal recognition of sexual orientation and gender identity, and criticizing bans on homosexual propaganda to minors, classifying faith-inspired groups as foes, along with Neo-Nazis and paramilitary groups.³⁵² Respect for cultures is subordinated to MDGs/SDGs and political agendas.

Although the Rio Declaration put the human person at the center of its concerns, it focused more on economic and ecological issues. The main point regarding humans was working on poverty and inequality. It briefly mentioned sustainable livelihoods. The Millennium Development Goals (MDGs) took eight years more, and it took two more years to include Social Development as a third pillar in SD. The MDGs of 2000, and the SDGs of 2015, address important and basic needs. Recognizing that, three related dangers must be avoided.

One danger is to be limited to the MDGs/SDGs and overlook many other needs of the world's poor. For example, Guruswamy had repeatedly warned that without access to efficient energy, most of the MDGs are unachievable.³⁵³ "Both Brugger and Guruswamy make the case for a right to energy and the duty to honor that right"³⁵⁴ which "can only be addressed as part of the overall right to economic and social development established by the foundational norm of SD."³⁵⁵ That has been remedied with SDGs' 7th goal, but the tendency to overlook other needs remains.

352 USAID, "LGBT Vision for Action," 5, 9.

³⁵³ Guruswamy, *International Energy and Poverty*, 2, "The lack of energy access faced by the Energy Poor greatly inhibits their ability to live safe and productive lives, and more broadly, it inhibits the ability of civilizations to develop and eradicate poverty."

³⁵⁴ Ibid., 316.

³⁵⁵ Ibid., 61.

The second danger is a paternalistic and optimistic social engineering mindset, which believes that societies can be designed and planned, avoiding significant unintended consequences. Social Development should respect people's freedom and capacity to make choices regarding their development.

The third danger is a focus on outcomes overlooking the dynamics necessary to produce them.³⁵⁶ This danger of prioritizing outcomes became evident as the attention of the UN system focused on the MDGs, neglecting the Sustainable Livelihoods approach.

Agenda 21, a document noted above produced by the Rio 1992 Conference clearly recognizes that "poverty is a complex multidimensional problem... No uniform solution can be found for global application." It places sustainable livelihoods as the long term objective and "integrating factor that allows policies to address issues of development, sustainable resource management and poverty eradication simultaneously." 358 Interestingly, associated with sustainable livelihoods, it emphasizes the human dimension by mentioning "integrated human development... local control of resources, local institution-strengthening and capacity-building... investment in human capital, with special policies and programs directed at rural areas, the urban poor, women and children." It also addresses "the areas of basic education, primary/maternal health care, and the advancement of women." 360

356 Ibid., 317-318.

³⁵⁷ UN, "Agenda 21," §3.1.

³⁵⁸ Ibid., §3.4.

³⁵⁹ Ibid.

³⁶⁰ Ibid., §3.6.

Noting that "Peoples' organizations, women's groups and non-governmental organizations are important sources of innovation and action at the local level and have a strong interest and proven ability to promote sustainable livelihoods,"³⁶¹ it supports, among other initiatives, "Empowering women... Respecting the cultural integrity... grass-roots mechanisms to allow for the sharing of experience and knowledge... Giving communities a large measure of participation in [managing] local natural resources."³⁶² Additionally, it identifies a number of measures to act upon, all of which strengthens the social fabric and web of relations that supports *sustainable livelihoods*.

Sustainable Livelihood as a concept appeared in the 1987 Brundtland Report. Livelihood appears there 27 times with qualifiers such as 'adequate', 'stable', 'sustainable', seven times associated with the latter. In 1992, Agenda 21 incorporated the term from the Brundtland Report and from recent work as "the sustainable livelihoods concept by Robert Chambers and Gordon Conway in 1991. By 1996 "important donor institutions such as Care, Oxfam, the United Nations' Development Programme (UNDP), and the UK Department of International Development (DFID) had adopted the Sustainable Livelihoods Approach (SLA) as basis for their development programmes and practices. Approach (SLA) as basis for their development programmes and practices.

Certainly, a "reason for the success of SLA... was that it offered a fresh vision of a holistic and/or integrative approach with the capacity to analyse and

³⁶¹ Ibid., §3.7.

³⁶² Ibid.

³⁶³ UN, Our Common Future, 1987. Chapter 2, 56; Chapter 4, 46; Chapter 5, 2, 40, 59, 80.

³⁶⁴ Per Knutsson, "The Sustainable Livelihoods Approach," 90. Chamber and Conway defined it as: "a livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation."

³⁶⁵ Ibid.

understand the complexity of rural development."³⁶⁶ In 1998 it could be said that the "concept of 'sustainable rural livelihoods' is increasingly central to the debate about rural development, poverty reduction and environmental management."³⁶⁷ It went beyond the limited approach of measuring income or consumption to assess poverty levels, identifying the underlying resources and capacities that had to be developed, and the critical mass of assets needed, so as to escape poverty on a sustainable basis.

It has been said that some "approaches to sustainable development, such as the Sustainable Livelihoods Approach, are genuinely transdisciplinary as they are produced, disseminated and applied in the borderland between research, policy, and practice,"368 which makes it very compatible with a sound Human Ecology. The "elaboration of policy-oriented livelihood frameworks, the description and analysis of driving forces, pressures, and impacts of all types of activities related to the local livelihood situation,"369 are consistent with the complex interaction of the many factors which Human Ecology considers in the flourishing of the human person.

The sustainable livelihood approach also distinguishes in the vulnerability context, the factors related to the individual and his circumstances and those of the broader context as they need practical interventions at the local level, or strategic interventions at the systemic level respectively. Knutsson, on the premise that "we need integrative or holistic

³⁶⁶ Ibid.

³⁶⁷ Ian Scoones, "Sustainable Rural Livelihoods," 3.

³⁶⁸ Per Knutsson, "The Sustainable Livelihoods Approach," 90.

³⁶⁹ Ibid., 90.

approaches in order to further our understanding of sustainable development processes and establish effective policies and practices," has highlighted the challenges in terms of assessing knowledge integration for the purpose of production, dissemination and application.³⁷⁰ Assessing resources (different capitals), mix of strategies, institutions and processes, and a variety of relevant outcomes is certainly more complex than measuring income and consumption. The "analysis of sustainable livelihoods... provides a holistic and integrated view of the processes by which people achieve (or fail to achieve) sustainable livelihoods."³⁷¹

Although emphasized in the *Brundtland Report* and in *Agenda 21*, the importance of Sustainable Livelihoods was greatly diminished at the Johannesburg Summit and almost totally absent from the Sustainable Development Challenges report of 2013.³⁷² Sustainable Livelihoods does not appear in the Johannesburg Declaration,³⁷³ and is mentioned only four times in the Implementation Plan,³⁷⁴ always in the reduced context of employment and income generation, thus losing its holistic approach. The UN may have focused more on the MDGs as being more easily measurable and simpler to explain, with greater appeal for mass media as well as contributing parties. Unfortunately, this is at the expense of a more complex but more solid approach which could provide truly sustainable outcomes.³⁷⁵

-

³⁷⁰ Ibid., 91-92.

³⁷¹ Ian Scoones, "Sustainable Rural Livelihoods," 13.

 $^{^{\}rm 372}$ UN, "World Economic and Social Survey 2013."

³⁷³ UN, "Johannesburg Declaration."

³⁷⁴ UN, "Johannesburg Implementation Plan."

³⁷⁵ Amadei, *Engineering for Sustainable Human Development*. 492. On holistic and multidisciplinary approaches, see also 67–68, 337–340, 476.

a) What is social development?

Chapter 1 identified two sources for defining social development: the documents issued by the summits on environment and SD, and the Copenhagen Declaration on Social Development.³⁷⁶ Social Development can be construed as embracing the general themes of poverty, inequality, women's rights, gender equality and human development ³⁷⁷ as well as the specifics of "basic requirements as clean water, sanitation, adequate shelter, energy, health care, food security and the protection of biodiversity," ³⁷⁸ although this is limited and still needs to be complemented with the social and spiritual dimensions.

The most common approach is the one found in paragraph 6.23 of *Agenda 21*. It addresses the needs of vulnerable groups, but it is reasonable to extend it to humans in general as it seeks that people "be allowed to develop to their full potential (including healthy physical, mental and spiritual development); ... develop, establish and maintain healthy lives; ... perform their key role in society; and [be supported] through educational, economic and technical opportunities." 379

The Copenhagen document is more comprehensive as it proposes "a political, economic, ethical and spiritual vision for social development that is based on human dignity, human rights, equality, respect, peace, democracy, mutual responsibility and cooperation, and full respect for the various religious

³⁷⁶ UN, Copenhagen Declaration on Social Development.

³⁷⁷ UN, Johannesburg Declaration; Johannesburg Implementation Plan, chapter 2; Rio+20, The Future We Want, §§2, 4.

³⁷⁸ UN, Johannesburg Declaration, §18; Johannesburg Implementation Plan, chapter 6.

³⁷⁹ UN, Agenda 21, §6.23.

and ethical values and cultural backgrounds of people"380 addressing "social problems, especially poverty, unemployment and social exclusion... both their underlying and structural causes and their distressing consequences,"381 responding "to the material and spiritual needs of individuals, their families and the communities... as a matter of urgency but also as a matter of sustained and unshakeable commitment."382 It recognizes "that people are at the centre of our concerns for sustainable development and that they are entitled to a healthy and productive life in harmony with the environment"383 and the commitment to allow that they "may exercise the rights, utilize the resources and share the responsibilities that enable them to lead satisfying lives and to contribute to the well-being of their families, their communities and humankind."384 It acknowledges "the family as the basic unit of society... that it plays a key role in social development and as such should be strengthened... entitled to receive comprehensive protection and support."385

It seeks to build rule of law, accountable democracy, human dignity, social justice and solidarity; inclusion of all in political, economic, social and cultural life; equitable distribution of income, equal opportunity and equality among genders and for those more vulnerable or with disabilities,³⁸⁶ "an

³⁸⁰ UN, Copenhagen Declaration on Social Development, §25.

³⁸¹ Ibid., §2.

³⁸² Ibid., §3.

³⁸³ Ibid., §8.

³⁸⁴ Ibid., §9.

³⁸⁵ Ibid., §26 (h).

³⁸⁶Ibid., §26.

economic, political, social, cultural and legal environment that will enable people to achieve social development."³⁸⁷

This includes freedom and inclusion that should be accessible to all. Every person, due to his dignity should have the opportunity to earn a decent living, participate in society, and learn new knowledge and skills. Social issues are closely related with the environment and the economy. Of course, poor and vulnerable people are often more challenged in their access to these freedoms, goods and services, and to energy, clean water and air, health care and education. Social Development, understood as caring for the well being of the individual persons and the social space which fosters that, also includes the cultural, social, and civic space which allows for the exercise of freedoms, the relevant participation in self-government and the decisions affecting life and community, and the reasonable and healthy pursuit of interests and activities which fulfill their social, cultural and spiritual needs. The Copenhagen summit considers not only the goals but also the underlying and structural causes and the enabling economic, political, social, cultural and legal environment. This reflects a more comprehensive and integrated approach than focusing on specific and separated outcomes or goals.

b) Demographic Issues

Population is an important factor in social development. As I intend to explain in this section, not because population is growing too much, but because the United Nations entities and other interested parties are making the

-

³⁸⁷ Ibid., §29.

case for it, and as a consequence, are pushing harmful policies all over the world, inflicting serious damage to the life and dignity of many people.

The 2013 UN Survey on SD identified major demographic changes,³⁸⁸ as a megatrend which impacts Social Development. These changes reflect variations in population based mainly on migration, death and birth rates. In general, as access to health gets better, death and birth rates have declined. People live longer, so fewer people die each year.³⁸⁹ As parents start to believe that more of their children will live, and live longer, they have fewer children. Population growth rates are declining in many countries, even below replacement level.³⁹⁰ "The global population reached 7 billion in 2011 and will continue to grow, albeit at a decelerating rate, to reach a projected 9 billion in 2050."³⁹¹

A phenomenon called Population Momentum, occurs when a larger proportion of the population's age is best for childbearing and productivity in terms of work. As some of the population is too young or too old to work, society is highly dependent on the portion of people that can work. Patterns in developed countries suggest a demographic transition from an initial state of high fertility and high mortality to a state of low fertility and low mortality, with a stage of Population Momentum that "presents opportunities for reaping a demographic dividend... However, this dividend will pay out only if those

_

³⁸⁸ UN, "World Economic and Social Survey 2013," 3.

³⁸⁹ Ibid., 12, "Owing to improvements in nutrition and public health and social development more broadly, mortality is declining throughout the world."

³⁹⁰ Ibid., 11, "Fertility is below replacement level in countries that account for almost half of the global population, namely, most developed countries, but also China."

³⁹¹ Ibid., 11.

economies can create employment opportunities"³⁹² At the same time, falling fertility rates may lead to a smaller working population segment, which will be stressed to cope with the burden assigned to them.³⁹³

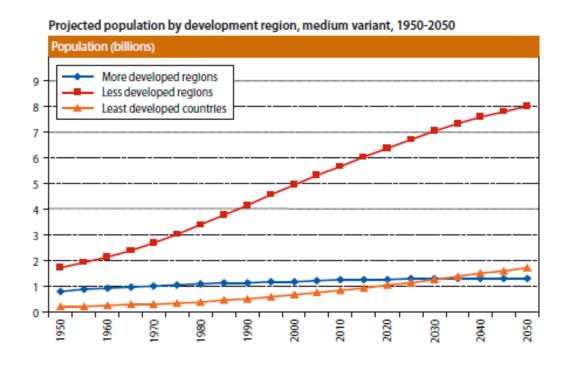


Table 4 - Source: UN, Dept of Economic and Social Affairs, Population Division (2011) 394

Another issue closely linked with economics, as well as politics and violence, is migration which is projected to continue due to violence and lack of opportunities. Population growth "is still high in some developing countries... [with] an increase in the proportion of youth... [which] combined with persistent inequalities, in turn creates migratory pressures."³⁹⁵

³⁹² Ibid., 13.

³⁹³ Ibid., 13. "Population ageing is most advanced in developed countries, leading to sharp increases in dependency ratios and putting a strain on those countries' health and pension systems."

³⁹⁴ Ibid., 13.

³⁹⁵ Ibid., 11.

Apparently, the authors of this UN report would prefer no population growth, although overpopulation is no longer seen as an issue by both the scientific and the international political community³⁹⁶ and population control has been discredited because of the many human rights abuses that it has caused. The New York Times recently recognized in a video report, including Paul Ehrlich and other scientists and activists, that the overpopulation scare was way overblown. Ehrlich forecasted that in the 70s, famines would starve hundreds of millions of people, advocating coercive methods of population control. In India, more than 8 million women were sterilized, many forcibly. In the 46 years since Ehrlich's prediction, undernourishment in developing countries did not increase but receded from 33% to 14%, while world population duplicated. Still, Ehrlich is unwilling to recant.³⁹⁷

The video closes with concerns for lack of population in Europe, Japan, China, America and Germany.³⁹⁸ The accompanying article highlights concerns of damage to the environment by the overconsumption of the richest segment of the population.³⁹⁹ The New York Times, however, "conveniently fails to mention that it helped to fan the flames of the overpopulation panic. It advocated setting up population control programs, and editorialized on behalf of the billions of dollars in funding that continues to fuel the anti-people movement down to the present day."⁴⁰⁰

³⁹⁶ Haberman, "The Unrealized Horrors of Population Explosion," "To some extent, worrying about an overcrowded planet has fallen off the international agenda."

³⁹⁷ Ibid.

³⁹⁸ Ibid.

³⁹⁹ Ibid., Fred Pearce, expert in global population, also says: "The world's richest half billion people — that's about 7 percent of the global population — are responsible for half of the world's carbon dioxide emissions. Meanwhile, the poorest 50 percent of the population are responsible for just 7 percent of emissions."

⁴⁰⁰ Steven Mosher and Anne Morse. "The New York Times Throws in the Towel on 'Overpopulation'".

It also did not mention that as the horrors predicted by Ehrlich did not come to pass, the overpopulation panic caused worse horrors as in "the human costs when governments made population control a priority... the savage forced abortions and forced sterilizations that followed... the killing of baby girls through female infanticide and sex-selective abortion... the wasted money, the age and gender imbalances that continue to unfold and will take effect for years to come."401 Brutal policies and abuses well documented in China, Myanmar, Uzbekistan and Peru are only a few examples of the "past half century [that] has seen tens of millions of men and women sterilized without their consent and tens of millions of women forcibly aborted."402 In a hopeful development of this new view on population issues, Vietnam is poised to reverse its population control coercive policies.⁴⁰³

Nevertheless, the mindset of reducing population growth in developing countries has been prevalent in recent UN documents, emphasizing the support for reproductive health programs. Meanwhile, lip service is paid to changing lifestyles and unsustainable consumption patterns in developed countries, but no real action is taken. This double standard appears clearly in Rio's documents. The Declaration's Principle 8, states: "States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies." 404 This does not translate equally into action. The table compares professed goals of *Agenda 21* with their urgency and

⁴⁰¹ Ibid.

⁴⁰² Ibid.

⁴⁰³ Paul Wilson, "Vietnam Poised to End Two-Child Policy;" Thanh Nien News, "Vietnam rethinks two-child policy amid declining birth rate."

⁴⁰⁴ UN, "Rio Declaration," §8.

proposed budgets for the goals of changing consumption patterns (Chapter 4) versus demographic dynamics (Chapter 5).⁴⁰⁵

	AGENDA 21	
Issue	Description of urgency/priority	Yearly Budget
Chapter 4 CHANGING CONSUMPTION PATTERNS	 4.3 The major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production 4.5 Excessive demands and unsustainable lifestyles among the richer segments, place immense stress on the environment. 4.13 Unsustainable production and 	4.14. The Conference secretariat has estimated that implementation of this programme is not likely to require significant new financial resources.
	consumption patterns and lifestyles and their relation to sustainable development should be given high priority.	
Chapter 5 DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY	5.3. The growth of world population and production combined with unsustainable consumption patterns places increasingly severe stress on the life-supporting capacities of our planet.	[5.2-5.15] Developing and disseminating knowledge 5.7 average total annual cost of programme to be about \$90 million
	5.4 World's population is expected to exceed 8 billion by the year 2020.	[5.16-5.41]Formulating integrated national policies
	5.16 Demographic trends and factors as elements have a critical influence on consumption patterns, production, lifestyles and long-term sustainability	5.36 average total annual cost of programme to be about \$90 million
		[5.42-5.66] Population & Reproductive health programmes
		5.57 the average total annual cost of this programme to be about \$7 billion

The need to change consumption patterns is stronger and of higher priority, but merits no budget to pursue it, while population and reproductive health programmes merit a budget of \$7.2 billion a year. This apparent bias, of course, would need a detailed analysis to verify. *Agenda 21* provides this very telling measure of budgets, which are not available in the Johannesburg or Rio

. . . .

 $^{^{405}}$ All info in the table excerpted from UN, *Agenda 21*.

+ 20 documents. The ideological focus on issues like overpopulation is distracting from the real issue of overconsumption and draining attention from real Social Development.

c) The Poverty and Inequality Challenge

In the previous section of Economic Development we have mentioned poverty and its reduction as the alleged goal of macroeconomic policies. We have also analyzed macroeconomic aspects resulting in a growing inequality which at the personal level increases the harmful effects of poverty.

Poverty is the consequence of complex causes, a "wicked" problem which cannot be solved. Wicked problems⁴⁰⁶ are easily identified when policy makers declare "war" on them, a disguised admission that many efforts have proven ineffective.⁴⁰⁷ Of course it should not surprise us since God Himself told us we'd always have the poor with us.⁴⁰⁸ Although we probably cannot expect to eradicate poverty, we can alleviate its impact in some degree. As noted earlier, financial growth alone is not the cure.⁴⁰⁹ However, there are other opinions.

In 2013, the World Bank Development Research Group published a document where it shows "growth in average incomes in Latin America in the 2000s was 1.2 percent per year on average, while the income share of the poorest 40 percent grew at 1.1 percent per year on average... income growth of the bottom 40 percent in Asia was at an even higher rate of 3.7 percent per year

⁴⁰⁸ The Holy Bible. Matthew 26,11, "For you always have the poor with you."

⁴⁰⁶ Gwyn Prins et al., "The Hartwell Paper," 7. Defining "wicked" or intractable problems.

⁴⁰⁷ Ibid., 15-16.

⁴⁰⁹ See section 1, c, of this chapter.

during the 2000s, because the overall average growth rate in Asia was so high." 410

According to them, "findings show that the poor on average benefit equiproportionally from overall growth, and these findings hold across most regional and temporal disaggregations of the data, and across a variety of further robustness checks."411 This implies that "policies and institutions that stimulate higher growth benefit the poor equiproportionately on average."412 They conclude that: "Incomes of the bottom 20 percent and bottom 40 percent of the income distribution generally rise equiproportionally with mean incomes as economic growth proceeds... [so]we can expect economic growth to lift people out of poverty and lead to shared prosperity on average."413

This argument seems maybe too convenient for the wealthy, allowing them to pursue greater income growth, with an easy conscience and no additional philanthropic effort, because the poor also benefit from growth, albeit equiproportionally. Their income grows hundreds of times that of the poor, but the World Bank has alleviated their social conscience as they foster growth because "it helps the poor". The paper by Dagdeviren, van der Hoeven and Weeks quotes Dollar and Kray stating that distribution-neutral growth is good for the poor, considering it "a rather strange statement, for it challenges the imagination to produce any growth pattern that would provoke the

. .

⁴¹⁰ David Dollar, "Growth Still Is Good for the Poor," 10-11.

⁴¹¹ Ibid., 12.

⁴¹² Ibid., 12.

⁴¹³ Ibid., 17. "We establish this result in a data-set spanning 118 countries and four decades... The result holds across decades, including in the 2000s -- hence the conclusion that "growth still is good for the poor.""

 $^{^{414}}$ If equiproportionally means that for an average increase of \$100, the poor will benefit in \$0.60, this proposition is inadequate.

converse phrase, 'growth is bad for the poor."⁴¹⁵ It seems rather self-serving, or at least, completely oblivious to the situation of the poor. Rather, the policy issue should be "not whether growth is or it is not good for the poor (it is except in extraordinary circumstances), but what policy measures can make it better for the poor."⁴¹⁶

Increased incomes for the poor are certainly better than none, but we have to ask if equiproportional rate is really adequate or enough. If any increase due to growth is distributed in the same proportion, it seems it would add a very small amount to the income of the poor, while increasing the gap of inequality with its questionable consequences. If equiproportionally means that for an average increase of \$100, the poor will benefit in \$0.60, this proposition is inadequate. As "growth alone is a rather blunt instrument for poverty reduction, since the consensus of empirical work suggests that it is distribution neutral," we might say that an equiproportional rise in income is not good enough. 418

There have been many "shifts, reversals and re-affirmations that have plagued the analysis of the interaction of growth, poverty and inequality."⁴¹⁹ In the 50s, there was the notion of a trade-off between growth and redistribution. The 70s favored redistribution strategies that would reduce poverty while not hampering growth. The 80s hinged on the rise of neo-liberalism and the

⁴¹⁵ Hulya Dagdeviren, "Redistribution Matters: Growth for Poverty Reduction," 15-16.

417 Ibid., 27.

⁴¹⁶ Ibid., 16

 $^{^{418}}$ lbid., 2, footnote 1, Promoting redistribution or poverty reduction are positions in this discussion.

⁴¹⁹ Ibid., 3.

Washington Consensus where growth would help reduce poverty through 'trickle down' mechanisms.

In the 90s, doubt was cast on the notion that growth would take care of poverty and discussion assessed cases of countries that combined growth and poverty reduction, as well as showing that poverty constrained growth. 420 It was also shown that recessions impact the poor more negatively while growth is distribution neutral and that a lower initial inequality helps growth in reducing poverty. 421 In this regard, it is "the growing consensus that countries with an 'initial condition' of relatively egalitarian distribution of assets and income tend to grow faster than countries with high initial inequality. This is an extremely important conclusion, because it means that reducing inequality strikes a double blow against poverty."422

The simple "choice is between poverty reduction through faster economic growth and reduction through redistribution." ⁴²³ It seems better to combine them given that "it is always the case, no matter what a country's per capita income or degree of inequality, that redistribution with growth is more efficient than distribution neutral growth in reducing the intensity of poverty." ⁴²⁴ In designing "a poverty reduction strategy, the central issue is the

 420 lbid., 4, footnote 8. "Accumulating empirical evidence suggested no consistent relationship among growth, inequality and poverty across countries and over time."

⁴²¹ Ibid., 2-3. "an 'initial condition' of greater asset and income equity enhances growth rates."

⁴²² Ibid., 12.

⁴²³ Ibid., 2.

⁴²⁴ Ibid., 19.

relative effectiveness of growth and redistribution, and whether the one enhances each other."⁴²⁵

Distribution policies are best when compatible with growth. "Investment in infrastructure, credit targeted to the poor, land redistribution and education can all be important mechanisms to make growth 'pro-poor'."⁴²⁶ Redistribution policies have to be tailored to the economy and level of development of each country. An agenda that could foster both growth and equity should consider that "equality provides a favorable 'initial condition' for rapid and sustainable growth... [and that] redistribution of current income and assets, or redistribution of an economy's growth increment"⁴²⁷ is feasible in most cases.

However, redistribution is not as neutral as growth, and the ethical aspect of it will not appeal to the wealthier segments of population. The challenge for "a redistributive strategy in any country is the construction of a broad political coalition for poverty reduction. The task of this coalition would be the formidable one of pressuring governments for redistribution policies, on the one hand, while neutralising opposition to those policies from groups whose self-interest rests with the status quo."428 Any solution will unearth ethical questions, but the issues extend beyond the duty of the affluent to help the poor. Poverty should be seen as an

emergent property of dysfunctional systems and institutions in the developed and developing world alike... a deeper root cause of that

_

⁴²⁵ Ibid., 12.

⁴²⁶ Ibid., 6.

⁴²⁷ Ibid., 27-28.

⁴²⁸ Ibid., 22.

dysfunction is an *internal poverty* existing in individuals and institutions. It expresses itself in the form of destructive forms of behavior, such as greed, fear, selfishness, competitiveness, and apathy among others. When these forms of behavior become habits, a dominant logic is created that perpetuates *external poverty* in society.⁴²⁹

Mere technical, or partial solutions that focus only in economics will not be enough to break this cycle. Solutions such as the sustainable livelihoods approach, take a more holistic view of the complex social interactions, including the support of families which is crucial to economic success⁴³⁰ as we've seen in the previous chapter and we'll elaborate more in chapter 5.

d) The Paradox of Happiness

Social Development aims at the well being of the person and to foster their flourishing, so it should not be limited to basic material needs. There is evidence that other aspects are even more relevant in the general wellbeing, satisfaction, or happiness of people. Just considering the economic, Hopkins notes that "[t]here is an increasing acceptance that the welfare of individuals is not solely determined by their material circumstances but also depends heavily on their relative position in society."⁴³¹ The empirical relationship between inequality and happiness has been difficult to establish and "researchers will have to be much more precise about the form of relative concerns they assume."⁴³²

⁴²⁹ Amadei, Engineering for Sustainable Human Development, 481-482.

 $^{^{\}rm 430}$ Mona Charen, What the Times Misses about Poverty.

⁴³¹ Ed Hopkins, Inequality, Happiness and Relative Concerns: What Actually is their Relationship?

⁴³² Ibid., 19.

However, besides the lesser impact of income and the effects of inequality in happiness, other issues challenge it. Considering the case of Eritrea, M. Wrong reports how, in 2013, Eritrea's government

patted itself on the back for achieving three health MDGs ahead of schedule: reducing infant mortality, improving maternal health, and combating HIV, malaria, and other diseases. It expects to check three more off the list by the end of this year.... U.N. Development Programme's representative in the country, Christine Umutoni, has hailed the government as a model for Africa, and a BBC documentary crew... confirmed the impression of a well-run health service.⁴³³

In the mindset of the creators of MDGs, people should thrive there. However, lacking free press, opportunity for civic participation, religious freedom and an accountable government among other things, people are leaving Eritrea, in the highest number of migrants to Europe, after Syria.⁴³⁴ Man does not live on bread alone.

Inequality, as seen in the previous section of Economic Development, is correlated with many social ills, but might also undermine happiness by both generating and frustrating false expectations. Studies show millennials more frustrated over not achieving the expectations they were raised on, than actual deprivation. Inequality emphasizes what you could have but do not, even if the possibility is not real but wishful thinking. The built-in expectation of achieving happiness through money generates envy, social tension, and frustration in both directions. Those who do not achieve wealth are frustrated; as are those who achieve wealth but do not experience the promised happiness.

⁴³³ Michela Wrong, "When Migrants Flee Progress, not War."

⁴³⁴ Ibid.

⁴³⁵ Tim Urban, "Why Gen Y Yuppies are Unhappy."

This experience of material success does not make them happier: "It's a paradox; the wealthier we get, the more depressed young people get." 436 On the contrary, personal connections seem to have more impact than money:

married people are happier, healthier, live longer, are richer per capita, and have more sex than single people... "The difference between an annual income of \$5,000 and one of \$50,000 is dramatic," Gilbert says. "But going from \$50,000 to \$50 million will not dramatically affect happiness"... Paraplegics are generally quite happy people.⁴³⁷

The Grant Study, started in 1938 at Harvard University to track 268 students through their entire lives, 438 confirms the value of personal connections. "As George Vaillant, the study director, sums it up in 'Triumphs of Experience,' his most recent summary of the research, 'It was the capacity for intimate relationships that predicted flourishing in all aspects of these men's lives." 439

Other studies show that when people experience more wealth, or even seeing themselves more successful than their peers, they tend to be less compassionate and more self-centered. Oo, wealth, or the experience of wealth as being on the affluent side of inequality, seems to foster selfishness and directly undermines the personal connections and the generosity which has been correlated with happiness. This also contributes to eroding goodwill and social capital. In the earlier section on Inequality, I have cited the studies of Pickett and Wilkinson where they provide harder data as they identify eleven

⁴³⁶ Craig Lambert, "The Science of Happiness."

⁴³⁷ Ibid.

⁴³⁸ Robert Waldinger, What makes a good life lessons from the longest study on happiness. At https://www.ted.com/talks/robert_waldinger_what_makes_a_good_life_lessons_from_the_longest_study_on_happiness

⁴³⁹ David Brooks, "The Heart Grows Smarter."

⁴⁴⁰ Paul K. Piff et al., "Higher social class predicts increased unethical behavior."

different health and social problems or issues, for each of which, outcomes are significantly worse in more unequal rich countries.⁴⁴¹

In a 1991 study involving surveys in 35 countries, published in *Athéisme et foi*, no correlation with happiness was found with levels of income or education. In another study, in Japan in 1954, in a scale from 1 to 4, the average happiness was 2.7. In 1991 with six times the income, the average happiness remained in 2.7. The stronger correlations were found with people living in small cities, having large families and networks of friends, and those who were "goodfinders" – capable of seeing the good aspects in most situations.

Strong correlations with happiness were also found with believers 43% vs non-believers 23%; married 42% vs single 23% or divorced 17%. In France, 35% say they are happy. In Mexico with average income 1/3 of France, 63% say they are happy. The classic study of Brickman in 1978, interviewed 22 lottery winners showing that their happiness level decreased. Generous people are 43% more happy than those who are not; and people who volunteer are 42% happier than those who don't. Generous people are less prone (32%) to depression than those who are not (68%).⁴⁴³

Just as inequality in terms of income might produce frustration, inequality in terms of perceived happiness could have a negative effect on those who feel excluded from the experience, suffering more acutely when happiness seems more pervasive, 444 hence, the paradox: "the happiest places tend to have

443 Brooks, Gross National Happiness.

⁴⁴¹ Wilkinson, Richard, and Kate Pickett. "Why is equality better for everyone?"

 $^{^{\}rm 442}$ Paul Poupard, Felicidad y Fe Cristiana.

⁴⁴⁴ Daly, Dark Contrasts: The Paradox of High Rates of Suicide in Happy Places."

the highest suicide rates."⁴⁴⁵ "Discontented people in a happy place may feel particularly harshly treated by life... the lows of life may thus be most tolerable in an environment in which other humans are unhappy."⁴⁴⁶ A similar situation is generated in social media⁴⁴⁷ as people compare their reality with the embellished image other portray of themselves,⁴⁴⁸ exacerbated by the meager quality of human interaction in that environment.⁴⁴⁹

Summarizing, it seems that UN documents identify in Social Development a dimension which must be considered in SD, consistent with claiming that "Human beings are at the center of concerns for sustainable development." 450 Unfortunately, the clear ideas in the Copenhagen Social Development Summit of 1995 have not been embraced in the SD documents, and the MDGs/SDGs, while a worthy initiative, fall short of an integral development such as promoted by Sustainable Livelihoods Approach or that of Engineering for Sustainable Human Development. 451 It is unfortunate to invest energy on muddled demographics, overlooking the strong and clear need for a better understanding of integral development, well-being for the human person, and the common good of society, the Human Ecology that fosters the authentic flourishing of the human person.

-

⁴⁴⁵ Ibid., Abstract.

⁴⁴⁶ Ibid., 10, "our results are reminiscent of the interesting finding by Platt et al 1992 that suicide rates by the unemployed seem to be higher in low-unemployment regions."

⁴⁴⁷ Holly B. Shakya, "A New, More Rigorous Study Confirms: The More You Use Facebook, the Worse You Feel."

⁴⁴⁸ Ibid., "While real-world social networks were positively associated with overall well-being, the use of Facebook was negatively associated with overall well-being. These results were particularly strong for mental health."

⁴⁴⁹ Ibid., "The nature and quality of this sort of connection is no substitute for the real world interaction we need for a healthy life."

⁴⁵⁰ UN, "Rio Declaration," Principle 1.

⁴⁵¹ Amadei, Engineering for Sustainable Human Development.

3. Environmental Protection

At the origin of environmental summits, the main concern was for the care of a rapidly degrading natural environment. Even as the need of economic development for developing countries was acknowledged, the condition remained that it should be sustainable, not compromising the natural environment. The 1972 Stockholm Declaration already contained all the significant considerations in this regard which would be developed in further conferences. The 1982 UN Convention on the Law of the Sea made a successful and significant contribution to environmental protection. The 1992 UN Conference on Environment and Development in Rio embraced the concept of Sustainable Development proposed in the 1987 *Brundtland Report*, stating that "environmental protection shall constitute an integral part of the development process." In the effort "to conserve, protect and restore the health and integrity of the Earth's ecosystem... [it was established that] States have common but differentiated responsibilities."

The Rio conference also developed *Agenda 21*, "a global consensus and political commitment at the highest level on development and environment cooperation." ⁴⁵⁵ This detailed plan included specific strategies for environmental protection, management and restoration of ecosystems and natural resources, as well as the involvement of major groups and means of

_

⁴⁵² UN, "Stockholm Declaration."

 $^{^{453}}$ UN, "Rio Declaration," Principle 4.

⁴⁵⁴ Ibid., Principle 7.

⁴⁵⁵ UN, Agenda 21, §1.3.

implementation. The Climate Change issue, presented in the *Brundtland Report* was also addressed throughout *Agenda 21*.456

The 2002 Johannesburg Declaration on Sustainable Development reaffirmed previous commitments but found that "the global environment continues to suffer" in loss of biodiversity, depletion of fish stocks, encroaching deserts, effects of climate change and air, water, and marine pollution.⁴⁵⁷ As a response, it promoted "the integration of the three components of sustainable development—economic development, social development and environmental protection—as interdependent and mutually reinforcing pillars. Poverty eradication, changing unsustainable patterns of production and consumption and protecting and managing the natural resource base of economic and social development"458 were the objectives declared.

This declaration also acknowledged "the importance of ethics for sustainable development and, therefore, emphasize[d] the need to consider ethics in the implementation."459 These objectives were repeated almost verbatim in the Rio + 20 document, which added "the need to achieve sustainable development by promoting sustained, inclusive and equitable economic growth, creating greater opportunities for all, reducing inequalities, raising basic standards of living, fostering equitable social development and inclusion, and promoting integrated and sustainable management of natural resources and ecosystems."⁴⁶⁰ Rio + 20 also emphasized the need for harmony

⁴⁵⁶ Ibid.

⁴⁵⁷ UN, "Johannesburg Declaration," §14.

⁴⁵⁸ UN, "Johannesburg Implementation Plan," §2.

⁴⁵⁹ Ibid., §6.

⁴⁶⁰ UN, Río + 20, §4.

with nature, the role of civic involvement, the importance of the green economy, the strengthening of the environmental efforts, and the critical role of energy.⁴⁶¹ Noteworthy is the total absence of the concept of ethics raised in Johannesburg.

Since the 1972 Stockholm conference there has been a diminishing emphasis given to environmental concerns as "SD... continues to soften its environmentalism and place even greater emphasis on development... the Rio Declaration retreated from the high-watermark of environmental protection... [and the] WSSD Declaration also continues to drift away from a particularly demanding kind of environmentalism." ⁴⁶² However, there is value in reconciling the care for the environment with the development needed to provide people in developing countries the opportunity for a truly prosperous and dignified life.

There is also a solid argument in terms of making sure said development is not an artificial construct in statistics but is really focused on the well-being of the majority of individuals, real people. However, we also need to take account of the paradoxical extent to which environmental protection has become a part of the common law of humankind."463 "[W]hen faced with this common problem [of pollution], States generally act to protect the health of their people, and they seldom deny the deleterious effects or decide to ignore

⁴⁶¹ Ibid., §§39-40; C 42-55; III 56-74; C 87-90, 125-129.

⁴⁶² Guruswamy, International Environmental Law, 643.

⁴⁶³ Ibid., 645.

them." ⁴⁶⁴ So, "environmental skepticism has not impeded a rising environmental common law of humankind." ⁴⁶⁵

a) Environmental concerns and growth

Economic growth directly impact the environment: this is a challenge to sustainability. The Kuznets curve model (EKC) "explains how rising incomes will result in decreases in pollution, and posits that international environmental regulation only becomes a reality to governments once the basic needs of their people are met. If that is correct, then developing countries that achieve economic growth may well reinstate a more demanding environmental agenda." ⁴⁶⁶ Some dispute the accuracy of the Kuznets curve model as "econometrically weak... [When applying appropriate statistics and techniques] we find that the EKC does not exist." ⁴⁶⁷ or that it might not correctly attribute "effects of trade on the distribution of polluting industries." ⁴⁶⁸

One issue with EKC is considering proportions and not absolute values, which might lead to misleading conclusions. "Manufacturing, which is just one part of GDP, did not become cleaner or dirtier as income changed. Instead, manufacturing became smaller relative to services and trade in expanding economies." This could be explained by a shift from industry to lower polluting services, but, an increase in services with no shift would also explain this. Likewise, a displacing of industry to countries with cheaper labor would

464 Ibid., 646.

465 Ibid., 650.

466 Ibid., 645.

⁴⁶⁷ Stern, "The Environmental Kuznets Curve," 1.

 $^{\rm 468}$ Stern, "The Rise and Fall of the Environmental Kuznets Curve," 1426.

469 Bruce Yandle, "Environmental Kuznets Curves: A Review of Findings, Methods, and Policy Implications," 14.

explain it, and neither explanation implies a reduction of pollution caused by manufacturing.

According to Stern, "in rapidly growing middle income countries the scale effect, which increases pollution and other degradation, overwhelms the time effect. In wealthy countries, growth is slower, and pollution reduction efforts can overcome the scale effect. This is the origin of the apparent [Kuznets curve] effect."⁴⁷⁰ Since developed economies have and promote lifestyles which consume energy and other resources at rates between 30 and 60 times that of least developed countries, and generate waste at comparable rates, poor economies which grow and adopt those globalized aspirational lifestyles will consume in those proportions (scale effect), overwhelming any incremental improvements in technology and efficiency.⁴⁷¹

There might be bias supporting the Kuznets model from a stronger concern to ensure that economic growth is unharmed, than a concern for protecting the environment: for example, the World Bank's 1992 World Development Report favored the Kuznets model.⁴⁷² Along those lines it is argued that "[i]f economic growth is good for the environment, policies that stimulate growth (trade liberalization, economic restructuring, and price reform) should be good for the environment ... Because market forces will ultimately determine the price of environmental quality, policies that allow

⁴⁷⁰ Stern, "The Environmental Kuznets Curve," 1.

⁴⁷¹ UN, "World Economic and Social Survey 2013," 15. "There is no evidence of such an absolute decoupling of growth in resource use from economic growth at the global level, and only very limited evidence for relative decoupling, where resource use grows more slowly than the economy."

⁴⁷² Stern, "The Environmental Kuznets Curve," 2.

market forces to operate are expected to be unambiguously positive."⁴⁷³ But the premise that growth is good for the environment and the validity of the Kuznets model itself are is in question,⁴⁷⁴ with Stern stating: "the statistical analysis on which the environmental Kuznets curve is based is not robust."⁴⁷⁵

The market argument only considers the demand for a cleaner environment and not the demand for goods and services allowed by a higher income. The growth of pollution, waste, and the use of non-renewable resources and energy, correlate to the size of the economy as the Kaya identity⁴⁷⁶ shows in the case of CO_2 emissions.⁴⁷⁷ Efficiencies scarcely mitigate the impact per unit of GDP. Some suggest there is a necessary trade-off between economic growth and environmental protection.⁴⁷⁸

However, Pielke argues that "there is an iron law of climate policy... that when policies focused on economic growth confront policies focused on emission reductions, it is economic growth that will win out every time" and that this "iron law of climate policy holds everywhere around the world, in rich and poor countries," so that "any policy that seeks to achieve an accelerated decarbonization of the global economy must be designed such that economic

⁴⁷³ Yandle, "Environmental Kuznets Curves," 29-30.

⁴⁷⁴ Stern, "The Environmental Kuznets Curve," 2, "However, the EKC has never been shown to apply to all pollutants or environmental impacts and recent evidence challenges the notion of the EKC in general."

 $^{^{}m 475}$ Stern, "The Rise and Fall of the Environmental Kuznets Curve," 1435.

⁴⁷⁶ Roger Pielke, jr., *The Climate Fix*, 69, the Kaya identity will be discussed in chapter 4, section 8.d.

⁴⁷⁷ Gwyn Prins, et al., "The Hartwell Paper," 27-28.

⁴⁷⁸ Pielke, *The Climate Fix*, 45. "That the economy and the environment are necessarily trade-offs is built into the IPCC's four families of scenarios used as the basis for its projections of future emissions."

⁴⁷⁹ Ibid., 46.

⁴⁸⁰ Ibid., 47.

growth and environmental progress go hand in hand."⁴⁸¹ The Hartwell group concurs that "it would be prudent to accelerate the historical trend of reducing the carbon intensity of our economies... However, we do not recommend doing so by processes that injure economic growth, which we think – and the history of climate policy demonstrates – is politically impossible with informed democratic consent."⁴⁸²

b) Environmental degradation and threats to global ecosystems

Despite many efforts to protect the environment, threats are increasing: "While an unusually stable global environment has been the precondition for unprecedented human development over the last ten thousand years, this stability is now under threat from human activity... energy consumption has skyrocketed owing to rapid population and economic growth, resulting in unprecedented concentrations of CO_2 in the atmosphere."

There is considerable argument on whether this implies anthropogenic climate change and in what proportion. A good summary is provided by the Hartwell Group:

The sharp increase in concentrations of CO_2 in the atmosphere from the preindustrial level of around 280 ppm to 389 ppm today, and rising in recent times at just under 2 ppm per year, is one of the firmest data tracks which we possess. It is also the least controversial graph in the current debate; and the rise which it documents is unprecedented in the last 10,000 years. But how this clear CO_2 trend relates to global temperature and distributed weather extremes is much cloudier. How rising CO_2 levels—and other human forcings—may relate to prospective climate change is, by extension, a further articulation of theory, data and modeling of the most mysterious of complex systems on Earth. These

.

⁴⁸¹ Ibid., 49.

⁴⁸² Prins et al., "The Hartwell Paper," 21.

⁴⁸³ UN, "World Economic and Social Survey 2013," 14.

efforts too have become controversial. But what is certain is that such projections are uncertain.⁴⁸⁴

Similar to the Kaya factor, another equation, ImPACT, determines environmental impact as the product of total population, affluence, the intensity of consumption patterns and the efficiency of technology. 485 Affluence interacts with consumption patterns and impacts GDP.

Increased GDP can hardly be compensated by efficiencies, and so, a

challenge arises from unsustainable consumption and production patterns that have evolved in developed countries, a pattern that is increasingly being followed by developing countries. For example, per capita greenhouse gas emissions levels in developed countries are 20-40 times greater than needed for stabilization of the atmospheric greenhouse gas concentration. The per capita ecological footprints in developed countries are 4-9 times greater than their bio-capacity.⁴⁸⁶

Using the greenhouse criterion for sustainability, we can quickly realize the enormity of the challenge.

Pre-industrial data suggest that the atmosphere's sustainable CO_2 absorption capacity... is about 5 gigatons... the world population will stabilize at about 10 billion by 2080... This suggests a little over 0.5 ton of CO_2 (tCO_2) as the sustainable level of annual per capita emissions.⁴⁸⁷

It is important to note that the current per capita emissions level of the United States is about 19 tCO₂ and in most other developed countries falls around 10 tCO₂."⁴⁸⁸ Another way to measure impact is the ecological footprint, "which measures the biological space (expressed in terms of area) required to produce the resources that a person consumes and to absorb the waste that his or her consumption generates."⁴⁸⁹ Since the bio-capacity of the earth is 11.5

⁴⁸⁷ Ibid., 30.

⁴⁸⁴ Prins et al., "The Hartwell Paper," 21.

 $^{^{\}rm 485}$ UN, "World Economic and Social Survey 2013," 15.

⁴⁸⁶ Ibid., vii.

⁴⁸⁸ Ibid., 30.

⁴⁸⁹ Ibid., 30-31.

billion hectares of biologically productive space, with a population of 7 billion, the allowable global hectares (gha) per person would be 1.64. With 10 billion people, each person could only use 1.15 gha. As of 2007, per capita use is 1.8 gha in developing countries, 4.7 gha in Europe, and 8 gha in the US. Furthermore, as the following chart shows, developing countries increased their footprint by 28%, and developed countries by 39% between 1961 and 2007,⁴⁹⁰ showing that the tendency is for higher income societies to increase their environmental impact at a more accelerated rate, further disproving the EKC position.

491 Figure II.6 Average ecological footprint per person in developed and developing countries, 1961 and 2007 Developed countries Developing countries Source: Woodward and Simms (2006); Global Footprint Network, "Ecological Footprint Atlas" (Oakland, California, 13 October 2010).

Table 6 - Average Ecological Footprint

Whether measuring environmental impact by greenhouse gases or by ecological footprint, the UN survey reaches three conclusions:

1961

⁴⁹⁰ Ibid., 31-32.

⁴⁹¹ Ibid., 32.

First, the impact of human activities has already exceeded the capacity of the Earth to absorb it. Second, this breach has been due mainly to unsustainable consumption in developed countries. Third, as developing countries try to emulate the consumption patterns and levels of developed countries, the breaches in the Earth's planetary boundaries are becoming larger. For example, under current production technology, if the whole world wanted to consume at the 2001 level of the United States, resources equivalent to that of 15 planets like the Earth would be required."⁴⁹²

These are very complex challenges with no clear solution. Although one of the most serious challenges, climate change is not the only one, and reducing the issue to controlling carbon dioxide emissions is shortsighted. Our current model of growth disproportionately consumes resources and generates waste, while leaving billions of people without basic needs. New models have to be developed which include change in moral options and lifestyles, technology, governance and global cooperation. Furthermore, the International Governance required to deal with these issues has yet to generate the credibility and leadership needed. Repeatedly we see that, mostly, the "problems and the solutions are not technical but moral." 493

4. Squaring out Human Development and the Environment

Pielke and the Hartwell Group recommend seeking a non-confrontational path rather than framing environment and development goals in terms of a trade-off. The basic challenge is that governments, business and financial interests are all heavily invested in economic growth. This goal overrides all other concerns, such as in the abovementioned "iron law of climate change," generating debatable theoretical arguments claiming that

⁴⁹² Ibid., 33.

_

⁴⁹³ Ambrozic, "Beyond Public Reason on Energy Justice," 392.

growth is good for the poor and good for the environment, and that growth can be "decoupled" from environmental impact. Growth serves consumerism, where growth in the overall value of transactions increases business and financial profits, even as real wealth is reduced and the environment devalued. The combination of governments, business and financial interests, and consuming elites gains another powerful ally by enlisting the media.

In his book Prosperity Without Growth, Tim Jackson makes the case for discrediting the myth of decoupling and the need of ending the mutually reinforcing mechanisms of business and consumerism. Businesses aim to sell more through obsolescence, low durability, and reinvention, providing consumers with an endless stream of novelties which they anxiously crave to fill the void of a secular world, and their various psychological needs.⁴⁹⁴ Consumerism-led growth relies on unsustainable lifestyles. Although aware of this dilemma, international efforts have been half-hearted as their voluntary compliance shows.⁴⁹⁵

Given these obstacles, the efforts have sought the least painful ways to achieve sustainability, such as relying on technology to gain efficiencies, such as more energy and fewer emissions per unit of fossil fuels burnt, fewer units of energy and other raw materials, and less waste per unit of GDP produced. However, this yields only limited progress. Actual changes in lifestyles are needed: consuming lower quantities, shifting from material to non-material consumption, from a private to a shared mode of consumption, from one-time

_

⁴⁹⁴ Jackson, *Prosperity Without Growth*, chapters 5-6.

 $^{^{495}}$ UN, Río + 20, §226. "programmes on sustainable consumption and production patterns... included in the 10-year framework are voluntary."

or short term to multiple use or longer lasting products, and from use of nonrecyclable to use of recyclable material.

Unsustainable Lifestyles

Already in 1987 it was said that "sustainable global development requires that those who are more affluent adopt life-styles within the planet's ecological means—in their use of energy, for example."⁴⁹⁶ Other UN documents have also recognized the significance of consumption.⁴⁹⁷ Even if "consumption patterns are very high in certain parts of the world, the basic consumer needs of a large section of humanity are not being met. This results in excessive demands and unsustainable lifestyles among the richer segments, which place immense stress on the environment. The poorer segments, meanwhile, are unable to meet food, health care, shelter and educational needs."⁴⁹⁸

Agenda 21 did set important goals such as promoting "patterns of consumption and production that reduce environmental stress and will meet the basic needs of humanity... [and developing] a better understanding of the role of consumption and how to bring about more sustainable consumption patterns" analyzing "the present concepts of economic growth and the need for new concepts of wealth and prosperity which allow higher standards of living through changed lifestyles and are less dependent on the Earth's finite resources;" 500 and achieving "efficiency in production and changes in consumption patterns in order to emphasize optimization of resource use and

496 UN, Our Common Future, §29.

⁴⁹⁷ UN, *Agenda 21*, §§18, no. 4.5-6; UN, "World Economic and Social Survey 2013," 15.

⁴⁹⁸ UN, Agenda 21, §18, no. 4.5.

⁴⁹⁹ Ibid., §18, no. 4.7.

⁵⁰⁰ Ibid., §19, no. 4.11.

minimization of waste... reorientation of existing production and consumption patterns that have developed in industrial societies."⁵⁰¹ However, as we saw in the previous section on population, this wording was not supported in the budgets or in real commitments, casting doubt on its sincerity.

The prevailing narrative insists that economic growth and technical progress will eventually solve all the problems achieving prosperity for all, but this prosperity has "benefited only the richest segments of the world's population (1-2 billion people)"502 and is not "free of unintended social, psychological and environmental consequences... the unhappiness that is often associated with affluence and want [and] the destruction of native cultures and their social fabric, loss of autonomy, and a general lack of concern for human development."503 The overall damage to the poorer 5-6 billion cannot be ignored: "the CO₂ emission of a person in developed countries is 30 times that of a person in developing countries. It affects climate over the entire planet, and disproportionately affects the poor segments of the world's population,"504 who lack the resources wealthier people have to adapt to a changing climate.

"Simply put, promoting the use of such practices in countries with emerging markets does not work for the rest of the world... The concept of sustainability, with its emphasis on the interaction between society, the

⁵⁰¹ Ibid., 20, no. 4.15.

 $^{502}\,\mathrm{Amadei}$, Engineering for Sustainable Human Development, 2.

503 Ibid.

⁵⁰⁴ Ibid., 3.

environment, and the economy, has to become an integral part of the discussion in human development."505

Amadei observes: "Unfortunately the 1-2 billion people who benefit the most from the current system do not have much interest in changing the status quo for the others, despite their continuous rhetoric about the need for change." ⁵⁰⁶ It might seem all too obvious, but "the simple fact that people have plenty of resources... and know-how to eliminate poverty (especially extreme poverty) in our lifetime... but do not have the will and priority to do so is a true reflection of deep pathological dysfunction of the human race and its institutions." ⁵⁰⁷

The deepest challenge is not technical or economical. "It is time to think about poverty as more than the mere absence of this or that and abandon the naïve idea that poverty reduction can be approached in a piecemeal way by offering quick, cheap, and non-lasting miracle "Band-Aid" solutions to separate problems. Problems are related and so are their solutions."⁵⁰⁸ Amadei insists that the external poverty we recognize is the expression of the internal poverty of selfishness, greed, fear, apathy and other destructive behaviors that prevail in society. ⁵⁰⁹ This situation is unjust and inhumane for all people, both for the "billions who do not have their basic needs met... which would allow them to live with dignity... [and for the] millions who have more resources [and] are

505 Ibid.

506 Ibid.

507 Ibid., 480-481.

⁵⁰⁸ Ibid., 481.

509 Ibid., 481-2.

unwilling to share with those in need."⁵¹⁰ The former do not have a choice. The latter have a choice, and it is the tragic reality of the internal poverty that Amadei describes, abetted by a materialistic and alienating culture, that leads the wealthy to choose to demean "their own dignity to neglect their vocation to love and to fail to serve and give generously to those in need when they can."⁵¹¹ This aligns with the findings of Piff's study on wealth we already have referred to earlier in this chapter. However, it becomes more serious as a widespread cultural and social problem, so that when "so-called developed societies deny their peoples' duty to virtue and duty to help those in need in the name of freedom, they betray their human nature and frustrate their own fulfillment."⁵¹²

Thus, in the effort to live sustainably, the greatest hurdles are moral.⁵¹³ As Amadei notes, "developed countries in particular have to address unsustainable consumption and production patterns and their continuously rising environmental impact, while emerging and developing economies need to pursue the goal of greening their catch-up growth."⁵¹⁴ This would require a "global consensus on sustainable development … based on solidarity, with human development and environmental protection as integrated and universal goals for all countries."⁵¹⁵ This is not a technical challenge, but a moral and political one.

⁵¹⁰ Ambrozic, "Beyond Public Reason on Energy Justice." 391.

⁵¹¹ Ibid.

⁵¹² Ibid. This blind and selfish entitlement of the wealthy is partly addressed on the problem of *meritocracy* in Patrick J. Deneen's, "The Ignoble Lie."

⁵¹³ Amadei, Engineering for Sustainable Human Development, 1, 21.

⁵¹⁴ Ibid., 21.

⁵¹⁵ Ibid.

Things will not change unless people adopt "a drastically different mindset and redefining what it is to be truly human in this planet."⁵¹⁶ The second part of this chapter explores the underlying conceptions of the human and society in the prevailing worldview in which SD is framed. If these conceptions are accurate representations of the human experience, or ambitious hypotheses of social engineering, and if they contribute to a sustainable and equitable world that fosters human flourishing, are issues that merit close scrutiny.

We can argue that events such as the 2008 financial crisis with its worldwide damage, increasing inequality and the persistence of poverty are related to an economic model that privileges economic growth, consumerism and materialistic self-interest. Connected to this are the efforts on solving social ills and environmental challenges, that concentrate on material and pragmatic measures. All of this appears to be based on a flawed anthropology that does not recognize the dignity of the human person and the importance of its moral and spiritual dimension. We realize that the most significant obstacles to environmental and social challenges are moral, but the proposed solutions avoid to confront this. The wealthier people of developed countries influence policies that do not require them to change their lifestyle of overconsumption, or decrease their income, but rather force population control on the poor, and affirm that economic growth will take care of poverty and the environment. This is all connected to that flawed anthropology that also determines a view of

⁵¹⁶ Ibid., 482.

society and human interaction. The next chapter will analyze this distorted view and its harmful consequences.

Chapter 3.- Underlying conceptions bearing on Sustainable Development

1. The Human Person and Human Flourishing

As we have covered the main themes of Sustainable Development in the last chapter, the lack of a comprehensive approach was noted. The spiritual and intellectual, and the exercise of freedom through consciousness and choice with their corresponding moral aspects was, more or less absent. The social dimensions of family, friendship, inclusion and interaction with the social environment was weak. This underlines a challenge at the core of Human Ecology which is the need to account for the whole of the human person. The discussion can be enriched with Catholic theology, but bringing it into the public debate requires configuring a common space with relevant language. There is no appropriate language in the empirical, secular tradition to account for the whole of the human person, because this tradition has always tried to explain the supernatural in the terms of empirical science. Consequently, a concept of the whole human person will be developed in the language of the Catholic worldview. Other traditions and non-believers are invited to consider this Catholic contribution on the merits of how consistently it explains the perceived reality of the human experience. As this chapter will show, efforts from the secular view that try to explain the spiritual or non-material are much less consistent.

a) The core of God's plan and the anthropology in it

Anthropology, the understanding of the human person, whose reality extends beyond the physical, needs the light of both philosophy and faith. Human beings were created in the image of God to know, love and glorify Him, by their use of created things and by seeking communion with God and with each other. Being in the image of God, human beings have conscience and free will, which enables them to recognize what is true, good and beautiful; to embrace it and love it and to act accordingly. They can be conscious of their own selves and choose to seek holiness and perfection, acting according to what fully elevates and develops their nature, both natural and spiritual. Even more, they can communicate with others, recognizing their dignity in the mystery of God's image in them, and achieve communion with each other, in love, seeking each other's good.

I argue that the most essential reality of God is revealed through the mystery of the Trinity. God is a communion of love formed by the three persons' absolute and constant donation to each other. The fullness of being is mirrored and expressed by the fullness of self-giving to each other. Each person in the Trinity lives his plenitude in the total gift of himself. The Father expresses his identity to the fullest as He gives himself as Father to the Son. Each person participates in this communion by living out, expressing and giving his self, his identity, the totality of himself to the fullest.

517 Pope Paul VI, Gaudium et Spes, §12.

The Father and the Son not only live the wonderful communion of fully giving themselves to each other⁵¹⁸ but also the communion of sharing the fullness of love that each one has for the Holy Spirit. Man, created in the image and likeness of God the Trinity,⁵¹⁹ will achieve fulfillment in the same way, by his total gift of self to others,⁵²⁰ and even in the communion achieved in the sharing of the love they have for others.

However, as Romans states, men paid no heed to God's plan and pursued their happiness and fulfillment apart from God. Disrupting the harmony of God's creation, they yielded to their passions and pride. Seeking autonomy and freedom from the constraints of God's plan and moral order, they became enslaved by their own passions, fears and whims.⁵²¹ Disobeying God, they brought about a rupture with Him.⁵²² Separated from God, they no longer know where they come from or who they are, and so, betray their now obscured identity, causing a rupture with themselves.

Consequently, they no longer recognize themselves and each other as brothers, children of the same Father; nor do they recognize love and communion as integral to their identity and fulfillment. Others are seen as possible prey or competitors, to be abused or feared and fought; hence, there is a rupture with our fellow men.

Finally, absent the reference to God, creation is not acknowledged as a gift from God to be embraced, cherished and revered. It is to be exploited and

-

⁵¹⁸ The Holy Bible. John 17:20

⁵¹⁹ The Holy Bible. Genesis 1:26-27

⁵²⁰ Pope Paul VI, Gaudium et Spes, §24.

⁵²¹ The Holy Bible. Romans 1:18-32.

⁵²² Pope Paul VI, Gaudium et Spes, §13.

hoarded for our own needs and selfish desires, becoming a motive of conflict with our fellow men. These four ruptures are the dimensions of sin, the faces that consented evil takes on in our lives. These terrible wounds, however, do not completely alienate the human person. A deep hunger for his true identity, and for communion, reminds him that he is not who or where he was meant to be, and more, that he can be free from anger and guilt, sadness and fear. He has a longing for reconciliation. 523

God, in his infinite love, gave up His only Son, Jesus Christ, to save us from sin and its evil consequences, "to set us free from the hands of our enemies, free to worship him without fear, holy and righteous in his sight, all the days of our life." This is echoed in Ephesians's presentation of God's plan of salvation where we are promised "all the spiritual blessings," chosen "to be holy and faultless before him in love", adding that the promised reconciliation will encompass the whole of creation. From this we can glean that man's highest purpose, the object of his existence is to be holy and faultless and to worship God and live in His presence in fullness of communion with Him and our brethren. To achieve this, we are promised freedom, forgiveness, wisdom and all the spiritual blessings in heaven.

-

⁵²³ Pope John Paul II, Reconciliatio et Penitentiae, §3.

⁵²⁴ The Holy Bible, Luke 1:74-75.

⁵²⁵ Ibid., Ephesians 1:3-14.

⁵²⁶ Pope John Paul II, Peace Message 1990, §§3, 4.

⁵²⁷ The Holy Bible, Luke 1:74-75; Ephesians 1:3-7

Man, being one, is made of body, soul and spirit. ⁵²⁸ All three are indispensable, but it is the spirit which guides the fulfillment of the human person. In and through the spirit, the image and likeness of God is realized, the communion with God and our brothers achieved. Certainly aided by and in unity with our body and soul, but through the lead of the spirit, we reach the contemplation of the divine plan and exercise the freedom of embracing love and good and rejecting evil. As Benedict XVI notes, this is tha path to human fulfillment and a just and healthy society:

God created man and woman in his own image and likeness (cf. *Gen* 1:27). For this reason each person is endowed with the *sacred right* to a full life, also from a spiritual standpoint... This [transcendent] dignity, understood as a capacity to transcend one's own materiality and to seek truth, must be acknowledged as a universal *good*, indispensable for the building of a society directed to human fulfillment.⁵²⁹

b) Spiritual dynamics in the human person

Man is only understood in Christ. His happiness and fulfillment, even "the redemption of the body," lie in his renewal in the Spirit.⁵³⁰ "Created in the image of God," man, whose nature, as expressed in the inner life of the Trinity, is love, cannot fully find himself except through a sincere gift of himself in love.⁵³¹ If man is made to be fulfilled in love, it follows that he is also made for truth and the good, both of which he needs in order to be able to love. It is only natural since "the desire for God is written in the human heart... [and] only in

152

⁵²⁸ Pope Paul VI, *Gaudium et Spes* §14, mentions only body and soul following Aristotle and St Thomas. However, I Thessalonians 5:23 mentions spirit, soul and body, and so does St Augustine (*De anima et eius orig.*, 4.3: MI.44.525) along with St. Irenaeus of Lyons (*Adversus haereses*, V, 6, 1).

 $^{^{529}}$ Pope Benedict XVI, "Peace Message 2011," §2.

⁵³⁰ Pope Paul VI, Gaudium et Spes, §22.

⁵³¹ Ibid., §24.

God will he find the truth and happiness he never stops searching for"532 and God is the source and fullness of all love, truth and goodness.

As man develops awareness of his inner life and the world around him, he discovers longings and hungers inside and is confronted with the possibility of many courses of action to satisfy those longings. He is assisted by the moral conscience that God has put in him to discern moral good and evil. He recognizes his capacity for action and his capacity to choose the direction of his action. He realizes he cannot satisfy all his desires and he becomes aware that his decisions might or might not yield the best results. Consequently, he recognizes the need for truth to guide his decisions and actions in the direction that will best respond to his true purpose and desires.

Man has a desire for truth,⁵³³ particularly the truth about the meaning of life,⁵³⁴ but also a desire to do good for he "senses that there is a connection between moral good and the fulfillment of his own destiny."⁵³⁵ Finally, there is a connection between truth, good and freedom. Genuine freedom responds to the authentic meaning of life which is in tune with the truth and good found in God.⁵³⁶ Moral conscience and freedom achieve their purpose as they lead us to truth, good and love.⁵³⁷

⁵³² Holy See. *Catechism of the Catholic Church*, §27.

536 Ibid., §34. "Genuine freedom is an outstanding manifestation of the divine image in man. For God willed to leave man 'in the power of his own counsel' (cf. Sir 15:14), so that he would seek his Creator of his own accord and would freely

153

⁵³³ Pope John Paul II, Fides et Ratio, §§1, 25.

 $^{^{534}}$ Pope John Paul II, Veritatis Splendor, §1.

⁵³⁵ Ibid., §§7,8.

arrive at full and blessed perfection by cleaving to God."

537 Ibid., "Although each individual has a right to be respected in his own journey in search of the truth, there exists a prior moral obligation, and a grave one at that, to seek the truth and to adhere to it once it is known."

The spirit is where we encounter God and the truth, good, and love he shares with us. The spirit is where we acknowledge truth and adhere to its implications, acknowledge the moral judgment of our conscience and consent to it, encounter God's love and accept it, open ourselves to love, and decide to give ourselves to God and others, regardless of the cost. Here we experience the communion with God, the truth, the good, and with others as the fullness of joy and fulfillment.

The spirit is not separated from the body and the soul, but integrated with them. Body and soul are indispensable for through them the human spirit relates to the world, perceiving, understanding, and acting. Through the soul's capacity to reason, a person considers and evaluates a perceived offense. Ultimately, the spirit will choose, through the operations of the soul, whether to yield to anger or to God's prompting to mercy in his moral conscience. Finally, his body will act out according to what the spirit has decided, either the violence of revenge or the words of kindness and forgiveness. The three—body, soul and spirit—are united in a person, but the mystery of freedom, moral decision, and the openness to good or evil, to abnegation or selfishness, are played out primarily in the spirit.

c) The current secular approach

Currently, there is a widespread notion that regards the spiritual dimension just described as subjective and consequently of no real significance. Since no scientific evidence —understood in the narrow empirical, material sense— can be provided to prove anything about spiritual realities, there is no

basis for agreement; therefore, the spiritual should be dismissed as unattainable, irrelevant to society and the ordering of the public realm.⁵³⁸

This approach is flawed both from an anthropological and an epistemological perspective. Anthropologically, it reduces the human person to what can be apprehended by scientism, the ideology that reduces all to the empirical sciences. This denial of the metaphysical and teleological makes it impossible to really understand the human person fully. This leads to absurd explanations such as those of molecular biologist Dawkins: I am treating a mother as a machine programmed to do everything in its power to propagate copies of the genes which ride inside it, for Iwe are survival machines—robot vehicles blindly programmed to preserve the selfish molecules known as genes.

The antisupernaturalism bias inherent in scientism's approach renders it blind to anything beyond the empirical. From an epistemological perspective, the process is fatally flawed. It denies that different disciplines have boundaries

⁵³⁸ Emilio M. Garza, *Thoughts on Conscience—and Ourselves*. "[positivism] reduces existence to what is sensory or physical or phenomenal, sacrifices relevance for presumed certainty, and precludes any question of spiritual reality." There Garza also cites Eric Voegelin, *The New Science of Politics*, 4, "became dangerous...[when becoming] assertions that a study of reality could qualify as scientific only if it used the methods of the natural sciences, that problems couched in other terms were illusionary problems, that in particular metaphysical questions which do not admit of answers by the methods of the sciences of phenomena should not be asked, that realms of being which are not accessible to exploration by the model methods were irrelevant and, in the extreme, that such realms of being did not exist.""

⁵³⁹ Robert Spaemann, *Essays in Anthropology*, X. "Scientism is not a vague umbrella-term for the totality of scientific endeavor as practiced today; it is rather the particular ideology that drives a good deal of scientific practice. Scientism champions the objectifying method peculiar to science... as the method for all understanding. With this claim scientism challenges (among other things) the traditional way we understand ourselves... Thus today we find the widespread assumption, both scholarly and popular, that if we are really to understand ourselves we must pay attention not to what we think, desire, or do but rather to the "blind" biological processes that underlie those thoughts, desires, and actions."

⁵⁴⁰ Pope Paul VI, *Gaudium et Spes*, §57. "Indeed today's progress in science and technology can foster a certain exclusive emphasis on observable data, and an agnosticism about everything else. For the methods of investigation which these sciences use can be wrongly considered as the supreme rule of seeking the whole truth."

⁵⁴¹ Richard Dawkins, *The Selfish Gene*, quoted in Robert Spaemann, Essays in Anthropology, p.6.

which define their object of study and hence, appropriate tools and methods.⁵⁴² The method of historical sciences, for example, is different since historical events cannot be reproduced in a lab. Likewise, it is foolish to demand physical evidence of the metaphysical or natural proof of the supernatural. Scientism's denial of the existence or relevance of anything outside the empirical would be deemed laughable arrogance,⁵⁴³were it not for the dramatic consequences it has had in the lives of so many people.⁵⁴⁴

Admitting the possibility of the spiritual but denying its relevance, or treating it as secondary manifestations of the physio-biological is equally flawed. Scientism does not accept that it does not have the tools to be able to make these assertions. Consequently, this approach fails to account for that which is most relevant in the human, that is, the spirit, where openness to encounter, conscience, moral choice and freedom are exercised, thus leaving out of consideration the most significant realm of knowledge regarding human persons, their action, society and culture.

⁵⁴² Emilio Garza. "Thoughts on Conscience- and Ourselves," "Voegelin's criticism pinpoints the theoretical limitations of the social sciences, by identifying the analytical inversion latent in its methodology- namely, that the method of inquiry determines the scope of reality, instead of reality dictating the method of inquiry. This analytical inversion reduces existence to what is sensory or physical or phenomenal, sacrifices relevance for presumed certainty, and precludes any question of spiritual reality. Science in this sense becomes an ersatz religion, providing adherents meta-physical 'certainty' based on physical postulations. It is not surprising, therefore, that the two foremost political ideologies of the twentieth century were based, in part, on supposedly scientific principles: National Socialism on 'social Darwinism' and communism on 'scientific materialism.'

⁵⁴³ Eric Voegelin, *The New Science of Politics*, 4, quoted in Emilio M. Garza, "Thoughts on Conscience- and Ourselves," "The assumption that methods used in the empirical math sciences possessed an inherent virtue to be emulated by other sciences 'became dangerous...[when] combined with the second assumption that the methods of the natural sciences were a criterion for theoretical relevance in general. From the combination of the two assumptions followed the well-known series of assertions that a study of reality could qualify as scientific only if it used the methods of the natural sciences, that problems couched in other terms were illusionary problems, that in particular metaphysical questions which do not admit of answers by the methods of the sciences of phenomena should not be asked, that realms of being which are not accessible to exploration by the model methods were irrelevant and, in the extreme, that such realms of being did not exist."

⁵⁴⁴ John Paul II, Inaugural Speech at Puebla, I.9. "it is the inexorable paradox of atheistic humanism. It is the drama of man being deprived of an essential dimension of his being, namely, his search for the infinite, and thus faced with having his being reduced in the worst way."

d) A common bias

An example of this reductive approach of the human and its damaging consequences, is found in Abraham Maslow, on how to provide for the needs of the human person, and respond to the motivations that trigger human activity, in his *Theory of Motivation*⁵⁴⁵ with his corresponding "Hierarchy of Needs." In his 1943 paper, he proposes what he thinks must be considered in any definitive theory of motivation. Some of it is interesting, such as the integrated wholeness of the organism or that it should be centered in basic goals rather than drives or desires.

More questionable is the core proposition that needs are arranged in hierarchies or degrees of pre-potency (basicness) where more basic needs have to be satisfied before a less basic one can be dealt with. The problem with this approach is that it leads to consider basic needs as more real and down to earth, and the spiritual ones as luxuries that are "nice to have" but that not everybody can afford, and ultimately not really needed. "The clear emergence of these needs (self-actualization) rests upon prior satisfaction of the physiological, safety, love and esteem needs." 546

If the organism is dominated by the most basic unsatisfied needs and these focus his interests and even worldview, it is unlikely that most people would ever develop a spiritual life. However, we find that often, people with basic unsatisfied needs are not only able to perceive but even prioritize 'higher' needs. Let us clarify here that love is understood by Maslow in a very reductive

⁵⁴⁵ Maslow, A Theory of Human Motivation.

⁵⁴⁶ Ibid.

way: as a need that refers to belonging and having affectionate relations. It is not the more traditional sense, owed to Christianity in the Western culture, of the selfless giving of oneself to others without expecting retribution and which actually finds fulfillment in transcending our own needs and desires.

Frankl's argument - Viktor Frankl, in *Man's Search for Meaning*,⁵⁴⁷ arrives at a very different conclusion than Maslow. His argument is a psychologist's scientific analysis of a real experience as witness and protagonist. In the Nazi concentration camps, there was a constant struggle for survival where "only those prisoners could keep alive who, ... had lost all scruples in their fight for existence; they were prepared to use every means, honest and otherwise, even brutal force, theft and betrayal of their friends, in order to save themselves." This is consistent with Maslow's theory. There is a departure however in that the area of concern is expanded to include the closest friends. "Everything was sacrificed to this end (keeping oneself and one's closest friends alive)." However, the analysis continues.

In the midst of the worst deprivation of all basic needs, man's spirit can break free and seek the more lofty needs and longings of the spiritual life: "The truth –that love is the ultimate and highest goal to which man can aspire... The salvation of man is through love and in love." 550 Man is not determined by his basic needs. He always retains his freedom and the capacity to choose above and beyond the demands of his flesh. "The sort of person the prisoner became

547 Frankl, Man's Search for Meaning.

⁵⁴⁹ Ibid., 78.

⁵⁵⁰ Ibid., 58-59.

⁵⁴⁸ Ibid., 7.

was the result of an inner decision, and not the result of camp influences alone."551 The witness of the few that were able to do so, resonated in the rest.

We who lived in concentration camps can remember the men who walked through the huts comforting others, giving away their last piece of bread. They may have been few in number, but they offer sufficient proof that everything can be taken from a man but one thing: the last of the human's freedoms-to choose one's attitude in any given set of circumstances, to choose one's own way.⁵⁵²

We can see good people free from the constraints of Maslow's need's structure, achieving spiritual and inner freedom, forsaking basic needs for the sake of the spiritual achievement of living according to their conscience and dignity.

Even more, we can see that having a purpose beyond basic needs was not only possible. It was the required condition to muster the inner resources to survive: 553 "those who knew there was a task awaiting for them to fulfill were most apt to survive." 554 This, even if the purpose was no other than to accept suffering with dignity, "proudly –not miserably." 555 Frankl quotes Dostoevsky to shed light on this experience: "There is only one thing that I dread: not to be worthy of my sufferings." "It can be said that they were worthy of their sufferings; the way they bore their suffering was a genuine inner achievement. It is this spiritual freedom –which cannot be taken away- that makes life meaningful and purposeful." 556 Frankl quotes Nietzsche to

⁵⁵² Ibid., 104.

⁵⁵¹ Ibid., 105.

⁵⁵³ Ibid. There is a profound anthropological insight here. Living according to man's highest nature, the spiritual, is what actually works better, even for the purpose of his most practical ends: survival.

⁵⁵⁴ Frankl, Man's Search for Meaning, 165.

⁵⁵⁵ Ibid., 132.

⁵⁵⁶ Ibid., 105-106.

emphasize that purpose and meaning is the key to survival: "He who has a why to live can bear with almost any how."557

If we consider that the environment, our Human Ecology, is not only physical, but also psychological and spiritual, we can see that purpose and meaning, as part of each one's personal ecosystem, could make up for serious physical privations. On the other hand, lack of purpose and meaning in one's life brings about an existential vacuum and then existential frustration, regardless of having sated basic needs or not. Another key difference lies in transcendence. Unlike Maslow's position, "the real aim of human existence cannot be found in self-actualization. Human existence is essentially self-transcendence rather than self-actualization."558 In contrast with a driving trend of current culture, "the meaning of our existence is not invented by ourselves, but rather detected."559 The human person cannot find meaning only in himself, but the truly spiritual longings lead him to transcend oneself. We do not make our own meaning and salvation. They are a gift received.

Frankl's argument has a special relevance to Human Ecology, particularly in the current culture that fosters being focused toward the self. In one aspect, it shows that environmental, external conditions certainly weigh on the human person but do not determine their decisions. In another, it emphasizes the importance of spiritual meaning, transcendence and purpose and the need for society and culture to foster or at least allow the conditions that support them.

⁵⁵⁷ Ibid., 121.

⁵⁵⁸ Ibid., 175.

⁵⁵⁹ Ibid., 157.

Other developments by Maslow – Studying other aspects of Maslow's work help understand his difficulty in considering the spiritual and supernatural, consistent with love as transcendence, and his need to anchor his work in the self-referenced individual. He has tried to provide more elements to explain his theory. He develops the need for knowledge and relates it to the 'search for meaning' but he does not understand it as transcending but rather as satisfying a personal need to understand. He refers to self-actualizing people that are not driven by basic needs but by (being) B-needs but it is not clear how to integrate this with his hierarchy of needs.

In 1957, as chair of the Research Society for Creative Altruism, he edited the book that published the papers presented at the First Scientific Conference on New Knowledge in Human Values. ⁵⁶⁰ There is a messianic enthusiasm and confidence on a scientific solution to the problem of man. Faced with "old value systems that have not worked", and "the real possibility of annihilation", he diagnoses that "the ultimate disease of our time is valuelessness." He is confident that "the cure for this disease is obvious… a validated, usable system of human values… that we can believe in… because they are true… rather than because we are exhorted to 'believe and have faith'. And for the first time in history, many of us feel, such a system –based squarely upon valid knowledge of the nature of man…- may be possible." ⁵⁶¹ He seems to be debating with faith traditions –religions- but offers no consistent grounding for his own proposal; why his set of values are "true" and even what truth means in his view.

-

⁵⁶⁰ Abraham H. Maslow, New Knowledge in Human Values.

⁵⁶¹ Ibid., vii-viii.

In his own paper he explores the quest for a "value system that could be derived from man's own nature, without the necessity of recourse to authority outside the human being himself" stating: "we think that a scientific ethic may be possible, and we think we know how to go about constructing it." 562

An interesting concept he develops is the notion of self-actualization from the natural impulse that capacities have for being used or actualized. He considers that "all basic needs can be subsumed" in the path to self-actualization which leads to "becoming fully human, everything that the person can become." This reconciles the contrast between Being and Becoming. As man grows in self-actualization he is becoming and experiences ever more advanced states (or peak-experiences) of being, which in turn open new horizons of becoming. He uses these rewarding experiences to reject "the notion that Heaven lies someplace beyond the end of the path of life. Heaven, so to speak, lies waiting for us through life."563 This concept of self-actualization could be compatible with the Christian approach to life as a pilgrimage in which we grow towards the fullness that God intended for us through holiness and finally in eternal. Unfortunately, that is unacceptable to Maslow who seems closed to the supernatural and transcendence.

He draws another interesting idea from the studies in homeostasis, where people and animals crave for the food that provides their blood with the needed nutrients, chemicals, etc., without being conscious of it. Another experiment found that some animals chose their food better than others and the results were shown in that they developed to be stronger, bigger and more

⁵⁶² Ibid., 120.

⁵⁶³ Ibid., 123-124.

dominant than the poor choosers. When the better choices were applied to the poor choosers, they also improved significantly.⁵⁶⁴

Maslow thinks that observing the choices of healthy people we can learn what is best for people. This could also be compatible with a Christian approach as we recognize truly "healthy" people –in an integral, holistic way- as those who live according to their identity as children of God, growing in holiness. That is what Catholics do when they recognize saints as models of actualized lives and good choices. If we learn to choose as the saints, our lives would improve towards the goal of the veritable "good life". The difficulty, of course, is deciding by which criteria we will recognize these healthy individuals worthy of imitation. Maslow's account for the better model of a human person is hardly convincing.

Another difficulty is the problem of evil. He explains how as man learns through self-knowledge, self-discipline and sometimes psychotherapy, he becomes a healthy person, while those who do not grow, remain sick and weak. It would seem that a "healthy" person is incapable of evil, and that evil is really only the consequence of ignorance, sickness and weakness. Unfortunately Maslow thinks that evil is really only psychopathology.⁵⁶⁶ Conscience, freedom, self denial and evil remain alien to him.

In Religions, Values and Peak-Experiences⁵⁶⁷ his approach helps us to understand better his own position. He is somewhat condescending with

⁵⁶⁴ Ibid., 120-121.

⁵⁶⁵ Ibid., 126-128.

⁵⁶⁶ Ibid., 133-135.

⁵⁶⁷ Abraham H. Maslow, Religions, Values and Peak-Experiences.

religious people, "intellectual primitives"⁵⁶⁸ stating that "faith, which has perfectly respectable naturalistic meanings, as for example in Fromm's writings, tends in the hands of an anti-intellectual church to degenerate into blind belief... unquestioning obedience and last ditch loyalty... It tends to produce sheep rather than men."⁵⁶⁹ He builds straw religions to dismiss them, unaware that he has not understood what religion is about. "Very obviously, such values [spiritual and ethical]... cannot be handed over to any church for safekeeping... what is needed then is an expanded science... [which] includes among its concerns practically everything in religion that can bear naturalistic observation."⁵⁷⁰

He argues that many peak experiences and values do not need to be derived from religious faiths since "spiritual values...have naturalistic meaning [and] are well within the jurisdiction of a suitably enlarged science." ⁵⁷¹ Basically, the religious questions are valid but the answers from the churches are not, so we need the recourse to science to finally provide a satisfactory response. ⁵⁷² He deconstructs all that is recognized as supernatural by religious traditions as "in fact, perfectly natural, human peak-experiences of the kind that can easily be examined today". ⁵⁷³ He argues that

to the extent that all mystical or peak experiences are the same in their essence and have always been the same, all religions are the same in their essence and always have been the same. They should therefore, come to agree in principle on teaching that which is common to all of

⁵⁶⁸ Ibid., 3.

⁵⁶⁹ Ibid., 14.

⁵⁷⁰ Ibid., 17.

⁵⁷¹ Ibid., 4.

⁵⁷² Ibid., 18.

⁵⁷³ Ibid., 20.

them... [and] whatever is different... can be fairly taken to be localisms... therefore, peripheral, expendable, not essential.⁵⁷⁴

A much more interesting approach to peak-experiences can be found in Josef Pieper's *Divine Madness*. ⁵⁷⁵ Maslow's approach that denies the supernatural is hardly useful as a guide for the human person open to transcendence. The next section will deal with one of the challenges that might explain Maslow's weaknesses.

e) The question of dualism inherent to the problem of man

The problem of man is frequently muddled by a perceived dualism that challenges a proper understanding.⁵⁷⁶ Man has a physio-biological dimension and a rational-spiritual one. The first one is determined. The second one is the source of man's freedom from determinedness. Focusing on the first one, the empirical approach seeks to reduce to it the second one, denying freedom.⁵⁷⁷ It also denies anything beyond the self-interest that can be more easily recognized as "natural".⁵⁷⁸ According to Spaemann, "anthropological dualism, however, is not simply a contingent accident in the history of thought. Rather, it is grounded in the very structure of human self-experience. In one way or another it has always been there."⁵⁷⁹ Overcoming the problem of this dualism requires recognizing the spiritual reality inherent to the human person, not

⁵⁷⁴ Ibid.. 20.

⁵⁷⁵ Josef Pieper, Divine Madness.

⁵⁷⁶ Spaemann, *Essays in Anthropology*, xii. "the question of 'What is a human being?,' the basic dualism in perspectives (2) that has always characterized anthropological enquiry. From one point of view, that is, humans are creatures conditioned by nature, their behavior reducible to a series of biological and physical processes. But from another point of view humans are persons, indeterminate agents who dispose of their existence as they choose."

⁵⁷⁷ Ibid., xiii

⁵⁷⁸ Ibid., 7-8. "having failed to find a meaning for the word 'good' apart from 'good for...,' and having failed really to understand Socrates' appeal to Callicles: 'But I beg you, my friend. To conceive it possible that nobility and goodness may be something different from keeping oneself and one's friends from danger."

⁵⁷⁹ Ibid., 13.

"spiritual" as a refined manifestation of the natural, but as an opening to the presence of God in man. 580

It is humbling and frustrating for science to accept that a key dimension of man lies beyond its object and method.⁵⁸¹ It also underscores the teleological reality of the human, which is beyond man's natural capacities. Spaemann points out that "'nature is not deficient in necessary things' [natura non deficit in necessariis). But what could be more 'necessary' than attaining our final end? By nature animals are sufficiently equipped to attain their own end. Why not the human being?". He responds with the answer of St Thomas:

Just as nature does not fail man in necessaries, although it has not provided him with weapons and clothing, as it provided other animals, because it gave him reason and hands, with which he is able to get these things for himself; so neither did it fail man in things necessary, although it gave him not the wherewithal to attain Happiness: since this it could not do. But it did give him free-will. With which he can turn to God, that He may make him happy.⁵⁸²

To be fully human, a human cannot be limited to the natural, but must include the "supernatural" openness to God, truth and good.

According to Taylor, "Wojtyla's primary philosophical work, *The Acting Person*, is devoted to articulating how the experience and structure of action reveals that the person is an objective/subjective unity whose self-fulfillment is achieved by moral praxis. ⁵⁸³ Wojtyla integrates metaphysics and phenomenology, the objective philosophy of being and the subjective

⁵⁸⁰ Ibid., 14.

⁵⁸¹ Ibid., 31-32. "Kant gave an unequivocal answer to the question of to what extent scientism challenges our selfunderstanding: scientism knows only interrelations of material conditions. Yet the experience of something absolute (represented, according to Kant, in basic moral experience) cannot be properly accounted for by the framework of a scientistic worldview. Rather, experience of The Absolute must be so reinterpreted by this scientistic worldview that it is no longer recognizable."

⁵⁸² Ihid 15

⁵⁸³ Jameson Taylor, "Beyond Nature: Karol Wojtyla's Development of the Traditional Definition of Personhood," 415-416.

philosophy of consciousness, in a personalist framework.⁵⁸⁴ Wojtyla transcends previous views of man as "a passive subject of experience" affirming him as "an 'agent of action'—an actor"⁵⁸⁵ capable and responsible of rational, conscious and free action. Rationality gives him "the ability to know moral truth and to distinguish it from moral falsehood" and "not just an intellectually cognized abstract concept but a dynamic reality that demands personal surrender," which is the basis for the transcendence of the person in the recognition and obedience to the voice of God in moral conscience.⁵⁸⁶

In the human person, action involves not only the physical. As an example, prayer involves the action of exercising freedom in deciding to turn oneself to God, and to open our minds and hearts to His Spirit, wisdom, love and strength, often with great struggle and effort. Prior to external action, recognizing and resisting the inclination to do wrong requires deliberate purpose and action. Thinking involves action when we decide to engage in the strenuous reasoning of difficult ideas, to pursue intuitions or not; to prevent feelings or prejudices from distorting our reasoning, to give assent to what we honestly recognize, even if unpalatable, as probable conclusions or truth. In the man who chooses to exercise conscience and freedom, the inner life is full of intense action.

⁵⁸⁴ Ibid., 416.

⁵⁸⁵ Ibid., 428.

⁵⁸⁶ Ibid., 436.

"Consequently, the person can only partially be identified with his nature, for his end lies in an order of love that is beyond the natural realm." 587
Wojtyla elaborates upon this transcendence in a 1964 radio broadcast:

The assertion that the human being is a person has profound theoretical significance... It speaks of the human being's natural greatness. The human being holds a position superior to the whole of nature and stands above everything else in the visible world. This conviction is rooted in experience... A being that continually transforms nature, raising it in some sense to that being's own level, must feel higher than nature—and must be higher than it.⁵⁸⁸

The human person then, contains the natural but transcends it through his freedom, self-determination and conscience in obeying the truth and the good. Thus, he develops his latent possibilities, not in conflict but in harmony with it,⁵⁸⁹ through willed action in love. By his free capacity to choose the good and enter in communion with it, man transcends the natural, "through the act of love, which is the highest form of personal action. Love is what makes the development and expansion of nature possible."⁵⁹⁰

"By loving other persons, man is raised to a new level and challenged to more fully realize his natural potentialities. Thus, love enables the person to attain to his natural completion and, in so doing, takes him from the natural to the personal order." This capacity to transcend his own self and find a fuller existence in another sets the person apart from other creatures and gives him his particular dignity. This denial of self for the sake of truth and the good of others in love, is the highest form of action and reconciles the natural and the

⁵⁸⁷ Ibid.

⁵⁸⁸ Ibid., 443-444.

⁵⁸⁹ Ibid., 448, note 143, Wojtyla, LR, 229, "Nature cannot be conquered by violating its laws."

⁵⁹⁰ Ibid., 452.

⁵⁹¹ Ibid., 452.

supernatural, the fulfillment of the individual and community ⁵⁹² giving meaning to the whole universe through the good achieved by the action of the person. ⁵⁹³

This reflection allows us not only to reconcile the perceived dualism, but to identify the path through which the human person achieves flourishing and fulfillment. A Human Ecology will then, necessarily protect and foster the conditions which allow the human person to know the truth and the good, to abide by it and freely choose the communion with God and others. It also provides the foundation for recognizing human dignity and the rights inherent to it. Only the human person, in the likeness of God who is love, is able to step out of himself as center of reference for all else, 594 and "see" the center in others, giving up his own interest for the sake of love.

This is why only man is loved by God for his own sake, and only man, of all creatures, can choose to love Him back.⁵⁹⁵ God's love in Psalm 116:15 leads Spaemann to say that the "preciousness of the human being as such... renders her life something holy, giving the concept of dignity an ontological dimension... Dignity signals something sacred. The concept is a fundamentally

--

⁵⁹² Ibid., 453. "Action, though, is not merely the actus humanus ordered toward a hierarchy of natural ends but always has a personal end and is ordered toward the love of self, neighbor, and God. Accordingly, Wojtyla's analysis of action concludes with the discovery that love is the highest form of action and the fulfillment of both the person and community."

⁵⁹³ Ibid., 419.

⁵⁹⁴ Spaemann, *Essays in Anthropology*, 19-20. "That the human being transcends himself is more than an afterthought... Each organism naturally develops a system that interacts with its environment; each creature stands at the center of its own world... To see the other as other, to see myself as his 'Thou'... We find in ourselves the idea of The Absolute, 'the infinite,' as that which cannot be derived, as Descartes noted, from our finite and conditioned nature. 'Love of God carried as far as contempt of self' (amor Dei usque ad contemptum) —that too transcends nature. Yet it is exactly this transcendence that makes human nature human."

⁵⁹⁵ Pope Paul VI, Gaudium et Spes, §24.

religious/metaphysical one. Horkheimer and Adorno saw this clearly when they wrote that the only argument against murder is a religious one.⁵⁹⁶

Consequently, the right to religious freedom and conscience is not a luxury but a required condition for the fulfillment of the human person, and cannot be negotiated. Atheism and agnosticism, coercive or practical, are not as neutral as they pretend to be.⁵⁹⁷ Denying or weakening, failing to respect or recognize traditions which affirm the religious foundation for human dignity, fatally undermines Human Ecology. As Garza notes, atheistic political systems in the 20th century have surpassed in cruelty, by several orders of magnitude, anything that can be attributed to religiously motivated abuse⁵⁹⁸.

Furthermore, this dignity and freedom are what makes the human capable of self-denial, capable of giving up his Darwinist advantages for survival and even supremacy. This capability of freedom in regards to needs and desires allows him to discern what is true and good, to prioritize the needs of other living beings, and to sacrifice his interests to care for them. This same freedom allows him to contemplate truth, goodness, and beauty. For these reasons, Human Ecology must encompass both the natural order of the environment and the supernatural order of the spiritual realm, even as we recognize the challenge of making a clear distinction between them.

-

⁵⁹⁶ Max Horkheimer and Theodor W. Adorno, *Dialectic of Enlightenment*, 118, quoted in Robert Spaemann, *Essays in Anthropology*, p. 57.

⁵⁹⁷ Spaemann, *Essays in Anthropology*, 72. "In truth, however, the notion of human dignity and its inviolability finds its theoretical foundation only in a metaphysical ontology, that is, in a philosophy of the Absolute. Therefore, atheism definitively deprives human dignity of its foundation, and with that the possibility within civilization to reflect on good reasons to protect human life."

⁵⁹⁸ Emilio M. Garza, "Thoughts on Conscience-and Ourselves," The greatest genocides in the 20th century have been made not in the name of religions, but of atheistic ideologies –Nazi and Communist- using "science" for one or another form of "social engineering".

f) Human Ecology as Culture

We have presented a brief account of the Plan of God and the place of the human person, the dynamisms of his spiritual core and the secular attempts to sever it from him. In this we have explored the relation of man with God and with himself. It is now relevant to turn our gaze to the relation of man with his fellow men and with nature, completing his four dimensions of encounter. Both of these are encompassed in culture, as it deals with how man relates with the world outside himself, both receiving the external impact and influence on himself, and exerting it through his own actions.

Culture as a term originates in Cicero⁵⁹⁹ who took it from the Latin *colere*, to cultivate, to apply it to the cultivation of the human being. It implies both the reality that is cultivated and the human contribution in work and ingenuity to perfecting that reality so that it becomes more fruitful. This requires the reverence to "listen" to nature, to reality, so that its inherent possibilities can be actualized. This attitude, in Cicero's time, acknowledged the land rhythms for sowing and harvesting, the suitability to particular crops, and so on. It recognized that the reality to be cultivated has a nature of itself, beyond the initiative of the one cultivating it, something that he does not "create" but receives as "gift."⁶⁰⁰

This "encounter" with nature is part of God's plan for man. "When man develops the earth by the work of his hands or with the aid of technology, in order that it might bear fruit and become a dwelling worthy of the whole

⁵⁹⁹ Cicero, Tusculanas, II,5,13.

⁶⁰⁰ Alfredo García, La cultura de hoy y la reconciliación.

human family and when he consciously takes part in the life of social groups, he carries out the design of God manifested at the beginning of time, that he should subdue the earth, perfect creation and develop himself." ⁶⁰¹ In doing so, man "humanizes" his environment in artifacts, lifestyles, customs, institutions and many other concrete realities that constitute his "habitat," "dwelling," or "environment." Benedict XVI refers to a Human Ecology, ⁶⁰² a house worthy of being occupied by the human person. ⁶⁰³

The life and energy of culture stem from the human person's "hunger of being," that "longing for infinity" inscribed in him by God himself. Cardinal Ratzinger stated that in every culture there is a "basis of truth," and a "longing for unity". This resembles the image and likeness; that godlike identity inherent in human nature, as well as the culture created by the activity of the human person. The truth about the human is rooted in having the image of God as the core of his identity, with the longing to recover the likeness lost by sin and the desire and efforts to achieve full reconciliation with God, himself, others and the created world. That is why human life and culture always manifests the interplay of the invariable truth about the identity of man and the myriad ways by which man tries to actualize the potential of that identity in his life and activity.

⁶⁰¹ Pope Paul VI, Gaudium et Spes, §57.

⁶⁰² Pope Benedict XVI, Caritas in Veritate, §51.

 $^{^{603}}$ Alfredo García, La cultura de hoy y la reconciliación.

⁶⁰⁴ Luis Fernando Figari, Longing for Infinity.

⁶⁰⁵ Joseph Ratzinger, "Cristo, fe y el desafío de las culturas" (conferencia dirigida a los Presidentes de las Conferencias Episcopales de Asia), Hong Kong.

Man and culture are not static but dynamic, as man searches for an ever greater fulfillment which can only be sated in eternity. If his activity is consistent with his identity, man grows in harmony and fulfillment. If his activity is divorced from or betrays his identity, he diminishes his humanity and can even destroy himself, others, and damage creation. That is why Popes John Paul II and Benedict XVI have used the term "anticulture" or "culture of death" to identify a culture which no longer cultivates but rather destroys what is human.

We can see two dynamisms in play, that of permanence, and that of unfolding. Reality is what it is. It has a permanence. Human activity contributes so that existing reality can yield the fruits of the possibilities it already bears in itself. We might discover possibilities hitherto unknown, but we did not 'create' them. We recognized what had always been there as potential. The dynamism of unfolding is the process of actualizing the existing potential according to its nature. The permanent nature of reality is brought to fruition in the unfolding, expressing in a fuller, harmonious development what was embedded in that reality.

This harmonious process has been radically altered in the current cultural environment. Rational instrumentality no longer cares to "listen" to reality or nature. Nature is no longer a gift embraced, but a slave to be mastered into submission. Both permanence and unfolding have been corrupted. Permanence and identity have disappeared by the denial of truth, so the unfolding no longer has a reference to be faithful to, and is now subject to

-

⁶⁰⁶ Pope John Paul II, Discurso inaugural de la IV Conferencia General del Episcopado Latinoamericano, §18; Pope Benedict XVI, *Deus Caritas Est*, §30; Homily in the feast of the Baptism of the Lord, 2006.

the unfettered freedom of choice. Adam and Eve's rebellion from the reality constitutive of their being, given to them by God, and their desire to determine themselves the good and bad, has been brought to its full expression in current times. Postmodern thinkers proclaim that we are finally free from reality, because either it does not exist, or it's not possible or relevant to know it.

The rebellion of the desires and the will against reality underlies many of the ruptures of our times. As Benedict XVI points out, the recent financial crisis can be traced to the rupture with reality by an economy artificially conceived to respond to greed, denying truth and good, producing "damaging effects on the real economy of badly managed and largely speculative financial dealing". Tellingly, this very much resembles Niklas Luhmann's endorsement of "systems" such as the market being as abstract as possible to allow for their constant "auto-creation." One

The experiments of recreating human nature according to one or another project of social engineering have yielded tragedies like Nazism, Stalin's communism, China's cultural revolution and the Khmer Rouge. Cyber technologies, Facebook and Youtube, have allowed millions to recreate themselves into new 'selves', more satisfactory that their real selves, in Baudrillard's "hyper-reality." 609 Biotechnology will allow us to recreate human's biological nature, reshaping it and "correcting" nature's "mistakes." This reveals the tendency of modernity not to cultivate nature and reality,

⁶⁰⁷ Pope Benedict XVI, Caritas in Veritate, §21.

⁶⁰⁸ Niklas Luhmann, Social Systems, 33ss.

⁶⁰⁹ Jean Baudrillard, In the Shadow of the Silent Majorities, 83-84.

working with its rhythms, but rather to subdue it by the force of reason and will.

This disrespect for nature extends to the human person. Scientism's approach sees culture as the artifacts it has produced. It seeks to describe and classify, rather than understand human action, its purpose and meaning. Biased by instrumental reason, it looks for systems that 'function' rather than for the mystery of the human person being allowed to unfold itself. Those who think it within their grasp to deconstruct and reassemble man and society in a more efficient way trample on the sanctuary of man's conscience and his vocation to give himself freely in love and service. Approaches such as Maslow's conceit that "we think that a scientific ethic may be possible, and we think we know how to go about constructing it," 610 which try to build a better man and a better society, but are clueless about suffering, evil and the human capacity for self-denial, do more harm than good.

Benedict XVI, poses two criteria particularly relevant to building that common space, the shared environment needed by the human persons to better satisfy their needs and goals: *justice and the common good*. For both, charity and truth are needed, much more than the efficiency and organization of a functional or systemic approach. Justice is "the minimum measure" of charity and to desire and strive towards the common good is a requirement of justice and charity.⁶¹¹ A culture which provides for a healthy Human Ecology will generate a society and a political space that strive for charity, truth, justice and the common good.

 $^{^{\}rm 610}$ Maslow, New Knowledge in Human Values, 120.

⁶¹¹ Pope Benedict XVI, Caritas in Veritate, §§6-7.

2. Challenges to an integral Sustainable Development in the current culture

While political liberalism – the prevalent political perspective in the current culture – postures as neutral ground for discussion, it tends to impose its own views and a distorted approach to human life. It tends to eliminate moral or religious considerations from ethical and political conversations, permitting only a reduced participation of individuals. Furthermore, for ethical social reasoning and political organization, the model of political liberalism is arguably compromised and must be complemented with other approaches. In this section we will review how the limited approach of secularism distorts culture and the public space, impeding a holistic environment and consequently, the flourishing of the human person.

a) Truth and knowledge as basis and tools of Human Ecology

Continual development reflects the history of humanity, but also the anthropological observation that man has unlimited potential that compels him to actualize it. SD furthers humanity's venture ensuring a healthy physical environment for the wellbeing of future generations. Human Ecology, striving to provide the holistic environment for the healthy development and fulfillment of the human persons, includes SD providing valuable insights to the conditions it requires. Justice, the common good and development are some of the key conditions required by a healthy Human Ecology. All of them, to be achieved, require truth as a foundation. "Church's social teaching... [is] the truth of

Christ's love in society... Development, social well-being, the search for a satisfactory solution to the grave socio-economic problems besetting humanity, all need this truth."612

Justice is a basic expectation of people in any society. It implies rectitude, fairness, giving what is due or merited,⁶¹³ measuring what is right, and morally demanding compliance. When justice is not present, we are compelled to work for it, with urgency and dedication. The moral theology and social teaching of the Catholic Church can contribute to social relations by helping us identify the obligations of justice and providing us with the moral energy necessary to undertake the challenges implied in heeding those obligations.

Justice as righteousness requires a standard of judgment to operate. The Old Testament equates justice with goodness and perfection as established by God's law and the just person with the saint. Currently, in the global secular culture reluctant to recognize the true or the good, these Christian accounts of justice are disqualified. Many prefer to talk about justice as fairness. Sacred Scripture's standard of judgment goes beyond fairness and lays down the conditions necessary to achieve the good.

It is summarized in loving God with all your heart, soul, mind and strength and loving your neighbor as you love yourself.⁶¹⁴ Grisez and Shaw state that when striving for the good, sometimes we should go beyond fairness

-

⁶¹² Ibid., §5.

⁶¹³ Pope Benedict XVI, Message for Lent 2010,

⁶¹⁴ The Holy Bible, Matthew 22:37-40.

by forgoing our own good and providing for the good of others,⁶¹⁵ explaining that:

In this fallen world, merely being fair ensures that we will make one another miserable. Fairness is a good thing as far as it goes, but it cannot overcome conflict or division; in the work of building community, justice is necessary but insufficient. The Christian transformation of fairness lies in forgoing rights, setting aside even just claims, and going beyond fairness by being merciful.⁶¹⁶

This conception of justice recognizes that all creatures have a right to the good and should strive to make the good available to all. This is at the core of the Judeo-Christian tradition which has shaped the idea of justice in the western culture. Human activity should be oriented to that end.⁶¹⁷

We can expect that the good, will necessarily include justice. "The Golden Rule," found in the Gospel, states: "[d]o unto others as you would have them do unto you."618 Grisez and Shaw say the Golden Rule is one formulation of fairness which excludes "unreasonable partiality to oneself and those to whom one feels attached, while requiring an attitude of solidarity toward others and readiness to carry it out in appropriate deeds."619 Although some insist that the good is implied in these accounts of fairness, an explicit reference to the good should be retained.

615 Germain Grisez, and Russell Shaw. Fulfillment in Christ, 322-323.

⁶¹⁶ Ibid., 310-311.

⁶¹⁷ Pope Paul VI, Gaudium et Spes, §35.

 $^{^{\}rm 618}$ The Holy Bible, Luke 6:31; Matthew 7:12.

⁶¹⁹ Grisez and Shaw, Fulfillment In Christ, 82.

b) The inhospitable and self-defeating ecology of Secular Liberalism

Here we will explore how denying the grounding of justice and the common good of society in its connection with truth and the good, renders and impoverished and ultimately unhealthy society. Through history, different political systems have organized societies allowing them to thrive and reach impressive achievements. Democracy and political liberalism are widely accepted in modern western societies and one of its most recognized theorists is John Rawls. The general argument is:

a basic feature of democracy is the fact of reasonable pluralism – the fact that a plurality of conflicting reasonable comprehensive doctrines, religious, philosophical, and moral, is the normal result of its culture of free institutions. Citizens realize that they cannot reach agreement or even approach mutual understanding on the basis of their irreconcilable comprehensive doctrines. In view of this, they need to consider what kinds of reasons they may reasonably give to one another when fundamental political questions are at stake.⁶²⁰

For Rawls, "the political conception of the person as a free and independent self is 'implicit in the public political culture of a democratic society."⁶²¹ This requires "the state as a neutral framework... To base rights on some conception of the good would impose on some the values of others and so fail to respect each person's capacity to choose his or her own ends."⁶²²

This is "a practical response to the familiar fact that people in modern democratic societies typically disagree about the good... it is more reasonable

 $^{^{\}rm 620}$ Rawls, The Idea of Public Reason Revisited, 131-32.

⁶²¹ Sandel, Liberalism and the Limits of Justice, 193, quoting Rawls, Political Liberalism, 13.

⁶²² Ibid., 187.

to seek agreement on principles of justice that are neutral with respect to those controversies." ⁶²³ Rawls suggests that democracy provide the neutral framework which gives everybody equal opportunity to pursue the good as they prefer. However, political liberalism is not really a neutral space; it is a paradigm⁶²⁴ with its own conception of individuals and their ends.

The premises of political liberalism - Political Liberalism's model for ethical social reasoning and political organization, is flawed in at least three important ways. First, it establishes justice as independent from the good and from truth. Second, it is a compromise that establishes a social contract on the common denominator of what it assumes everyone will reasonably accept. This could be a practical approach that allows people with different worldviews to agree on a political organization. However, it leaves out important parts of the lives of people and society. If political liberalism would recognize its limits and allowed other models to provide for other dimensions of the common good in political and ethical discussions, this limitation could be acceptable. However, as we will argue here, this restraint is frequently abandoned.

Third, this model does not acknowledge its ideological bias. It poses as a value-free and practical model which allows people to negotiate within the restricted limits of a fair and ordered social space. However, it seeks to impose itself as the dominant model for discussion in all aspects of human life, while at the same time making some of these aspects irrelevant to wider discussions.

623 Ibid., 189.

-

⁶²⁴ Kuhn, The Structure of Scientific Revolutions, discussing the advantages and limitations of paradigms.

⁶²⁵ Not what is due to each person but what their competing preferences negotiate in fair and due process.

And, because it does not recognize its own bias, it does not allow for fair negotiation.

The nature of the person implied - Any political system, whether it acknowledges it or not, has a conception of the human person. A system claiming to be neutral is suspect because its proponents are likely blind to the concepts implied in the system's foundation. Rationalist approaches typically suffer from this. They stake their legitimacy on being aseptically rational and free from any value or preconception, but then present their premises as obvious facts, that any reasonable person should accept as self evident. They try to remain free from anything not purely rational, but are challenged to account for the inevitable manifestations of reality, our moral conscience and common sense. Rawls's theory exemplifies this contradiction.

His political case for justice does have a conception of the self, as it "is necessary to the idea of the original position,"⁶²⁸ stating that "we are free and independent selves, unbound by antecedent moral ties, capable of choosing our ends for ourselves."⁶²⁹ There is no solid argument for his conception of the self or denial of any antecedent moral ties or ends to fulfill. Curiously, Rawls establishes that the "necessary conditions for a liberal conception of justice... be realistic. The first is that it must rely on the actual laws of nature and achieve the kind of stability those laws allow."⁶³⁰ What laws of nature? Rawls

626 Neuhaus, American Babylon, Notes of a Christian Exile, 101, "It is important to expose the fallacious value-neutrality of those who claim to argue from a tradition-free and autonomous rationality."

629 Sandel, Liberalism and the Limits of Justice, 187.

⁶²⁷ For an excellent critique of some of Rawls' position, see Sandel, Liberalism and the Limits of Justice, 187-190.

⁶²⁸ Ibid., 190.

⁶³⁰ Rawls, The Law of Peoples,12.

makes no further reference to laws of nature or to natural law in *A Theory of Justice* and the scant reference he makes in *The Law of Peoples* is to argue that political liberalism is wiser.⁶³¹

Having given up Kant as his philosophical foundation, he has "no moral or philosophical justification apart from an appeal to the shared understandings implicit in our political culture... [as Rawls writes] '[w]hat justifies a conception of justice is not its being true to an order antecedent and given to us, but its congruence with our deeper understanding of ourselves and our aspirations, and our realization that, given our history and the traditions embedded in our public life, it is the most reasonable doctrine for us.'"⁶³²

We have seen in the first chapter, in Lasswell's American pragmatism, a similar disdain for having to provide any deeper basis for "our own values." Richard Rorty is of the same mind as he writes, "Rawls' liberalism 'no longer seems committed to a philosophical account of the human self, but only to a historic-sociological description of the way we live now'. On this view, Rawls is not 'supplying philosophical foundations for democratic institutions, but simply trying to systematize the principles and intuitions typical of American liberals' ... 'the need for such [philosophical] legitimation may gradually cease to be felt."633

According to Sandel "Rawls pulls back from this purely pragmatic account" 634 but since he affirms virtues for political purposes only, it is hard to

-

⁶³¹ Ibid., 103-105.

⁶³² Rawls, Kantian Constructivism in Moral Theory, 77, quoted in Sandel, Liberalism and the Limits of Justice, 194.

⁶³³ Rorty, The Priority of Democracy to Philosophy, quoted in Sandel, Liberalism and the Limits of Justice, 194.

⁶³⁴ Sandel, Liberalism and the Limits of Justice, 194-195.

see that he escapes the pragmatic. Rawls' model has no real permanence being based only on current trends of American life. This reliance on his particular demographic to build a theory of justice might be deemed ego-centric or narcissistic, hardly appropriate to build a theory of justice that addresses the challenges of a complicated world. Other theories that are based in the universal nature of the human person are better equipped to be universally applied.

Rorty's arrogance was put in context when Solzhenitzyn addressed the Harvard community in 1978 and claimed that the US and the West, in its blind confidence that the rest of the world "should develop and mature to the level of present day Western systems which in theory are the best and in practice the most attractive", is really ignorant and indifferent to the reality of the rest of the world "out of the mistake of measuring them all with a Western yardstick."

The weak foundation of the self-referenced self - Political liberalism's understanding of the nature of the person is open to challenge, especially with regard to the arbitrariness of the self-referenced self.⁶³⁷ Why must we set aside our moral and religious convictions and our understanding of the highest human ends when engaging in discourse in the political space?

638 According to Sandel,

_

⁶³⁵ Chaput, *Religious Tolerance and the Common Good*, "But the problem is that much of American culture right now is built on an adolescent fiction. The fiction is that life is all about you as an individual—your ideas, your appetites, and your needs. Believe me: It isn't... Part of being an adult is the ability to separate marketing from reality; hype from fact"

 $^{^{636}\,}Solzhenitsyn$, Address at Harvard Class Day Afternoon Exercises, 1978.

⁶³⁷ See, for example, Sandel's critique in Liberalism and the Limits of Justice, 186-187.

⁶³⁸ Ibid., 191 "Once Rawls disavows reliance on the Kantian conception of the person, however, this way of justifying the original position is no longer available. But this raises a difficult question: What reason remains for insisting that our reflections about justice should proceed without reference to our purposes and ends? Why must we 'bracket,' or set

Political liberalism replies as follows... for political purposes, though not necessarily for all moral purposes, we should think of ourselves as free and independent citizens, unclaimed by prior duties or obligations. 639

Political liberalism, proposed as the neutral and limited framework necessary to protect the rights of people and negotiate their differences, now occupies all public space and denies participation to models that are not purely political.⁶⁴⁰ Moral or religious purposes are relegated to private spaces and consequently have no relevance in the public political space. To be allowed in the public space, our convictions must be stripped from any claim of truth or moral authority and must be expressed as a mere opinions or preferences.⁶⁴¹

But as Sandel questions: "Why should our political identities not express the moral and religious and communal convictions we affirm in our personal lives?... Rawls' answer is that this separation or 'dualism' between our identity as citizens and our identity as persons 'originates in the special nature of modern democratic societies'."642

To which we might reply: if modern democratic societies require a rupture within our personal identities which directly violates our rights to

aside, our moral and religious convictions, our conceptions of the good life? Why should not the principles of justice that govern the basic structure of society be based on our best understanding of the highest human ends?"

⁶³⁹ Ibid., 191-192.

⁶⁴⁰ Chaput, Religious Tolerance And The Common Good, "The modern secular view of the world assumes that religion is superstitious and false; that it creates division and conflict; and that real freedom can only be ensured by keeping God out of the public square.

⁶⁴¹ Sandel, Liberalism and the Limits of Justice, 192-193, n. 29, quoting Rawls, Political Liberalism, 30, 33, "The notion that we should regard our moral and religious duties as 'self-authenticating from a political point of view' (33) accords with Rawls statement, in A Theory of Justice, that 'from the standpoint of justice as fairness, these (moral and religious) obligations are self imposed' (206). But it is not clear what the justification can be, on such a view, for according religious beliefs or claims of conscience a special respect not accorded other preferences people may hold with equal or greater intensity (205-11)."

⁶⁴² Ibid., 193.

freedom of thought or religion⁶⁴³ by forbidding its free manifestation in the public space, then this model of democratic society is invalid. A society of self-referenced selves, of weak individuals that can only express preferences and not convictions is a weak society⁶⁴⁴ ripe for abuse.⁶⁴⁵ The *Universal Declaration of Human Rights* itself, one of the most most widely accepted public political documents, encumbers us with duties and relations such as being "members of the human family," sharing the "conscience of mankind" and the "dignity and worth of the human person,"⁶⁴⁶ and imposing "limitations... [of] the just requirements of morality."⁶⁴⁷ This puts in question the merit of a society ordered for the independent self-referenced self.

c) A Neutral Framework?

Political liberalism argues its legitimacy on providing a fair and neutral process for solving political differences in the public space. Here we will see that it is neither fair nor neutral and that far from restraining itself to the political process, similarly as the policy sciences we studied in the first chapter, it invades, judges and compromises all of human activity and life.

Whether the right can be prior to the good - Rawls bases his contention that the right is prior to the good because the self exists first and then chooses its ends. "For the self is prior to the ends which are affirmed by

⁶⁴³ UN, Universal Declaration of Human Rights, art. 18, "freedom of thought, conscience and religion [and to] either alone or in community with others and in public or private, to manifest [our] religion or belief in teaching, practice, worship and observance", [hereinafter UDHR]

⁶⁴⁴ Chaput, Remarks to City Club of Denver, [by] "separating religious faith from public life, we begin to separate government from morality and citizens from their consciences. And that leads to politics without character, which is now a national epidemic.",

⁶⁴⁵ Chaput, "Seeing Clearly", "A fully secularized public life would mean policy by the powerful for the powerful because no permanent principles can exist in a morally neutral vacuum. Finally, secularism isn't really morally neutral. It's actively destructive. It undermines community. It attacks the heart of what it means to be human."

⁶⁴⁶ UN, UDHR, Preamble.

⁶⁴⁷ UN, *UDHR*, Art 29.

it."⁶⁴⁸ However, this overlooks who the person truly is. This individualist conception of human nature starts with a self, devoid of everything except its free will. Rawls' questioned position asserts that the right is prior to the good in two ways. First, "certain individual rights 'trump,' or outweigh, considerations of the common good. Second, the right is prior to the good in that the principles of justice that specify our rights do not depend for their justification on any particular conception of the good life."⁶⁴⁹

The first argument is debatable since individual rights can be subjective preferences, as opposed to the objective and moral consistency of duties to others and to the common good. With regards to the second argument, a "number of political philosophers writing in the 1980s took issue with the notion that justice can be detached from considerations of the good... whether rights can be identified and justified in a way that does not presuppose any particular conception of the good. As a philosophical matter, our reflections about justice cannot reasonably be detached from our reflections about the nature of the good life... As a political matter, our deliberations about justice and rights cannot proceed without reference to the conceptions of the good that find expressions... [our] cultures and traditions. The subjective of the good.

-

⁶⁴⁸ Sandel, Liberalism and the Limits of Justice, 187, quoting Rawls, A Theory of Justice, 560.

⁶⁴⁹ Ibid., 185.

⁶⁵⁰ Ibid., 188.

⁶⁵¹ Ibid., 186.

⁶⁵² Ibid., 186-187.

⁶⁵³ Pope Benedict XVI, Address for "La Sapienza," "Jürgen Habermas . . . says that the legitimacy of a constitutional charter, as a basis for what is legal, derives from two sources: from the equal participation of all citizens in the political

The limits and relevance of the political space - Political liberalism's premise is that people in society have different worldviews; thus, a reasonable and practical compromise is necessary, a social contract in which justice, conceived of as fairness and due process, solves differences. This premise cannot and is not meant to cover many important parts of life. It should recognize its limits and allow other institutions to provide for other dimensions of the common good. "Thus, political liberalism agrees with David Hollenbach, S.J., when he writes: 'Not the least important of [the transformation brought about by Aquinas] was his insistence that the political life of a people is not the highest realization of the good of which they are capable—an insight that lies at the root of constitutional theories of limited government." 654

In this context, "majority rule... has a subordinate place as a procedural device" 655 and cannot guarantee that its outcome is either just or right. It is only the best decision we can arrive at in the circumstances. Rawls clarifies that any such decisions should not be a compromise between competing interests, 656 but strive "to find the best policy as defined by the principles of justice." 657 Unfortunately this ignores human frailty, since agents in the limited political space will tend to overreach and grab all public space and rule it according to their own interests. This, of course, would remind us of George Washington's

process and from the reasonable manner in which political disputes are resolved. With regard to this 'reasonable manner,' he notes that it cannot simply be a fight for arithmetical majorities, but must have the character of a 'process of argumentation sensitive to the truth'... I find it significant that Habermas speaks of sensibility to the truth as a necessary element in the process of political argument, thereby reintroducing the concept of truth into philosophical and political debate."

⁶⁵⁴ Rawls. The Idea of Public Reason Revisited, 154, n. 52.

⁶⁵⁵ Rawls, *A Theory of Justice*, 313, "[with majority rule] there is no assurance that just legislation will be enacted. There is nothing to the view, then, that what the majority wills is right. In fact, none of the traditional conceptions of justice have held this doctrine..."

⁶⁵⁶ Ibid., 314.

⁶⁵⁷ Ibid.

words,⁶⁵⁸ that democracy needs virtue to function properly.⁶⁵⁹ The tendency, however, is not only to disregard virtue and values, especially religious ones, but to ridicule them and proscribe them from the public space.⁶⁶⁰

The unacknowledged secular bias at work - The neutral political space in a democratic society is in theory, limited. Conversely, totalitarian regimes frequently reject boundaries and intervene in all areas of the life of its citizens, crushing dissent and marshaling all people and their resources to the service of the state. People will resist this, seeking to affirm their dignity and rights, which are prior to any state, totalitarian or democratic. The capacity of Poland's people, to maintain their cultural and religious identity in spite of the communist totalitarian regime attests to the resourcefulness and resilience of human nature when these rights are infringed.

When people and political agents in democracies recognize both their limits and limitations, and respect the moral and religious values that dignify their public lives, a fruitful balance is established. Churches are free to function and regulate themselves but not abuse their moral influence, remaining subject to civil authority.⁶⁶¹ The state rules the political space but is subject to the

-

⁶⁵⁸ George Washington, Farewell Address, 20, "Of all the dispositions and habits which lead to political prosperity, Religion and morality are indispensable supports... Let it simply be asked where is the security for property, for reputation, for life, if the sense of religious obligation desert the Oaths, which are the instruments of investigation in Courts of Justice? And let us with caution indulge the supposition, that morality can be maintained without religion... 'Tis substantially true, that virtue or morality is a necessary spring of popular government."

⁶⁵⁹ Chaput, Acceptance Remarks: "The Canterbury Award", "American ideals *require* a certain kind of citizen to make them work. That's why John Adams said that "Our Constitution was made only for a moral and religious people. It is wholly inadequate to the government of any other.""

⁶⁶⁰ Chaput, Religious Tolerance and the Common Good, "In Europe, Pope Benedict XVI has warned of a growing culture... [that] denies Christians "the right to intervene in public debates. And even in the United States, where... [it] could not have been imagined by her founders without an understanding of God and man shaped deeply by the Christian faith... you'll find literally dozens of movies that cast religious believers in general—and Catholics in particular—as fools or hypocrites or worse."

⁶⁶¹ Rawls, The Idea of Public Reason Revisited, 158.

moral judgment of the churches, which act as society's conscience, reminding the state that human dignity and its moral character have precedence over it.⁶⁶²

The solution is neither a state that rules unchallenged, nor a church dominating the state. Rather, the state and the church each in its own role, complement and hold each other in check. There is an asymmetry since the state can enforce its rule while the churches can only voice their opinion, but that is in accordance to their nature, and poses no problem as long as the state does not abuse this asymmetry. Maintaining this balance requires people of wisdom and virtue, both in the churches as in the state. Otherwise, the churches will try to abuse its moral influence, or the state will abuse its power, silencing or reducing to irrelevance what it considers a limitation to its power.⁶⁶³ This tendency is not new, as Chaput observes: "I'm tired of the Church and her people being told to be quiet on public issues that urgently concern us."⁶⁶⁴ What is new is the tendency to identify the public space with the political and consequently exercise the need to render it secular and purge it from any religious or moral values. This is not an honest mistake. It reveals an ideologically charged stance, marked with passion and prejudice.

.

⁶⁶² Chaput, *Religious Tolerance and the Common Good*, "But if we remove God from public discourse, we also remove the only authority higher than political authority, and the only authority that guarantees the sanctity of the individual. If the twentieth century taught us anything, it's that modern states tend to eat their own people, and the only thing stopping this is a resistance based in the human spirit but anchored in a higher authority—which almost always means religious witness. You know, there's a reason why... Individuals pose no threat to any state. They can be lied to, bullied, arrested, or killed. But communities of faith do pose a threat. Religious witness does have power, and communities of faith are much harder to silence or kill."

⁶⁶³ Chaput, *Religious Tolerance and the Common Good,* "This is why active religious faith has always been so distrusted and feared by every one of the big modern ideologies—whether it's Marxism, or fascism, or the cult of selfishness and comfortable atheism that we see in Europe and the United States today."

⁶⁶⁴ Chaput, Religion and the common good.

There are many instances that illustrate this, such as denying Europe's Christian heritage in the preamble of the European Union's constitution,⁶⁶⁵ or ordering to remove crucifixes from classrooms,⁶⁶⁶ pressuring nations to accept abortion, ⁶⁶⁷ restrictions on public expressions of religion, ⁶⁶⁸ particularly Christianity, ⁶⁶⁹ and outright intolerance, ⁶⁷⁰ asserting "gay rights" over religious freedoms, ⁶⁷¹ forcing churches to contradict their moral teachings, ⁶⁷² and leading public spaces, such as public schools to disapprove any expression of religiosity. ⁶⁷³ The double standard displayed in forbidding the crucifixes because they might offend someone and protecting pornography as free expression, disregarding that it offends, injures children's sensitivity, denies parental rights, and even disregards legitimate state interest in dealing with a widespread health issue, reveals a secular ideological position where any

⁶⁶⁵ Text of the preamble of the constitution available at

http://www.unizar.es/euroconstitucion/library/constitution_29.10.04/part_I_EN.pdf and one of the many statements of Pope John Paul II where he deplores that historic cultural roots of Europe have not been acknowledged, available at http://www.vatican.va/holy_father/john_paul_ii/speeches/2004/october/documents/hf_jp-ii_spe_20041030_polonia_en.html

⁶⁶⁶ A case is "Lautsi vs Italy" which ruling is available at http://cmiskp.echr.coe.int/tkp197/view.asp?action=html&documentId=857725&portal=hbkm&source=externalbydoc number&table=F69A27FD8FB86142BF01C1166DEA398649

⁶⁶⁷ An example is the Charter of Rights in the Lisbon Treaty that overrides EU countries' right to decide on abortion. See at http://www.coircampaign.org/index.php/info-euguide/lisbon-and-abortion

⁶⁶⁸ Chaput, *The Vocation of Christians in American Public Life*, "dealing with a culture that increasingly derides religious faith in general, and the Christian faith in particular."

⁶⁶⁹ Chaput, (he served in the U.S. Commission on International Religious Freedom), *Christmas under Siege around the World*, Religious Freedom Panel Remarks, "Three things distinguish anti-Christian persecution and discrimination around the world. First, it's ugly. Second, it's growing. And third, the mass media generally ignore or downplay its gravity."

⁶⁷⁰ Chaput, OSCE Conference on Anti-Semitism and Other Forms of Intolerance (Session 5), "Discrimination and intolerance toward Christians and minority religious groups are rising in several areas of the world today. Europe, despite its heritage, is not immune... This is state-sponsored discrimination, and it violates OSCE commitments to promote religious freedom for all. An equally dangerous trend now dominates other OSCE states, where public expressions of religious faith often seem to be ridiculed as fundamentalism. In the name of respecting all religions, a new form of secular intolerance is sometimes imposed. Out of fear of religious fundamentalism, a new kind of secular fundamentalism may be coerced on public institutions and political discourse."

⁶⁷¹ Catholic News Agency, Same-Sex Marriage Will Impact Religious Liberty Say Experts, As Georgetown's professor "Chai Feldblum… holds, the dignity and equality of gay people should almost always outweigh considerations of religious freedom."

⁶⁷² Catholic News Agency, D.C. Council Members Push for Same Sex 'Marriage' Compromise (Nov. 21, 2009),

⁶⁷³ Catholic News Agency, "Rutherford Institute Takes Case of Boy Given Psych Evaluation After Drawing Jesus."

choice on a sexual issue is a protected expression of liberty while anything religious is potentially harmful or invasive.⁶⁷⁴

d) The Dynamics of Ethical Public Reasoning

In political liberalism, public reason requires free and equal citizens⁶⁷⁵ and a language appropriate for the discussion. It separates secular, philosophical, or religious comprehensive doctrines from the liberal political conceptions which provide the principles for public reason.⁶⁷⁶ It limits the reasons that can be used⁶⁷⁷ excluding reasons based on comprehensive doctrines, assuming that all will agree on reasons based on liberal political conceptions.⁶⁷⁸ Political liberalism proceeds to public arguments which aim to make the best policy or decision.⁶⁷⁹ One difficulty is the limitation placed on language, which consequently, reduces human experience.

Sandel explains that Rawls' says "political liberalism refuses to take sides in the moral and religious controversies that arise from comprehensive doctrines." 680 Therefore, Rawls no longer expects people to agree on why they

 $^{\rm 677}$ Ibid., 139, note 21, "to reasons consistent with their seeing other citizens as equals."

191

⁶⁷⁴ The examples given here were compiled around 2010. In the years that have past until 2017, both the seriousness and the frequency of these violations have increased exponentially.

⁶⁷⁵ Rawls, *The Idea of Public Reason Revisited*, 171 "we think of persons as reasonable and rational, as free and equal citizens, with the two moral powers [note 84, the capacity for a conception of justice and the capacity for a conception of the good]."

⁶⁷⁶ Ibid., 143.

⁶⁷⁸ Ibid., 165-166 "public reason is not a view about specific political institutions or policies. Rather, it is a view about the kinds of reasons on which citizens are to rest their political cases in making their political justifications to one another... concerning fundamental political questions."

⁶⁷⁹ lbid., 155 "Public justification is not simply valid reasoning, but argument addressed to others: it proceeds correctly from premises we accept and think others could reasonably accept to conclusions we think they could also reasonably accept."

⁶⁸⁰ Sandel, Liberalism and the Limits of Justice, 189-190

support political liberalism, but simply to achieve an "overlapping consensus" which people support for different reasons.⁶⁸¹

The curious case of human rights - The weaknesses of an 'overlapping consensus' are illustrated in the experience of the *Universal Declaration of Human Rights (UDHR)*. There was no consensus on the foundation for establishing the *UDHR*, although in the wake of World War II and its horrors there was support for the rights it included.⁶⁸² The *UDHR* was adopted December 10, 1948 by a vote of 48 in favor, 0 against, and 8 abstentions.⁶⁸³ The *UDHR* has not been contested as such. However, support for some of its rights has waned, which demonstrates the fragility of such a consensus. Secularist advocates in western democracies, arguing for separation of church and state have tried to limit religious expression to the private sphere, while totalitarian regimes have persecuted religions,⁶⁸⁴ violating Article 18.⁶⁸⁵ Freedoms of opinion and expression in Article 19 have suffered as well.

Concerted efforts of solidarity at the national and international levels are required to achieve rights such as economic, social, and cultural rights, the right to an adequate standard of living, which includes access to food, clothing, housing, medical care, necessary social services, and social security, and the

⁶⁸¹ Ibid., 189-190, "Rather than seek a philosophical foundation for principles of justice, political liberalism seeks the support of an 'overlapping consensus.'"

684 Chaput, OSCE Conference on Anti-Semitism, "Direct discrimination has the shape of legal restrictions, and often police harassment and legal barriers, designed to stamp out unauthorized or unpopular religious communities or to limit the legitimate exercise of their religious freedom."; Chaput, "Acceptance Remarks: The Canterbury Award," "I never really understood what that [religious] freedom meant, though, until I served on the U.S. Commission on International Religious Freedom and saw what its absence looks like... in so many countries around the globe."

⁶⁸² Germán Doig, *Derechos Humanos y Enseñanza Social de la Iglesia*, 146, note 129 refers how there was agreement in the wording of the declaration but not in the philosophical foundation or juridical interpretation.

⁶⁸³ Ibid., 145.

⁶⁸⁵ UDHR, Article 18.

right to education.⁶⁸⁶ Sixty years after the *UDHR* was adopted, efforts to achieve these rights for all show woefully inadequate results.⁶⁸⁷ In low-income families, parents' right to choose the kind of education for their children cannot be exercised because the states hold, for all practical purposes, a monopoly on free education.⁶⁸⁸

Newly invented reproductive rights⁶⁸⁹ currently receive more political attention and funding than those originally established, making it arguable that even a global consensus on human rights is insufficient lacking the personal moral commitment of the people. The *UDHR* is an egregious example of how overlapping consensus makes a weak foundation for a political conception developed for the purpose of ensuring justice and protecting the rights of people. A more vigorous source of virtue and moral values is needed.

The contribution of comprehensive religious doctrines - Rawls acknowledges the need for personal moral commitment to sustain civic agreements.⁶⁹⁰ Faith traditions, regarded as comprehensive doctrines, are part of the background culture that gives richness and consistency to society. With restrictions, Rawls admits "introducing comprehensive doctrines into public

686 UDHR, Articles 22, 25, 26.

⁶⁸⁷ UN, Message of the Secretary-General on Human Rights Day, 2008.

⁶⁸⁸ Pope John Paul II, Ecclesia in America, §71.

⁶⁸⁹ UNFPA, Abortion is legal in many countries and supported by policies of UN and EU. See emphasis of promotion of universal sexual and reproductive health services (which include abortion) and defining reproductive health as a basic human right. Sexual or reproductive health or abortion were not established by the UDHR.

⁶⁹⁰ Rawls, The Idea of Public Reason Revisited, 152-53.

political discussion."691 This is different from the background culture where he emphasizes "there are no restrictions." 692

Rawls argues that faith traditions can participate in public reason and provides the example of an interpretation of Shari'a law compatible with constitutional democracy.⁶⁹³ He even argues that there is value in that "each [publicly] declare our own comprehensive doctrine" for it allows that other "citizens... are reassured, and this strengthens civic friendship." 694 The presence of faith traditions in public reason, provided they argue with politically valid reasons, is not a threat or a distortion.⁶⁹⁵

Beyond Rawls' limitations, it can be argued that the space for ethical reasoning can and should be enlarged to benefit from the reasonably expressed moral and spiritual content of religious traditions. Rawls himself affirms that "[a]nother essential feature of public reason is that its political conceptions should be complete... so that those values alone give a reasonable answer to all, or nearly all, questions involving constitutional essentials and matters of basic justice."696 It is difficult to see how public reason by itself can give meaningful answer to all these questions while excluding all that is not political, such as the significant content from faith traditions. The obstacle for this seems to respond more to the secular bias mentioned earlier.

⁶⁹¹ Ibid., 152.

⁶⁹² Ibid., 153, note 51

⁶⁹³ Ibid., 151, note 46, It is argued that it is a perfect example of overlapping consensus.

⁶⁹⁴ Ibid., 155.

⁶⁹⁵ Ibid., 145.

⁶⁹⁶ Ibid., 144-145.

The secular bias - In the United States, the First Amendment to the Constitution states that "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof" which is commonly understood as "separation of church and state" and mistakenly used to restrict expressions of faith in the public debate. There is a confusion between the public and the secular which is ill used to enforce a secularist view in all that is public.

As discussed above, this secular bias seeks to impose itself disregarding reasonable discourse, factual history, and human and national rights. Rawls's claim of fairness is mistaken, or at least naïve, as illustrated when we see political liberalism used to disregard social duties and commitments in favor of the free rein of the self, and when secularism overrides religious rights. Political liberalism's secular proviso might not have been designed for these purposes, but it tends to produce these outcomes.⁷⁰⁰

-

⁶⁹⁷ Chaput, The Vocation of Christians in American Public Life, "Kennedy said: 'I believe in an America where the separation of Church and state is absolute'... The trouble is, the Constitution doesn't say that. The Founders and Framers didn't believe that... the "separation of Church and state" had little force in American consciousness until Justice Hugo Black excavated it from a private letter President Thomas Jefferson wrote... then used Jefferson's phrase in the Supreme Court's Everson v. Board of Education decision in 1947."

⁶⁹⁸ lbid., "America's Catholic bishops... [in 1948] strongly endorsed American democracy and religious freedom. They also strongly challenged Justice Black's logic in Everson. The bishops wrote that 'It would be an utter distortion of American history and law' to force the nation's public institutions into an 'indifference to religion and the exclusion of cooperation between religion and government..."

⁶⁹⁹ Chaput, Remarks to City Club of Denver, "The "separation of Church and state" can never mean that religious believers should be silent about legislative issues, the appointment of judges or public policy... it's very much the job of the Church to guide Catholics to think and act in accord with their faith... What the Founders intended was... [not] any prohibition against religious believers, religious leaders or religious communities taking an active role in public issues and the political process. The idea of exiling religion from public debate would have made no sense to them."

⁷⁰⁰ Chaput, Seeing Clearly, 1st Annual Orange County Prayer Breakfast, "key differences exist between public institutions which are simply non-sectarian, and today's secularist ideology. Everybody can live with the former. No Christian in his or her right mind should want to live with the latter. Whenever you hear loud fretting sparked by an irrational fear of an Established Church, somebody's trying to force religious believers and communities out of the public discussion of issues... Finally, secularism isn't really morally neutral... It rejects the sacred while posturing itself as neutral to the sacred. It ignores the most basic questions of social purpose and personal meaning by writing them off as private idiosyncrasies. It also just doesn't work -- in fact, by its nature it can't work -- as a life-giving principle for society."

Limits of political liberalism and the space for faith - Political liberalism allows Catholic expressions of the common good in political space as long as they are expressed as political values.⁷⁰¹ These expressions must be stripped from any moral, religious or philosophical content. Why should these limitations be accepted? Why should these significant considerations be set aside when discussing matters of great relevance in justice? Sandel challenges political liberalism's conception of justice with three objections:

[f]irst,... it is not always reasonable to bracket, or set aside for political purposes, claims arising from within comprehensive moral and religious doctrines.... Second... it cannot be said that there is a 'fact of reasonable pluralism' about morality and religion that does not apply to questions of justice. Third... [that] citizens may not legitimately discuss fundamental political and constitutional questions with reference to their moral and religious ideals... is an unduly severe restriction that would impoverish political discourse and rule out important dimensions of public deliberation.⁷⁰²

The political conception of political liberalism excludes moral and religious concepts from reasonable argument in public political space.

However, it is necessary to include faith traditions in public political discourse to fill the void left by political liberalism and to provide a more complete account of individuals and society so that we can achieve a more integral approach to what justice implies. As a model for ethical public reasoning and political organization political liberalism is seriously incomplete. Its effort to disentangle itself from any philosophical groundings have compromised its ability to say something relevant or permanent about human nature and society. In practice, it ignores the moral and spiritual aspects of the human person and consequently excludes them from public space. It reduces

_

⁷⁰¹ Rawls, The Idea of Public Reason Revisited, 142.

⁷⁰² Sandel, Liberalism and the Limits of Justice, 196-218.

human persons to self-referenced selves, a very weak foundation for any social project.

Justice reduced to fairness and catering to the demands and expectations of self-referenced selves impoverishes public space and renders it unable to account for or protect what human persons value and cherish. Justice loses its connection to the truth, to the good, to what is moral and spiritual. It is hostile to virtues, values, and anything that is not strictly secular. It does not include truth, charity, or openness to God, and therefore, includes no hope. Consequently, it offers little motivation for building a better society and working for justice.

Faith traditions can advance ethical reasoning by contributing centuries of wisdom and reflection, by providing moral conscience, values, and spiritual depth, and by offering the compelling force and energy which only stems from commitments to God. Therefore, it is critical that faith traditions remain free to speak in the public space without the restrictions Rawls establishes for political discussion. Political liberalism does not provide compelling arguments for excluding faith traditions from public arguments, even less if it means neglecting or denying the relevance of the moral and spiritual in the human person.

In chapter one and two we have covered the birth and growth of Sustainable Development and its current relevance to our future as a global society. As we identified serious distortions in both theory and practice, this chapter has contrasted with the notion of the human person that forged Western culture, the underlying conceptions of current political thought that

cause those distortions. The next two chapters will show how a comprehensive Human Ecology can integrate Sustainable Development correcting its distortions and completing its insufficiencies. Chapter four will show the breadth and richness of the different instances of human ecology through history, and chapter five will integrate them from the perspective of Human Ecology in John Paul II and Benedict XVI.

Chapter 4.- Development of Human Ecology

In the previous chapters we have given an account of Sustainable Development (SD) and its place in today's culture and global society, along with the serious shortcomings it harbors. As we aim to provide, through Human Ecology, a more holistic and harmonious approach to SD, this chapter will start by reviewing the history of Human Ecology and the experiences and perspectives that have enriched it.

The term Ecology although coined by Ernst Haeckel in 1866, was made known more widely by "Danish botanist Eugenius Warming (1841–1924) and the German translation of his Lehrbuch der ökologischen Pflanzengeographie (1896), a pioneering work in his field of plant ecology... [He] also discussed the human influence on the environment and the importance of the human species for the science of ecology. The communal life of plants Warming described as a "social adaptation," whereas humans also played a pivotal role in influencing "the struggles between plant associations" that again influence human societies (Warming 1918 [1895]: 276)."703 The term ecosystem is also helpful as we have seen, evoking useful insights for human ecology: the community formed by different live agents, interacting between themselves and the environment; the interdependence of the agents and the environment; some discernible patterns or rules of healthy interaction that reveal an order based on the nature of the agents, which needs to be respected and cared for.

Human Ecology can also be regarded as a theoretical approach that emphasizes the heuristic value of human culture and behavior. In particular it

199

⁷⁰³ Matthias Gross, "Human Geography and Ecological Sociology: The Unfolding of a Human Ecology, 1890 to 1930—and Beyond," *Social Science History* 28, no. 4 (2004), 577.

emphasizes the complex ways in which humans shape and are shaped by their natural and social environment.⁷⁰⁴ Gates and Tucker remark that Human Ecology is a "highly eclectic" field.⁷⁰⁵ While interest in ecology and Human Ecology has grown rapidly among a wide range of academic endeavors, they are taken not so much as academic disciplines but as perspectives or orientations to the interconnectedness and reciprocal behavior of organisms in a given environmental setting. Thus, all ecological study is necessarily multidisciplinary⁷⁰⁶ connecting many different disciplines, but also establishing strong connections between the natural and human environments. However, there are other approaches to Human Ecology as a field of study.

1. Origins

According to Young, the origin of the notion of *Human Ecology* is typically dated to the late 19th and early 20th century, when it was part of a lively debate over academic fields and boundaries between geography and the social sciences, and became a sub-discipline of the social sciences in the 1920s. However, others trace the notion as far back as the Greek philosophers.⁷⁰⁷ Paul Sears ascribes even older roots to the concept of Human Ecology when he declares that Human Ecology's roots lie in the intuitive and empirical knowledge of ancient man who lived in intimate relations with the natural

⁷⁰⁴ Daniel G Bates. and Judith Tucker, "Introductory Remarks" in *Human Ecology: Contemporary Research and Practice*,

⁷⁰⁵ Ibid.

⁷⁰⁶ Ibid.

⁷⁰⁷ Gerald L Young, Human ecology as an interdisciplinary concept: A critical inquiry.

world.⁷⁰⁸ According to Bruhn, "[T]he term "human ecology" was first used in sociology in 1921."⁷⁰⁹ However, its use in geography dates from 1907 or earlier and it appeared in 1908 in the *American Journal of Sociology*. The discussions between 1890 and the 1920s evince key concepts and perspectives which continue to be relevant today.

"The ecological character and the geographical basis of human societies were also of central concern to early sociologists at the University of Chicago."⁷¹⁰ Albion Small, head of the sociology department, wrote with George Vincent, *An Introduction to the Study of Society* (1894), the first American textbook for sociology. They thought their book was similar to laboratory guides in biology, studying humans in their habitat, including the relation of society with the physical environment. "The authors regarded society as having a twofold relation to nature, since nature leaves an impression on society and society subjects nature to an endless series of modifications."⁷¹¹

Sociologists had to account for the whole of the material environment and its impact on society, so their students had to study a variety of disciplines, including biology and geology. Since Small defined sociology as the process of human association, which demanded "a full account of all physical and vital forces in their action upon the conditions and incidents of association,"⁷¹² he

708 Paul B. Sears, Some notes on the ecology of ecologists. Scientific Monthly 83:22-27, 1956.

⁷⁰⁹ John G. Bruhn, "Human ecology: A unifying science?" Human Ecology 2: p. 114. "There are forces at work within the limits of the urban community-within the limits of any natural area of human habitation-which tend to bring about an orderly and typical grouping of its population and institutions. The science which seeks to isolate these factors and to describe the typical constellations of persons and institutions which the cooperation of these forces produce is called 'human ecology".

⁷¹⁰ Gross, Human Geography, 578

⁷¹¹ Ibid, 578

⁷¹² Ibid, 579-580.

considered the material environment "as part of the 'social forces,' ironically adding that 'some of the social forces are not social at all.' In this important step, Small thus treated the material environment that stands in causal relation to human society as part of social forces and thus defined the material environment as part of the process of human association."713 These "social forces" resemble but should not be identified with Durkheim's social facts, as "[Durkheim] did not give the material environment the possibility of an originating motivating power for social change."714

Geographers were treading similar ground, not surprisingly since they were often communicating with sociologists. The first geography department in the United States was founded at the University of Chicago and J. Paul Goode was entrusted to develop its program of courses.⁷¹⁵ "The new courses in geography 'were planned to occupy the great uncultivated field between geology and climatology on the one hand, and biology, history, sociology, economics, anthropology, and political science on the other."716 Goode wrote an article in 1904⁷¹⁷ where "he discussed the hybrid character of geography, which has to study both the physical and the social environment," noting that the "influence of the physical environment for the understanding of human societies" had decreased from 95% in premodern societies to less than 20%.⁷¹⁸ In 1907 "Goode announced a course entitled 'Ontography,' which he described

⁷¹³ Ibid.

⁷¹⁴ Ibid, 580.

⁷¹⁵ Ibid, 581.

⁷¹⁶ Ibid.

⁷¹⁷ J. P. Goode, "The Human Response to the Physical Environment." Journal of Geography 3(1904): 333–343.

⁷¹⁸ Gross, Human Geography, 582.

as... 'essentially an elementary course in plant, animal and Human Ecology'... Goode and his geographer colleagues considered themselves geographers who were also human ecologists."⁷¹⁹ A feature of Goode's program was the emphasis on field studies, "important, since during the field studies the students also learned to cooperate with scholars from other disciplines."⁷²⁰

Looking for interdisciplinary connections on the subject of Human Ecology, Goode made contact with a professor of sociology at the University of Illinois, Edward Hayes, who quoted a letter by Goode when writing about the relationship between geography and sociology: "Human ecology, according to the passage by Goode quoted in Hayes, 1908, is to be understood as the interface between the two disciplines. This seems to be the first time that the term human ecology was discussed in a scholarly magazine, the *American Journal of Sociology*." 721 Goode envisioned geographers and sociologists working with economic geographers in Human Ecology, "a new hybrid field, where geography builds the factual foundation and sociology the abstractions from the geographic facts."722

While "for a time in the early 1900s, human ecology seemed to hold some promise for a cooperative framework," with sociology aiming to integrate knowledge from different fields as

[Hayes stated that] "tracing the effects of geographic conditions on social phenomena . . . is distinctly an excursion into sociology, and contributes an essential part of the explanation sought by sociology." To be sure, for

_

⁷¹⁹ Ibid, 582.

⁷²⁰ Ibid, 582.

⁷²¹ Ibid, 583.

⁷²² Ibid, 584.

⁷²³ Ibid, 584.

Hayes a sociological "explanation will not be complete until the four factors in the explanation, physiologic, technic, geographic, and psychic, are correlated into one description. 724

However, the type of collaboration Hayes had in mind was definitely not symmetric. Rather he thought the integration

cannot be made by any one of the sciences that discover a part of the conditions of social reality, but only by a sociology which gathers all of these conditions into one perspective." In other words, for Hayes geographers did the rough spadework for sociology, that is, the collecting of facts, partially again from other sciences. The much smarter sociologists carried out the intellectual or scientific work of abstraction and conclusion.⁷²⁵

In a way, Goode himself facilitated the surrender of Human Ecology to the field of sociology. Hayes, on the one hand "started an attack on 'metaphysical tendencies' in sociology, which, he claimed, neglected the importance of the natural environment for the analysis of societal development,"⁷²⁶ while he also avoided "falling into a one-sided determinism" of the environment. In his dissertation,⁷²⁷ "he quoted Gabriel Tarde's definition of society: 'Societies (plural) are not merely masses of inter-spiritual action; they are at one and the same time masses of inter-spiritual and intercorporeal actions, combined with many physical actions, united struggles with the forces of nature to repel and to utilize them.'"⁷²⁸

Hayes basically took human ecology from geography into sociology and despite other efforts, this would remain so for a couple of decades. He defined that what was "to be studied fell into two main groups, social activities and the

=

⁷²⁴ Ibid.

⁷²⁵ Ibid., 584-585.

⁷²⁶ Edward C. Hayes, "The 'Social Forces' Error." American Journal of Sociology 16(1911): 613–25.

⁷²⁷ E. C. Hayes, Sociological Construction Lines: A Dissertation (Chicago: University of Chicago Press, 1905 [1902]) 628.

⁷²⁸ Gross, Human Geography, 585.

conditioning factors that shape and alter these activities."⁷²⁹ The conditioning factors were conditions of four kinds: "(1) geographic conditions, or the natural physical environment; (2) technic conditions, or the artificial environment; (3) psychophysical conditions, or the hereditary and acquired traits of population; (4) social conditions, or the causal relations between the activities of associates."⁷³⁰ According to Hayes, "human society does not simply adapt to its environments, as is implicated in the notion of environmental determinism prevalent in early-twentieth-century social thought dealing with the natural environment. Rather, Hayes viewed human society as active and as acting not only upon its social and natural environment, but also on and with technology."⁷³¹ It was a sociological theory where the natural environment played an important but not deterministic role. "Thus, by around 1905–15, Goode and especially Hayes had already sketched and marked out a realm and scope of human ecology."⁷³²

As human sciences had influenced Anton Kerner and others in the late 19th century, some believe that "the ecologist Frederic E. Clements' concept of ecology was directly derived from the ideas of community in sociology and the metaphor borrowed from sociology that described a social unit as a kind of organism."⁷³³ Biology oriented ecologists interested in Human Ecology, such as Charles C. Adams, approached "treating human communities as one more

⁷²⁹ Ibid, 586.

⁷³⁰ Ibid, 587-588.

⁷³¹ Ibid, 588.

⁷³² Ibid, 588.

⁷³³ Ibid, 588-589.

animal community in the natural environment."⁷³⁴ Adams thought "that human ecology still needed to be understood as a part of his own discipline, animal ecology.

In Adams' view, sociology was also a part of general ecology."⁷³⁵ In the inaugural volume of the journal Ecology, in 1920, "the lead article, 'The Scope of Ecology,' still argued for a broad view of ecology, even stating that "geography, in so far as it is the study of man in relation to his environment, is human ecology.'"⁷³⁶ In 1922 Steven Forbes in an article "The Humanizing of Ecology," "also put the case for including 'civilized man' and his relation to the natural world in the subject matter of ecology."⁷³⁷ However, in the following years, the concept remained absent from ecology allowing "for a 'purely' sociological take on human ecology, although there were still a few geographers who claimed the field as theirs."⁷³⁸

Harlan Barrows made an attempt to reclaim Human Ecology for the field of geography in his Presidential address before the Association of American Geographers at their Ann Arbor meeting in December, 1922. His effort was not successful even though his arguments were noteworthy. He presented geography as dealing with "the mutual relations between man and his natural environment... [and thus, as] the science of human ecology... [advising it be treated] from the standpoint of man's adjustment to environment, rather than

⁷³⁴ Ibid, 589.

⁷³⁵ Ibid, 589.

⁷³⁶ Ibid, 590.

⁷³⁷ Ibid, 590.

738 Ibid, 590.

from that of environmental influence." ⁷³⁹ This adjustment implied man changing on account of the environment but also changing the environment ⁷⁴⁰ by his actions in a constant process. ⁷⁴¹ He regarded human ecology to have "a unity otherwise lacking, and a point of view unique among the sciences which deal with humanity," ⁷⁴² that allowed it to view as an integrated whole the interrelating elements, ⁷⁴³ including the cultural aspects. ⁷⁴⁴ The complexity and interconnectedness of the different dimensions of natural and human life ⁷⁴⁵ required an interdisciplinary and dynamic approach such as that of Human Ecology, and that for the future of geography "the problem of Human Ecology may have the vitalizing, unifying influence needed."

"In subsequent years, geographers' and sociologists' early attempts to ecologize their disciplines, as well as animal and plant ecologists' claims to include humans into their fields of study, appeared detached from the new human ecology of the 1920s developed by sociologists in Chicago's Department of Sociology,"⁷⁴⁷ which took an undisputed lead in Human Ecology until the late 1930s. These other efforts, however, contributed to its later development.

⁷³⁹ Harlan H. Barrows, "Geography as Human Ecology," *Annals of the Association of American Geographers*, 13, no. 1 (March 1923), 3.

 $^{^{740}}$ lbid, 11 "It would be ,a great mistake to, suppose that ... the natural factor is the constant, and the human factor alone the variable. An environmental complex may be changed profoundly, even, in a short interval of time, by the operation of natural forces. and especially by the activities of man."

⁷⁴¹ lbid, 12 "...the present adjustments of people to their environments represent only a stage in a ceaseless process of evolution... no adjustment of man to the earth is permanent, that the only permanent thing is change."

⁷⁴² Ibid, 7.

 $^{^{743}}$ lbid, 8 "regional geography comes into its own when the synthetic element is introduced, and the different items are studied in the light of their interactions upon one another."

⁷⁴⁴ Ibid, 9 "No other science, it may be noted in passing, gives systematic attention to the development of the cultural landscape."

⁷⁴⁵ Ibid, 12 "the different phases of human activity are connected with one another organically."

⁷⁴⁶ Ibid, 13-14 "The road which to me seems most promising is that denoted by human ecology."

⁷⁴⁷ Gross, Human Geography, 590.

2. Chicago's Department of Sociology

The most significant development of the concept of Human Ecology came from the University of Chicago where twenty-five years earlier biological ecology had been co-founded. Consequently, biology strongly influenced the development, even more so since biology had borrowed before from sociology. "It is interesting to note that it was the application to organic life of a sociological principle—the principle, namely, of 'competitive co-operation'—that gave Darwin the first clue to the formulation of his theory of evolution."⁷⁴⁸ Sociological human ecologists, professors Park, Burgess and student Roderick McKenzie, are regarded as the founders of Human Ecology.⁷⁴⁹ They "piloted it to official recognition by the American Sociological Society... [and] formally introduced human ecology to sociologists."⁷⁵⁰

The ideas of community, system and organism were applied to a given common habitat and its inhabitants who would engage in competitive cooperation in a closed system. "To such a habitat and its inhabitants — whether plant, animal, or human— the ecologists have applied the term 'community.""⁷⁵¹ These communities would be defined by: "(1) a population, territorially organized, (2) more or less completely rooted in the soil it occupies, (3) its individual units living in a relationship of mutual interdependence that is

748 Park, "Human ecology," 2-3.

⁷⁴⁹ Gerald Young, "Human Ecology as an Interdisciplinary Concept: A Critical Inquiry," 4-5.

⁷⁵⁰ James A. Quinn, "The Nature of Human Ecology—Reexamination and Redefinition," 161.

⁷⁵¹ Park, "Human ecology," 4.

symbiotic... interrelated in the most complex manner."⁷⁵² As an organism it would have a life cycle and a "mechanism (competition) for (1) regulating the numbers, and (2) preserving the balance between the competing species of which it is composed. It is by maintaining this biotic balance that the community preserves its identity and integrity as an individual unit."⁷⁵³

Change is part of life in these communities or system, even if the degree and pace might be very different at times. Park quotes Elton as stating that

The impression of anyone who has studied animal numbers in the field is that the "balance of nature" hardly exists, except in the minds of scientists. It seems that animal numbers are always tending to settle down into a smooth and harmonious working mechanism, but something always happens before this happy state is reached.⁷⁵⁴

When competition is sparked for one reason or other, change happens from one stage to the next. Society "is just the area within which biotic competition has declined and the struggle for existence has assumed higher and more sublimated forms."⁷⁵⁵ Certainly, the conditions which influence "the movements and numbers of populations are more complex in human societies than in plant and animal communities, but they exhibit extraordinary similarities."⁷⁵⁶ Ecological principles of dominance and succession are also at work in human communities. Areas of dominance are usually the higher land values of the shopping district and the central banking area. Accounting also for terrain and methods of transportation, this "tends to determine the general

⁷⁵² Ibid.

⁷⁵³ Ibid.

⁷⁵⁴ Ibid, 5.

⁷⁵⁵ Ibid, 7.

⁷⁵⁶ Ibid, 6.

ecological pattern of the city," and succession, that is, the serial changes through different stages, comes through inventions, catastrophic changes and competition and conflict.⁷⁵⁷

According to Park, there is added complexity in human societies because "competition is limited by custom and culture. The cultural superstructure imposes itself as an instrument of direction and control upon the biotic substructure." The factors in play then, are 1) population, 2) technological culture, 3) customs and beliefs (non-material culture), and 4) the natural resources of the habitat. Human ecology studied "the processes by which the biotic balance and the social equilibrium (i) are maintained once they are achieved and (2) the processes by which, when the biotic balance and the social equilibrium are disturbed, the transition is made from one relatively stable order to another."

McKenzie's attention was drawn to the phenomenon of rapid city growth driven by industrialization. To explain it he focused on spatial distribution and movement, access to resources and division of labor. "The spatial and sustenance relations in which human beings are organized are ever in process of change in response to the operation of a complex of environmental and cultural forces. It is the task of the human ecologist to study these processes of change" The forces or ecological factors could be classified as: 1) geographical, 2) economic, 3) cultural and technical, and 4)

⁷⁵⁷ Ibid, 7-10.

758 Ibid, 15.

⁷⁵⁹ Ibid.

⁷⁶⁰ Roderick D. McKenzie, "The Scope of Human Ecology," 141.

political and administrative. He considered them "either positive or negative; they either attract or repel."⁷⁶¹ Understanding them "would be of great value in city-planning, as it would enable the community to control the direction of its growth and structure."⁷⁶²

Interesting examples of technical forces such as "the shaft elevator, introduced in the seventies, and steel construction, introduced in the nineties, and the more recent advent of the automobile have acted as general factors in affecting the concentration of population and organization of communities."⁷⁶³ The situation of Japan in 1919 is given as an example of economic forces: "The townward tendency is operating in every civilized country... 'the dominant characteristic of the new industrialization is the trend of population from the country to the city... [accelerated growth of cities] reveal the metamorphosis of Japan from a feudal to an agricultural country, and now to the age of steam, electricity and steel.'"⁷⁶⁴ Structure such as roads and water systems would be a factor that constrains processes but railroad and motor transportation had increased flexibility.⁷⁶⁵

McKenzie defined "five major ecological processes: concentration, centralization, segregation, invasion, succession." ⁷⁶⁶ Concepts of mobility (change of residence, employment or location of services) and fluidity (movement without change of ecological position) were relevant to change,

⁷⁶¹ Ibid, 145.

⁷⁶² Ibid, 146.

⁷⁶³ Ibid, 145.

764 Ibid, 146.

⁷⁶⁵ Ibid, 154.

766 Ibid, 146.

segregation and centralization. Ecological distance, measured in time-cost, was a measure of fluidity with an hour as the usual limit. Growth would follow routes of rapid transportation.⁷⁶⁷ Concentration is reflected in density while centralization implies the temporary concentration of people coming together at definite locations for specific common interests such as work, play, business or education. "It is the process of community formation.... The focal point of centralization in the modern community is the retail shopping center."⁷⁶⁸

Centralization has territorial and time specialization according to different needs, interests, and the different groups, generating a constellation of specialized centers. "Civilization is a product of centralization. The evolution of economic organization from village and town to metropolitan economy is but the extension and specialization of centralization of each of the dominant interests of life."⁷⁶⁹ Segregation was the concentration of population types within a community, mostly economic, but also by language, race and culture, and invasion was the process of group displacement by another group, enacting a cycle of succession, when there is a complete change in population type or in use.⁷⁷⁰

Park became part of the sociology faculty of the University of Chicago in 1914 and in the following decade would work to enlarge sociology's field taking Human Ecology from geography and establishing a strong reputation for the sociology developed in the University of Chicago. "From 1925 to 1939,

⁷⁶⁷ Ibid, 144-145.

⁷⁶⁸ Ibid, 148.

⁷⁶⁹ Ibid, 149.

770 Ibid, 152-154.

ecological studies of urban areas, particularly in Chicago, grew rapidly... These works began to exert significant influences on political science and stimulated interest in local, state, and regional planning."⁷⁷¹ In a 1935 article, "Charles Adams reflected on the relation between general ecology and Human Ecology... [and] acknowledged the sociologists of his time as the 'real' human ecologists."⁷⁷² According to Park's approach "geographers simply described and collected particular and individual facts in an idiographic manner, whereas sociology sought for universal characteristics, a nomothetic approach."⁷⁷³ He maintained the influence of the natural resources as one of the four variables in the study of society, but steered clear of any deterministic approach.⁷⁷⁴

With a solid foundation, sociology

could reach out into other disciplines' realms and even, as was the case with Park, claim to superimpose a sociological idea onto other areas. From here on it appears that most—if not all—the contents pertaining to a human ecology (including the name itself) were borrowed from geographers of an earlier generation and could subsequently be incorporated into the realm of sociology.⁷⁷⁵

In this way, sociology was able to take over human ecology completely. "To maintain the human ecological catchment area, Robert Park also had to give assurances that he did not want to leave the field of human ecology to the biological ecologists" 776 but he was criticized as the tide turned since "beginning in the 1930s, ecological approaches in sociology generally came

ibiu, 575

 $^{^{771}\,\}mbox{John}$ G. Bruhn, "Human Ecology: A Unifying Science?" 114.

⁷⁷² Gross, Human Geography, 590.

⁷⁷³ Ibid, 593.

⁷⁷⁴ Park, Human ecology, p. 15.

 $^{^{\}it 775}$ Gross, Human Geography, 595.

⁷⁷⁶ Ibid, 595.

under severe attack." 777 "The Chicago School eventually dissolved amid criticisms that its studies ignored cultural factors and its model of urban ecology was limited to Chicago." 778

In 1939 James Quinn would address the development of Human Ecology spawned by the Chicago School by criticizing "two widely-held conceptions, ...: (1) that Human Ecology is synonymous with the study of relations between men and their environment, and (2) that it is synonymous with the study of spatial distributions of human phenomena."779 Regarding the first conception, Quinn says it "proves inadequate for purposes of sociology... [because] sociologists need a more-limited and precise definition of the field... [because]unless limited in some way, leads to the conception of human ecology as an all-inclusive study of man..."780 Even recognizing its value of synthesis, "it does not help him in defining human ecology as a specialized science; and sociologists do regard human ecology as a specialized and limited field of study."781 To be more specific "Sociologists are interested in human ecology... the relations of man to man as influenced by limited supplies of environmental resources rather than the direct relations of men or groups to environment..." 782 Of course "the present discussion refers only to the sociological meaning of the term... the fact that a specialized ecological field does exist within the realm of sociology."783 Regarding the second conception

_

⁷⁷⁷ Ibid, 596.

⁷⁷⁸ Bruhn, "Human Ecology: A Unifying Science?" 115.

⁷⁷⁹ Quinn, "The Nature of Human Ecology," 161.

⁷⁸⁰ Ibid, 162.

⁷⁸¹ Ibid.

⁷⁸² Ibid, 163.

⁷⁸³ Ibid.

Quinn argues "(1) that certain spatial studies are not ecological and (2) that ecology includes aspects which are not spatial. These arguments, therefore, contradict the contention that human ecology may be defined as synonymous with studies of spatial distribution of human phenomena."⁷⁸⁴

As the Chicago School's influence waned, Quinn could state in 1939: "The nature of Human Ecology does not seem so clear today as it did a decade and a half ago... At least three recognized academic disciplines—biology, geography, sociology—each claims human ecology as its own."⁷⁸⁵ Sociology was trying to assert itself "on the idea of social variables acting as both theoretical cause and effect" leading to "an extreme form of sociologization [where] the focus was given to intentional actions, and human beings were increasingly regarded as exempt from ... naturalistic explanation ... Any effort to introduce things nonsocial into the equation seemed to threaten the very survival of the sociological enterprise itself."⁷⁸⁶ Eventually, "in 1958, George A. Theodorson could state in a review on human ecology in contemporary sociology that Park's 'human ecology essentially is a thing of the past.'" ⁷⁸⁷ Being interdisciplinary, Human Ecology struggled between forging ties with specific disciplines and resisting enmeshment with them which "led to human ecology's failure to become a unified enterprise."

-

⁷⁸⁴ Ibid.

⁷⁸⁵ Ibid., 161.

⁷⁸⁶ Gross, Human Geography, 596.

⁷⁸⁷ Ibid, 596.

⁷⁸⁸ Ibid, 596.

3. Dominion of Nature in Human Ecology

The sociology department at the University of Chicago was able to take over Human Ecology from the geographers, but used mainly it to apply methods of ecology to human populations. It weakened the focus on the environment without giving attention to the distinctly human factors of morals and freedom. This section will review different ways in which the interdependence and balance between the human and nature has been addressed.

Edward J. Kormondy, focusing on dominion of nature, identifies what he considers three distinct traditions within Human Ecology:⁷⁸⁹

a) The Imperialist Tradition – This school of Human Ecology views the human-nature relationship as one where humans have dominion over nature. It is grounded in a literal interpretation of the Old Testament. It was denounced by Lynn White in 1967,⁷⁹⁰ whom we already discussed in chapter one.

Key scriptures allegedly supporting the imperialist tradition are:

- 1. Genesis 1:26. "Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle and over all the earth, and over every creeping thing that creepeth upon the earth."
- 2. Genesis 1:28. "And God said unto them, Be fruitful and multiply, and replenish the earth and subdue it; and have dominion over the fish of the

⁷⁸⁹ Kormondy, Concepts of Ecology, 384.

⁷⁹⁰ Lynn White, "The Historical Roots of Our Ecological Crisis." *Science* 155 (1967):1203-1207.

sea, and over the fowl of the air, and over every living thing that moveth upon the earth."

However, the unbridled exploitation of nature was rare before the 17th century. The Catholic tradition from Scripture advocated reconciliation and harmony with nature. Nature witnessed to God's existence, His love and His marvelous works. The communities of monks that made the earth fruitful while treating it with reverence and St Francis' love for creation testify to a healthy approach to nature before the 17th century.

The imperialist tradition can be traced back to the writings of Francis Bacon in the early 17th century and his ideas about human domination over nature.⁷⁹¹ Carl Linnaeus and George Buffon gave the idea scientific and systematic form. According to Schwarz, nature was conceptualized in mechanical and instrumental terms, which made it possible to utilize nature for human exploitation.⁷⁹² Industrialization intensified this dominant discourse or philosophy of nature. There was an increase of knowledge-making, armed by the systematic approach of science.⁷⁹³ Protestant ethics abetted capitalism and economic growth for itself lending additional support to the exploitation of natural resources.

b) The Scientific Tradition – Ernest Haeckel defined ecology in 1870 in the following way: "By ecology we mean the body of knowledge concerning the economy of nature—the investigations of the total relations of [an] animal

⁷⁹¹ Astrid Schwarz, "Ecology Revisited: Reflecting on Concepts," Advancing Science (2011): 196-199.

⁷⁹² Ibid., 196.

⁷⁹³ Ibid, 197.

both to its inorganic and to its organic environment."794 The definition is void of any mention of humans. Kormondy explains that this absence of mention should not be interpreted to mean that mankind is something apart from nature in the imperialist tradition sense, but rather it implies that humans are an integral part of other organisms.⁷⁹⁵

Similar to the imperialist tradition, the scientific tradition ascribes human dominion over nature through the exercise of reason. See for example, Carl Linnaeus (1707-1778): "All treasures of nature, so artfully contrived, so wonderfully propagated, so providently supported... seem intended by the Creator for the sake of man."796

The imperialist and scientific traditions armed the founding and expansion of the United States and European imperialism. Under this view of man's relationship to nature, wilderness had to give way to food production for rising populations, and the result was "wanton pillage, exploitation, and decimation of natural resources to an unprecedented extent in human history."797

c) The Arcadian Tradition – Harmony and contentment characterize this approach in man's relation to nature, encompassing a reverence of nature because of its beneficence. The Arcadians were a pastoral Greek community of idyllic satisfaction. This view is later embodied in the writings of English

⁷⁹⁴ Kormondy, Concepts of Ecology, 384.

⁷⁹⁵ Ibid.

⁷⁹⁶ Carl Linnaeus, Discovery of Nature, in Kormondy, *Concepts of Ecology*.

⁷⁹⁷ Kormondy, Concepts of Ecology, 384.

naturalist Gilbert White whose ideas were likely a reaction to the rapid industrialism.

In America, Henry David Thoreau (1817-1862) continued the arcadian tradition of Human Ecology. He interpreted nature as an extension of the self, nature being best understood and appreciated by acknowledging correspondence and kinship with it.⁷⁹⁸

These three traditions fall in the division we studied in the first section of chapter one, with the imperialist and scientific traditions pertaining to the view of *anthropocentrism or scientism*, and the arcadian tradition corresponding to the view of *biocentrism or holism*.

4.- New human ecologies

"After the 1950s, many different notions of human ecology emerged in the natural and social sciences, especially in economics, medicine, psychology, and related fields... Other than the name, they did not have much in common." These were not related to earlier sociological ideas and in sociology itself, interest in human ecology "had considerably declined." In the late 1960s, with the public concern growing in regards to the environment, Human Ecology started to recover the attention of sociologists. A number of articles by William Catton and Riley Dunlap targeted the "anthropocentrism underlying all of classical sociology that did not pay attention to the nonsocial,

⁷⁹⁸ Ibid.

⁷⁹⁹ Gross, Human Geography, 596-597.

⁸⁰⁰ Ibid, 597.

that is, the biophysical world of society."⁸⁰¹ "Environmental sociology, even more ironically, was sometimes also called the new human ecology"⁸⁰² and even though O. D. Duncan did not give much credit to Park and other earlier authors, his proposal was heavily indebted to theirs.⁸⁰³

With the work of Luke Martell, Richard Noorgard, Niklas Luhmann and others, "environmental sociology of the 1970s was self-consciously fashioned as a critique of mainstream sociology as well as the classical tradition, which was said to be blind to its material environment. This perspective presents the 'new' human ecology of the 1970s in a vacuum, detached from its ancestors"⁸⁰⁴ without due account to earlier debates.

5.- So-called Contemporary Human Ecologies

Contemporary "human ecologies" arose in the United States and Europe in the 1960s and 1970s. Astrid Schwartz writes that these contemporary ideas were, at least in part, motivated by the journeys of explorations in South America and in the North American frontier by biologists and geographers, but also by urban planning, and public health.

a) The Ecosystems Model (1950s-1970s). Eugene Odum published an influential book, *Fundamentals of Ecology* in 1953. According to Odum, the ecosystem is a system composed of biotic communities and their abiotic environment interacting with each other. A lake can be regarded as an

_

⁸⁰¹ Ibid, 597.

⁸⁰² Ibid, 597.

⁸⁰³ Ibid, 597-598.

⁸⁰⁴ Ibid, 598.

ecosystem; as can a marshland; or the earth. A "mature" ecosystem, characterized by high species diversity and relationships of interdependence among its component organisms, approaches stability, or homeostasis, and represents nature's "balance." To understand nature in terms of ecosystems is therefore to see its diverse "parts" as interdependent. *Fundamentals of Ecology*, which began "top-down" with a discussion of the "whole," rather than the parts, made the ecosystem concept central to ecology and in so doing profoundly influenced the environmentalist movement.⁸⁰⁵ Odum would argue the need and duty of humans to be responsible with the environment it interacted with and on which it relied for its survival: "We must begin to devote more of our human wealth, energy, and engineering skills to servicing and repairing our "big house," the biosphere, which provides not only a place to live and enjoy but also all of our life-support needs."

Most importantly for Human Ecology, Odum applied his idea of ecosystem ecology to society, turning ecological principles into an environmental ethic. Odum never acknowledged disciplinary boundaries, such as the distinction many scientists see between basic science and applied science, or between ecology and environmentalism, having inherited from his father and his grandfather an imperative to use his learning to make a better world. In his ideal intellectual order, scientists, social scientists, and humanists work together to understand and solve problems, just as in his ideal community, academic intellectuals, economists, politicians, journalists, and

⁸⁰⁵ "Eugene Odum: Ecosystems Ecologist and Environmentalist," University of Georgia Wilson Center for Humanities and Arts, http://www.cha.uga.edu/bjc/Odum-Intro.htm#N_17_

⁸⁰⁶ Eugene P. Odum, *Ecological Vignettes: Ecological Approaches to Dealing with Human Predicaments*, 58. ". In a very real sense, humanity is a parasite on the biosphere... The prudent parasite moderates its demands on the host, and in many cases actually does things to help its host prosper... In ecological language, this is co-evolution for co-existence."

citizens with different interests all communicate with each other to make a more harmonious society. For Odum, the many parts of a system are interdependent, and for a society to function effectively, the many individuals who compose it must cooperate. He envisions Human Ecology has the potential to develop in the twenty-first century into what he has called the "third culture," or the bridge between biophysical and social sciences. ⁸⁰⁷

b) "Old Human Ecology" or Cultural Ecology: Julian Steward (1902-1972) was an anthropologist who coined the term "cultural ecology," envisioning cultural ecology as a methodology for understanding how humans adapt to such a wide variety of environments. In his book, *Theory of Culture Change: The Methodology of Multilinear Evolution* (1955), Steward defined cultural ecology as how culture change is induced by adaptation to the environment. A key point is that any particular human adaptation is in part historically inherited and involves the technologies, practices, and knowledge that allow people to live in an environment. This means that while the environment influences the character of human adaptation, it does not determine it. Cultures are taken to be the environed units, that is, cultural ecology recognizes that ecological setting plays a significant role in shaping the cultures of a region. Julian Steward's method involved:

- 1- Documenting the technologies and methods used to get a living from the environment.
- 2- Looking at patterns of human behavior or culture associated with using the environment.

 $^{^{\}rm 807}$ Eugene P. Odum, "The Strategy of the Ecosystem Concept," 266.

- 3- Assessing how much these patterns of behavior influenced other aspects of culture.
- c) New Human Ecology: Riley Dunlap and William R. Catton, Jr. (sociologists) began recognizing the limits of what would be termed the Human Exemptionalism Paradigm (HEP). In 1978 Catton and Dunlap suggested a new perspective which accounted fully for environmental variables. They developed a new theoretical outlook for sociology, the New Ecological Paradigm (NEP), with assumptions contrary to HEP.808

The NEP recognizes the innovative capacity of humans, but says that humans are still ecologically interdependent, as with other species. The NEP notes the power of social and cultural forces but does not profess social determinism. Instead, humans are impacted by the cause, effect, and feedback loops of ecosystems. The earth has a finite level of natural resources and waste repositories. Thus, the biophysical environment can impose constraints on human activity. They discussed a few harbingers of this NEP in "hybridized" theorizing about topics that were neither exclusively social nor environmental explanations of environmental conditions. Additionally, NEP presented a critique of Malthusian views of the 1960s and 1970s.809 Dunlap has since revised the concept of the NEP, which attempts to demonstrate that we are approaching the maximum number of people that the earth can sustain.

⁸⁰⁸ Dunlap et al., "New Trends in Measuring Environmental Attitudes: Measuring Endorsement of the New Ecological Paradigm; A Revised NEP Scale," 427, 433; Catton and Dunlap, "A New Ecological Paradigm for a Post Exuberant Sociology."

⁸⁰⁹ Dunlap and Van Liere, "The New Environmental Paradigm: A Proposed Measuring Instrument and Preliminary Results"; Dunlap, et al., "New Trends in Measuring Environmental Attitudes: Measuring Endorsement of the New Ecological Paradigm: A Revised NEP Scale."

d) Urban Ecology: This study of ecosystems includes humans living in cities and urbanizing landscapes. It is an emerging, interdisciplinary field which aims to understand how human and ecological processes can coexist in humandominated systems and to help societies with efforts to become more sustainable. It has deep roots in many disciplines including sociology, geography, urban planning, landscape architecture, engineering, economics, anthropology, climatology, public health, and ecology. Because of its interdisciplinary nature and unique focus on humans and natural systems, the term "urban ecology" has been used variously to describe the study of humans in cities, of nature in cities, and of the coupled relationships between humans and nature.

Urban Ecology recognizes that urbanization affects the structure and function of Earth's ecosystems through:

- Alteration of biophysical processes and habitat.
- Modification of major biogeochemical cycles.
- Active land use management decisions.
- Human health outcomes.

Environmental changes resulting from urbanization, in turn, affect human and ecological well-being 811

⁸¹⁰ Marzluff et al., Urban Ecology: An International Perspective on the Interaction Between Humans and Nature.

⁸¹¹ Patz et al., Source: University of Washington, Urban Ecology Research Laboratory; Rottle and Alberti, "Climate Change and Place; Alberti, "The Effects of Urban Patterns on Ecosystem Function"; Alberti et al., "Integrating Humans Into Ecology: Opportunities and Challenges for Urban Ecology."

e) Ecological Complex – Amos Hawley defined an "ecological complex." ⁸¹² The ecological complex is "a study of the morphology of collective life in both static and dynamic aspects" taking into account: population, environment, technology, and organization.⁸¹³

f) Community Ecology – Frank Young and Keiko Minai's "Community ecology" is a "structural" theory of Human Ecology, which interprets communities as problem-solving organizations concerned with improving the welfare of the residents. It makes a distinction between their problem-solving capacity in general (structural differentiation, pluralism and solidarity) versus specific (hospitals, public health agencies, public safety, etc.) and postulates a mutually reinforcing multiplicative interaction between them. The combined strength of these two types of social problem-solving capacities enables communities to overcome the impact of most environmental threats. It uses "population health" as the criterion of success and, postulates the causal primacy of "problem-solving capacity."814

g) Psychological Ecology and Environmental Psychology: Developed by Kurt Lewin in the 1930s, "his concept of 'life space' or the 'psychological field,' has important implications...Lewin considered all psychological events to be a function of 'life space' wherein the individual and the environment are viewed as a single constellation of interdependent factors."815 "Studies of 'group atmosphere' were carried out at the University of Iowa and led to the

⁸¹² Amos H. Hawley, Human Ecology, 67. See also Otis Dudley Duncan, Human Ecology and Population Studies (1959).

 $^{^{\}rm 813}$ Philip Hauser, "Demography and Ecology," 129.

⁸¹⁴ Young and Mina, "Community Ecology: A New Theory and an Illustrative Test."

⁸¹⁵ Bruhn, "Human Ecology: A Unifying Science?" 117.

establishment of a Research Center for Group Dynamics at the Massachusetts
Institute of Technology in 1945."816

Psychological Ecology was developed by Wright and Barker (1950) with later developments by Barker in 1965. Previously psychologists would avoid non-psychological factors considering them out of the boundaries of psychological laws. Wright and Barker would "contend that the task of psychological ecology is accounting for the physical-biosocial world (the non-psychological milieu) in which the person is immersed and attempting to understand the way this milieu is transformed into a psychological environment."⁸¹⁷

Research on environmental problems by a few psychologists focused on "the study of behavior in particular environmental contexts, which impose constraints on the range of permissible behaviors."818

The use of space in everyday behavior (proxemics) has been studied by the anthropologist E. T. Hall (1959, 1963, 1966). Sommer (1959, 1961, 1965) has studied the perception of space and spatial relations among objects and persons; habits, attitudes, and values concerning the use of space and interpersonal distance; and the behavioral consequences of architectural design.⁸¹⁹

Wohlwill presents three issues studied in Environmental Psychology: "(1) the environment as a source of affect and attitudes, (2) approach and avoidance responses as determined by environmental attributes, and (3) adaptation to environmental qualities as a function of prolonged

⁸¹⁷ Ibid.

⁸¹⁶ Ibid, 117.

⁸¹⁸ Ibid, 118.

⁸¹⁹ Ibid.

exposure."820 This will bear on the future construction of living environments considering "behavior, the use of space and environmental facilities, preferences in regard to environmental features, and tolerance and adaptation to particular environmental conditions."821

6.- Current Approaches to Human Ecology

One of the most common approaches currently in Human Ecology relies on systems theory,⁸²² as "the intersection of two complex adaptive systems"⁸²³ between people (social system) and their environment (rest of the ecosystem).⁸²⁴ "Human ecology extends how relationships occur in nature to human systems, such as those concerned with managing and planning human affairs... Language, culture, and technology... [as] 'integrative traits' help distinguish Human Ecology from the more traditional [human] ecology"⁸²⁵

Given the multiplicity of views in a given ecological situation, which is "common in complex social-ecological systems," there is a need for shared understandings to allow comprehensive, that is "integrative, systemic approaches,"826 considering "that 'comprehensive' means much the same as the term 'transdisciplinary', but its use reduces the focus on academic disciplines...

⁸²⁰ Ibid.

⁸²¹ Ibid.

⁸²² Steiner, Human Ecology: Following Nature's Lead, 23-24.

⁸²³ Dyball and Newell, Understanding Human Ecology, xv.

 $^{^{824}}$ Marten, Human Ecology: Basic Concepts for Sustainable Development, 1-2.

 $^{^{\}rm 825}$ Steiner, Human Ecology: Following Nature's Lead, 24.

⁸²⁶ Dyball and Newell, Understanding Human Ecology, 35-36.

[and] values the expertise of people drawn from many walks of life."827 Newell explores cognitive science, the use of mental models, metaphors, fuzzy categories, and communications to explain how complex domains of inquiry can be studied and discussed by people from different disciplines and types of approach.828 The purpose is "the development of a theoretical framework that can support comprehensive work in human ecology... because no one person can have expert knowledge of the whole of a complex social-ecological system."829

He further explains how in systems theory, the dynamics of stocks, flows, and feedbacks are key elements for Human Ecology's theoretical framework. This leads to models of sustainability for social-ecological systems, sustainability being the understanding of the limits of our ecosystem, planet earth, and operating within those limits.⁸³⁰ The systems approach does provide tools to build models that help analyze complex systems, but it is easy to forget their limitations and as said in chapter one, there are often unintended consequences when working on complex, open systems with "simple but potentially misleading simplifications."⁸³¹ The climate models have proven how difficult is to represent complex systems whose feedback processes we do not

⁸²⁷ lbid, 36; see also Knutsson, "The Sustainable Livelihoods Approach," 91. "A number of recent approaches to sustainable development, such as the Sustainable Livelihoods Approach, are genuinely transdisciplinary as they are produced, disseminated and applied in the borderland between research, policy, and practice. Human Ecology has the capacity to contribute to a better understanding and a critical evaluation of such new approaches"

⁸²⁸ Dyball and Newell, *Understanding Human Ecology*, 35-55.

⁸²⁹ Ibid, 54.

⁸³⁰ Ibid, 57-110; Marten, Human Ecology: Basic Concepts for Sustainable Development, p. 10.

⁸³¹ Pielke Jr., The Climate Fix, 128.

fully understand.⁸³² Even more difficult is representing human persons and their interactions in society.

Newell's human models ignore the moral and spiritual dimensions, 833 so if, "as Durkheim asserted, sociology is the scientific study of morality, and religion is the key producer of collectively held moral values, a focus on demographic factors related to religion that ignores its cultural content fails to fulfill the Durkheimian promise of sociological investigation."834 This critique could well apply to the systems approach. Systems theory, like the tools of policy sciences, can be useful when used as a tool in the context of a wider philosophical understanding of nature and the human person. Unfortunately, such tools present a temptation of pretending to encompass all of reality in what becomes one more effort of social engineering, blind to ethical and spiritual issues, and to the mystery of conscience and freedom of the human person. For example, Sachs, proposing a systems approach, defines it as a "normative or ethical view of the world, a way to define the objectives of a wellfunctioning society, one that delivers wellbeing for its citizens today and for future generations... [and which] urges us to have a holistic vision of what a good society should be."835

_

⁸³² Ibid.

 $^{^{\}rm 833}$ Dyball and Newell, Understanding Human Ecology, 121.

⁸³⁴ Blanchard et al., "Faith, Morality and Mortality: The Ecological Impact of Religion on Population Health," 1595.

⁸³⁵ Sachs, The Age of Sustainable Development, 11.

7. Academic and Cultural Presence

In general, Human Ecology appears to be more present, both in academics as in the general culture around the world. A Korean Association of Human Ecology promotes quality family life and contributes to the advances in technology and related industries by researching practical aspects of human advance ecology.⁸³⁶ In a recent Human Ecology International Conference in Putrajaya, the concept's appeal was used to counter divisive politics,⁸³⁷ and in another context to criticize inequity in access to entertainment.⁸³⁸

At a recent event organized by the Institute for Human Ecology at the Catholic University of America, panelists discussed whether one can be both pro-life and feminist. Base There are schools and colleges of Human Ecology in universities such as Rutgers, Cornell, Alberta, Michigan State, Wisconsin, Kansas State, Ohio State, Georgia Southern, the College of the Atlantic, the Tata Institute of Social Sciences in India and the Central Mindanao University in Philippines. In general, the focus is on basic human needs and improving the human experience in very practical applications. Very common are studies in apparel, textiles, fashion and interior design, as well as the consumer experience. Also common are family studies, health and human services, public policy, civil society, urban planning, family and personal finances. Present but

.

⁸³⁶ http://kjhe.or.kr/_common/do.php?a=current&b=11

⁸³⁷ Social media has emerged as a challenge that must be addressed by future leaders as part of the dynamics of Human Ecology. http://www.malaysiakini.com/news/379549

⁸³⁸ http://wearyourvoicemag.com/identities/race/kendrick-lamar-black-music-accessible

 $^{^{839}\} http://www.patheos.com/blogs/catholicnews/2017/04/feminists-and-pro-lifers-can-join-forces-and-why-they-should/$

with less emphasis, likely due to being part of other disciplines are studies on Human Ecology in relation to sociology, anthropology, and sustainability. 840

8. Other issues relevant to Human Ecology

a) The challenge of the human factor

In the past 120 years many of the approaches described have struggled with how to incorporate the human factor in their established disciplines. Scientists in geography and biology became aware that human population and its corresponding activity had an increasingly important impact on natural ecosystems and their animal and plant populations, to the point of reshaping physical landscapes and climate with ensuing repercussions for the species inhabiting those environments.

At the same time, they were able to realize that the natural environment had an influence in shaping the form of human communities, their food, their industry and commerce, the way they established their living arrangements, their travel, and even their political and military influence. It soon become obvious that, even as scientists tried to fit the human factor within their disciplines, they had no way to account for the cultural, moral and political factors which caused human decisions directly affecting the environment. At the same time, trying to describe the consequences of the environment in human life, they could account for simple physically observable elements such as spatial distribution, movement, growth, and decline, but they did not have

⁸⁴⁰ http://www.human.cornell.edu/; https://sohe.wisc.edu/; http://www.he.k-state.edu/; https://ehe.osu.edu/human-sciences; http://chhs.georgiasouthern.edu/she/;

https://www.tiss.edu/view/6/mumbai-campus/school-of-human-ecology/about-us-4/;

http://www.cmu.edu.ph/academic-units/college-of-human-ecology/

the tools to measure or classify the impact of the environment or of the changes it spurred in culture, religious practices, political organization and so on.

For sociology and other human sciences, the problem was different. They focused on aspects of the human experience, but were reluctant to place those areas of study in the wider context of all of human experience, a step which would have required interaction with other disciplines and finding common ground. Philosophy used to integrate knowledge in a comprehensive whole but lost this role and its role assigning areas of study and the tools and methods proper to each discipline. Sociology, like other disciplines, now defines its own epistemology, blurring its relation with others. Kuhn detected this problem, elaborating on the philosophy of science regarding paradigm shifts and the difficulty of disciplines operating under different paradigms to communicate meaningfully with each other.⁸⁴¹ Thus, the human experience is fragmented and no field of study has an obvious way to reintegrate it. The next chapter will show opportunities for a comprehensive approach to Human Ecology through philosophy and theology.

b) Interdependence of culture, society, and the environment

Many authors, ⁸⁴² as seen previously in this chapter, have long recognized the interdependence of humans, expressed in culture and society, with the environment. Natural environments shape the human experience in many ways, some of which have been mentioned in the previous paragraphs, even shaping the psychological traits and dispositions of peoples living in a

⁸⁴¹ Kuhn, The Structure of Scientific Revolutions.

⁸⁴² Such as Warming, Small, Vincent, Goode, Hayes, Tarde, Barrows, Odum, Dunlap and Catton, among others.

common climate and territory, including aspects most removed from the physical, such as literature, philosophy, religious beliefs and practices, and political organization. Human action, as well, has profound effects on the environment.

As we discussed in chapter one, the last fifty years abound with literature emphasizing the various, usually damaging, sometimes irreversible ways human action has impacted the environment. We also observed there that to explain the causes of these actions, beyond immediate causes, many have traced their source to religious beliefs or philosophical developments such as the Enlightenment and the Protestant work ethic which provided cover for an unbridled exploitation of the natural environment. Others have found that externally oriented religious traditions, such as the Catholic tradition, exert a strong cultural influence which enhances population health and life expectancy and has a positive influence in problem solving capacity and social support in societies. Calls for a change in human behavior towards the environment are based on scientific data and practical argument, but often appeal to religious and ethical arguments. More and more, there seems to be a need to find a transdisciplinary space which can process the data and arguments from such different sources and fields of study through research, policy, and practice.

c) Population and carrying capacity

That we might be approaching the maximum capacity of the earth for the human population, is well-known as examined in chapters two and three. Some, indeed, believe we have already exceeded it. Since the dire predictions of

⁸⁴³ Blanchard et al., "Faith, Morality and Mortality: The Ecological Impact of Religion on Population Health," 1592-1610.

The Club of Rome, many more have ventured catastrophic forecasts which have not been realized. This is due to three types of causes. One is the fact that while we are still growing in total numbers, the rate of population growth is decreasing, in fact negative in many developed countries. Since the rate of consumption of goods and services, and consequently, its impact on natural resources is greater per capita in developed nations, this, compounded with their minimal or negative growth, accounts for a lesser than forecasted impact in the depletion of natural resources.

A second factor is technology. New developments in science and technology are helping to make more efficient use of resources and to remedy some of the negative consequences predicted. Cleaner technologies are replacing older, more polluting ones. A third factor is that many predictions were intended to motivate action, presenting pessimistic scenarios which turned out to be unrealistic. This is very much a controversial area of discussion. On one hand, it is regrettable that the doomsayers cried "wolf" too many times, discrediting their position. On the other hand, the rate of use of natural resources continues to increase, and there are no reasonable and commensurate plans to rein it in. A leading concern is the reliance of our way of life on the extensive use of energy.

d) Economy and energy:

The current economy relies heavily on the use of energy, mostly from non-renewable sources such as coal, oil, and gas. In the past, many have warned that we were running out of fuel, that at the current trend we only had reserves for a few decades. In the last twenty years those predictions have been

discredited. Newly found reserves in gas and oil, made available through new technology in sands, shale, and deep water drilling have pushed the deadline beyond a century.⁸⁴⁴ With the constantly increasing rate of technological progress, it is difficult to assess of energy use, let alone the rate of carbon fuel energy use, a hundred years from now. The more urgent problem with the rate of carbon fuel use is climate change.

Climate is affected by human action. Teophrastus in the third century BC already identified that drying swamps cooled the climate while cutting forests made it warmer. In the past two hundred years, a sequence of scientists has built on each other's progress to identify the effect of greenhouse gases and their relevance to atmosphere temperatures. They have identified different gases produced by human activity and among them the preeminent impact of carbon dioxide (CO2). Global temperature seems to have risen between 1850 and 2010 by 0.75 degrees Celsius.

This, of itself, could be part of other natural cycles. However, CO2 has risen from 280 ppm (parts per million) in 1750 to 390 ppm in 2010. It is estimated that, globally, we currently add 33 Giga tons of CO2 each year and only 16 are processed by earth and oceans, adding a remaining 17 Giga tons each year to the atmosphere. The estimate is that 7.8 Giga tons elevate the concentration in one ppm.⁸⁴⁵ It is difficult to ascertain the exact impact of this on global temperatures but it certainly adds to the greenhouse effect. A

⁸⁴⁴ Yergin, The Quest: Energy, Security, and the Remaking of the Modern World, 227-241.

⁸⁴⁵ Pielke, The Climate Fix, 9-10.

practical way to break down the components that lead to those annual 33 Giga tons is the equation known as the Kaya factor:⁸⁴⁶

POPULATION * GDP PER CAPITA * ENERGY INTENSITY * CARBON

INTENSITY = TOTAL CARBON

The GDP per capita is clearly linked to the standard of life, or the goods and services consumed, including the overhead and production chain to support providing those goods and services. The two intensity variables are the least controversial as they are changed mostly by technology. Energy intensity is the amount of energy needed to produce each unit of GDP. This can be improved in terms of efficiency and productivity but these will be marginal increments. Carbon intensity is the amount of carbon emissions released to produce each unit of energy. This involves two factors. One is the efficiency of the conversion of fuel to energy, that is, how much gas, oil or coal is burnt. The other factor relies on how "clean" the process of burning each unit of fuel can be.⁸⁴⁷ Both are being aggressively tackled but are only expected to yield marginal increments.

The variable of population was featured prominently as the determining component in the last third of the twentieth century. Many organizations and governments pushed hard to attain specific goals limiting population. The consequences have been complicated to say the least. Reduction targets turned into quotas with grievous consequences in abuse of human rights with forced

⁸⁴⁶ Ibid, 69. Kaya identity is named after Yoichi Kaya, Director General of the Research Institute of Innovative Technology for the Earth in Kyoto, Japan; he proposed it in the late 1980s.

⁸⁴⁷ Ibid, 219. "There are only two ways that decarbonization of economic activity will occur... improving the energy efficiency of the economy... and the other is through decarbonization of the energy supply."

abortions and sterilizations in many developing countries,⁸⁴⁸ often sponsored by the United Nations, and other international bodies or aid programs where developed countries linked aid to population targets, as recently denounced by Archbishop Auza, the Vatican's representative at the UN.⁸⁴⁹ This was seen by many in developing countries as yet another assault on the poor. Countries like China developed and enforced their own policies with their own score of abused human rights.⁸⁵⁰ The rhetoric that often accompanied these efforts regarded mankind as, if not a pest, at least a problem that needed to be controlled.⁸⁵¹ Because of the many ethical issues raised and because as seen in chapter two, the growth rate has sharply decreased, currently there is reluctance to seriously propose population control as a solution.

One of the more controversial themes is the controversial but undeniable factor of intense consumption and its broad variation in different societies. Consumption of goods and services and corresponding energy in developed countries is calculated to be 40 to 70 times as much as in the poorest societies. This level of consumption is unmanageable for the world's population.⁸⁵² It could be argued that, if the goal is to reduce human impact on climate change, one human life less in developed countries could spare fifty of

_

⁸⁴⁸ Steven Mosher and Anne Morse, "The New York Times Throws in the Towel on 'Overpopulation." "Past half century [that] has seen tens of millions of men and women sterilized without their consent and tens of millions of women forcibly aborted."

⁸⁴⁹ Lisa Bourne, "Pope's Emissary Slams UN Population Control Efforts," *Lifesite News*, Apr 7, 2017. He "criticized prosperous nations that withhold authentic aid from developing nations as a form of coerced population control."

⁸⁵⁰ Pielke, *The Climate Fix*, 104. China says, "It's one-child policy had prevented 400 million births that otherwise would have occurred, with dramatic implications for carbon dioxide emissions."

⁸⁵¹ Shenan J. Boquet, "By Their Fruits (and Their Names) You Shall Know Them," Human Life International, April 8, 2017

⁸⁵² Dyball and Newell, *Understanding Human Ecology*, 8. For "Human Ecology... there is something fundamentally wrong if what one community regards as a reasonable expectation can be met only if other communities must settle for much lower levels of consumption... unethical, particularly when it imposes low levels of consumption that prevent individuals achieving even a basic level of health and wellbeing."

the more deprived human persons. The unstated counter-argument is that the quality of life of someone in a developed country might be of greater worth in itself, and therefore more productive to society, than the life of someone who is barely productive and so much in need of aid, someone clearly "a burden" on the global system. This would lead us into very treacherous grounds.

Many issues can be raised with regard to the remaining variable, the GDP per capita, which is linked to the standard of life, or the goods and services consumed. It clearly depends on the lifestyle set as a standard.⁸⁵³ It is hardly reasonable to set a standard that would be impossible to sustain if it were to be extended to the global population. Likewise, to consider such a standard available only to the restricted few that our current economic system allows the means to afford it, is hardly ethical. To allow market forces and interests to propose it as the standard of life all should aspire to attain is unrealistic and socially divisive. Nevertheless, this quest for an ever-higher standard of living through ever growing consumerism is pushed into a viciously accelerating cycle. People seek for whatever can relieve the interior void left by a materialistic society which has corroded ideals with skepticism and cynicism.

Unfortunately, the easiest means are a myriad of material goods and services catering to every imaginable whim and promising instant happiness, success, and popularity. Our economic and commercial system is all too ready to fill that void by selling whatever people can be persuaded to buy with sophisticated marketing strategies and painless credit schemes. Governments, whose macroeconomic planning relies on and even requires increased

⁸⁵³ Ibid, 8, "Human Ecology is fundamentally concerned with the age-old questions of the human condition, 'What makes life possible?' and 'What makes life worthwhile?'" or, survival and fulfillment.

economic growth are complicit in supporting these dynamics with little regard for the actual needs and well-being of people.

The outcome is a frenzy of consumerism⁸⁵⁴ which is political suicide to question but which extracts more and more natural resources, to produce more and more goods, burning more and more fuel. Since these goods are not related to real needs, it is no surprise how many soon end up discarded, contributing more and more waste to the already overwhelming challenge of pollution, recycling and waste disposal. Furthermore, a greater GDP is not real to the degree that it relies on unsustainable levels of credit, both personal and public debt, which compromises long term stability and the development of families and nations.

We have two solutions and we need both. One is dismantling this scheme of constant growth and consumerism.⁸⁵⁵ We might be closer to sustainability if we focused on real needs and not an artificial market. However, this runs against the "iron law of climate policy."⁸⁵⁶ The other solution is replacing carbon fuel with cleaner sources of renewable energy. This requires a greater commitment to developing new technologies.⁸⁵⁷ Both solutions are compatible with a reasonable and natural approach to a harmonious relation of man and his environment. Unfortunately, both require great political commitment against formidable and entrenched social dynamics.

⁸⁵⁴ Ibid, 173, "Excessive consumerism and individualism in modern societies harms the community by eroding social capital, resulting in loneliness, stress or depression."

⁸⁵⁵ lbid, "If addressing negative outcomes of consumerism requires consumption levels to be reduced, this tends to oppose the core values enshrined in the Paradigm of Limitless Growth."

⁸⁵⁶ Pielke, The Climate Fix, 46.

⁸⁵⁷ Ibid, 224, The challenge is "to develop alternative [cleaner] sources of energy supply that are cheaper than fossil fuels," and this requires aggressive technological innovation and government support.

These aspects that connect economy and energy are important but by no means the only ones that combine the complex processes that govern human purposes, choices and actions; the way they shape social dynamics and the interrelation of all this with the natural environment. An appropriate response implies a long-term approach of research and education to find feasible ways to develop and implement these solutions for the issues of economy and energy, considering other related issues which impact the human and natural environment; with the added challenge of gaining the indispensable widespread popular and political support.

"[A] paradigm that promotes the goal of 'sufficiency' must come to dominate the human economy now that it is global."⁸⁵⁸ Since over-consumers are the affluent and powerful, it is unlikely that they can be forced to consume less, which brings us back to the core of what is human: ethics and free choice.⁸⁵⁹ This approach must necessarily incorporate the empirical sciences, the human sciences, and philosophy, but also consider the spiritual purpose. A comprehensive vision as what could arise from Human Ecology could rise to this challenge and provide a powerfully persuasive and integrated approach.

9. The advantage and weakness of Interdisciplinarity in Human Ecology

Human Ecology has been seen from its origins as an opportunity to bridge divisions between disciplines and achieve an integrated approach. It has also been forcibly incorporated in specific disciplines. "Darwin (1873)

240

⁸⁵⁸ Dyball and Newell, *Understanding Human Ecology*, 176.

⁸⁵⁹ Ibid.

recognized both the need for and the difficulty of achieving a grand theory of the mutual relations of all organic beings. ... As concern over current manenvironment problems has increased, there has been a renewed interest in interdisciplinary approaches and appeals for a unified science of manenvironment relations."860 Human Ecology seemed suited to respond to this need, as recognized by many of the authors covered in this chapter, but "as ecological concepts and principles, developed originally in biology, have been adapted to the study of man-environment interrelationships in geography, anthropology, sociology, and psychology, human ecology has emerged as a specialty within each discipline." 861 This "highly specialized compartmentalized development of human ecology has inhibited attempts to reach solutions to contemporary man-environment problems which cut across disciplines."862

Different proposals have been made with the goal of achieving an interdisciplinary approach, such as "the overlap of narrow specialties... [and] organizational changes in universities which will enable scholars to specialize in interdisciplinary work... [or even] establishing separate institutes composed of scholars who are problem oriented"863 However, there is a "lack of interdisciplinary studies. While it is not popular to advocate such studies in universities or to propose that research be more oriented toward reaching solutions to current human ecological problems, these appear to be worth serious consideration if human ecology is indeed to ever become, in practice, a

_

⁸⁶⁰ Bruhn, "Human Ecology: A Unifying Science?" 118-119.

⁸⁶¹ Ibid, 105.

⁸⁶² Ibid, 106.

⁸⁶³ Ibid.

unifying science."⁸⁶⁴ "Yet, as E. P. Odum states, 'just how applied human ecology is to be developed and structured so that worthwhile goals can be achieved in the real world of society can be but dimly perceived at this point in history." ⁸⁶⁵

In spite of the challenges, "[p]ublic and private contributors to research and development programmes are increasingly calling for integrated approaches. For human ecologists, with a long tradition of interdisciplinary research on the complex interactions between people and the environment, this trend is of course welcomed warmly." 866 These approaches require knowledge integration which require standards for assessing, comparing, or evaluating processes to integrate knowledge. "Without standards of judgement, any approach that labels itself interdisciplinary, integrative, or holistic, is likely to be accepted as such" 867 which leads to "unrealistic hopes or unfounded criticism." 868 The Assessment Framework proposed by Knutsson 869 is one such tool "for human ecology to develop standards for knowledge integration, which can contribute to more integrative approaches to sustainable development problems in research, education, policy and practice." 870

⁸⁶⁴ Ibid.

⁸⁶⁵ Ibid.

⁸⁶⁶ Knutsson, The Sustainable Livelihoods Approach, 91.

⁸⁶⁷ Ibid.

⁸⁶⁸ Ibid.

⁸⁶⁹ Ibid, 91-96.

⁸⁷⁰ Ibid, 97.

10. Human Ecology as an Interdisciplinary Field

Human Ecology, as both study and practical application to improve the complex reality that encompasses the natural, social, cultural and spiritual environment in which human persons live, can and must explore realities that require an interdisciplinary and transdisciplinary approach.⁸⁷¹ This requires "a range of skills, perspectives, and understandings to be brought together in management collaboration. This is one reason why Human Ecology is necessarily transdisciplinary."⁸⁷² This applies both to the experiences of the individual person and of social processes.

Human Ecology needs to be understood in the Aristotelian sense of politics, that is, the pursuit of the common good, understood as making life possible and worthwhile for all. Ecology cannot include Human Ecology as part of itself. It lacks the methods to encompass the issues which an anthropology recognizing the rational, moral and spiritual dimensions addresses. However, there would be a significant natural overlap between sociology and Human Ecology, perhaps leaving the natural environment out of sociology's shadow. However, as sociology has become more fragmented and focused on statistical studies of social phenomena, retreating from philosophy and the understanding of the nature and teleology of the human person, it has descended to a more pragmatic level. Its field work and studies, with epistemological qualification, could be useful for a higher integration in Human Ecology.

⁸⁷¹ Dyball and Newell, *Understanding Human Ecology*, 10, "Social-ecological problems are not so much 'solved' as rendered manageable."

⁸⁷² Ibid, 11.

This account of the brief history of Human Ecology has both identified problems, and yielded insights to consider moving forward. It has established the interdependence of the human person with the human and natural environments, and how they resemble and affect each other. Different views on how humans differ from animals and plants, and the tensions in how these relations are defined, have led us to consider a *human ecology open to transcendence*, as the most integral option. The ecosystem concept and the need for cooperation echoed by many, helps to strive for harmony in that integration. Once and again, the need for ethics and ordered freedom, and the spiritual aspect implied, are recognized as a key part of any solution.

Another aspect is understanding the tension between disciplines and their own interests in using HE, while at the same time seeking methods that respect the realities involved when bridging the boundaries, and the need of an integrating perspective with a sound comprehensive epistemology. Geography (natural space), technology, the physchophysical (human nature), the social space (with its hard structures of politic, law and economy, and the soft realities of culture, relations and community), encompassing the natural and social sciences, as well as philosophy and faith to account for the spiritual nature of the human, all need to be reconciled. A holistic Human Ecology may have the vitalizing, unifying influence needed for it

All this is relevant to the flourishing of the human person and the common good. It has also made evident the challenges to reconcile and integrate them harmoniously. The next chapter will attempt to respond to this challenge from the Catholic approach to Human Ecology.

Chapter 5. Human Ecology in John Paul II and Benedict XVI

In chapters one and two we were able to follow the process that generated the field of Sustainable Development (SD), its more mature expression, and also the distortions and challenges it presents today. In chapter three we discussed the flawed underlying conception of man and society most at the root of those distortions. Chapter four presented a brief history of Human Ecology emphasizing the ideas that had enriched it in the process and which could be more helpful to develop a better context for SD. This chapter builds on that wealth of Human Ecology providing two key elements absent from SD and from previous versions of Human Ecology. One is a sound anthropology, a complete and consistent approach to the human person; and two, from that anthropology, a harmonious view of man, society, nature and all of reality. They reshape the discussion allowing an integral approach, even as we cover the different aspects of the human experience relevant to SD.

Most of the important aspects are covered in both popes, although each one has also particular contributions and features that merit special treatment. Finally, even if not part of the defined subject of study, a brief account is given of more recent scholarship and Pope Francis's encyclical *Laudato Sí*.

Part A. John Paul II

1. Introduction

The concept of Human Ecology first appears in Catholic teaching in the 1991 encyclical *Centesimus Annus* (see exceptions in next paragraph). At the beginning of this research in 2010, nothing was found published in Catholic secondary scholarship regarding Human Ecology, although one can only speculate as to why. When John Paul II used the term Human Ecology in 1991, the Iron Curtain had fallen recently and the political turmoil in Soviet Bloc countries drew significant attention.

As the pope tried to steer the course denouncing the evils of Marxist and totalitarian regimes, so harmful to the dignity and life of human persons, he also made it clear that capitalism, having outlived socialism in the political and economical confrontation of the Cold War, was not the only model of economic organization.⁸⁷³ He said that both capitalism and the market have to be "bridled" by the forces of state and society to allow human and moral factors greater weight so that human dignity can be protected. In the frenzy to declare western capitalist democracy victor in this struggle and the proven alternative to be adopted, such warnings and nuances were ignored, if not misunderstood. More recently, something similar happened with Benedict XVI's assessment of capitalism and the market in his encyclical *Caritas in Veritate*. With all this, Human Ecology was easily overlooked.

Prior to this time, Pope Paul VI used the term Human Ecology in a passing way which suggests that, although there was no deliberate intention to

246

⁸⁷³ Pope John Paul II, Centesimus Annus, §35.

establish the concept, Human Ecology is integral to the natural view that Catholics have of man and the world. The first occasion was in a short 1971 address alluding to ecology—purifying the physical environment—and noting that we should also purify the human environment, the moral ecology, and protect our own hearts from this pollution.⁸⁷⁴ The next occasion was a 1973 General Audience alluding to the conversion of the heart, center of all moral and spiritual life and choices, where we encounter God, and noting we should guard it and our personal conscience from the widespread public exposure of pornography and other immoral exhibitions that damage Human Ecology.⁸⁷⁵ These speeches are available only in Italian; and since the concept was not used again for eighteen years, it was easy to overlook the references to Human Ecology.

Returning to John Paul II, there is almost no information available to trace the origin of the concept in John Paul II, with two exceptions. One comes from an account by Cardinal Jorge María Mejía, appointed to the Pontifical Council for Justice and Peace in 1986. In that capacity, he worked with John Paul II on the draft of *Centesimus Annus*. He was candid and his account is of such value –and not found anywhere else– that it is worthwhile to quote it in full:

When the encyclical was written, it was well remembered that in "Sollicitudo rei socialis" the theme of general ecology had been well developed from the

.

⁸⁷⁴ Pope Paul VI, "Regina Coeli," April 18, 1971. "Si parla oggi di ecologia, cioè di igiene e di purificazione dell'ambiente naturale fisico; molto bene. Perché non parlare anche, e a maggior ragione, dell'onestà, della dignità morale dell'**ambiente umano**? Facciamo voti che anche **l'ecologia morale** preoccupi quanti hanno a cuore e hanno responsabilità del pubblico bene. Ma intanto, noi credenti, desiderosi di coerenza, badiamo a difendere i cuori dall'inquinamento ambientale." Emphasis mine.

⁸⁷⁵ Pope Paul VI, "General Audience," November 7, 1973. "La pubblicità e la propaganda, oggi tanto ignobilmente diffusa, per ciò che conturba e contamina gli spiriti, con la pornografia, gli spettacoli immorali, e le esibizioni licenziose. Dov'è **l'«ecologia» umana**? Dobbiamo essere bravi e coraggiosi nell'intento di portare il rinnovamento e la pacificazione, giù, nel centro della nostra coscienza personale." Emphasis mine.

theological and pastoral point of view. The Pope insisted this time that this was very well and it was necessary to insist on the subject. But he himself suggested to extend it to what he called human ecology, and which consisted in the respect and promotion of what is proper and necessary for the life of persons according to the demands of their nature. In that was included too, and especially, the family as a unit of man and woman with its own demands. I want to say that I received the topic well matured from the Pope himself, and I proposed to him a wording of the same theme, which he accepted. But the subject comes exclusively from him. 876

John Paul II might have found the term, but Cardinal Mejía's account indicates that the content he ascribed to it was not indebted to another author, but more likely the result of his own painstakingly matured concerns and reflections which eventually found their expression in the term of Human Ecology. The quote continues:

From what source? It seems to me that it can only be inferred that it responds to Pope John Paul's constant concern for the reality of the family. But also his intuition that the ecological requirement could not and should not be limited to the visible nature; climate, animals, plants and natural resources. I dare say, but I have no proof of this, that this comes from the constant meditation of the Pope on the biblical text of Genesis, chap. 1 where it is true the general theme of ecology is founded, when it is well understood, but where it also appears and crowns it, the reality of man and woman, divine image and their mutual relationship. The context is certainly this. I do not think I can or should say more.

His concern for the family is well known and we'll see this reflected on the place he gives to the family in Human Ecology. His reflections on Genesis and

877 Ibid.

éste. No creo que pueda ni deba decir más."

⁸⁷⁶ Personal correspondence with Cardinal Jorge María Mejía, email dated Sep 17, 2013, my own translation from the original in Spanish: "Cuando se hacía la redacción de esa encíclica, se tenía bien presente que en "Sollicitudo rei socialis" se había desarrollado bien el tema de la ecología general, desde el punto de vista teológico y pastoral. El Papa insistía esta vez en que eso estaba muy bien y era necesario insistir en el tema. Pero él mismo sugería que se lo ampliara a lo que él llamaba ecología humana y que consistía en el respeto y la promoción de lo que es propio y necesario de una vida de las personas conforme a las exigencias de su naturaleza. En eso entraba también y sobre todo la familia como unidad de hombre y mujer con sus exigencias también propias. Quiero decir que yo recibí el tema ya bien madurado de parte del Papa y le propuse una redacción del mismo tema, que él aceptó. Pero el tema viene exclusivamente de él. ¿Cuál es su origen? Me parece que se puede solamente colegir que responde a la constante preocupación del Papa Juan Pablo por la realidad de la familia. Pero además su intuición que la exigencia ecológica no podía ni debía ser limitada a la naturaleza visible; clima, animales, plantas y recursos naturales. Me atrevo a decir, pero no tengo de ello ninguna prueba, que esto proviene de la constante meditación del Papa sobre el texto bíblico del Génesis, cap. 1 donde es verdad se funda el tema general de la ecología, cuando se lo entiende bien, pero donde aparece también y lo corona la realidad del hombre y la mujer, imagen divina y su mutua relación. El contexto es ciertamente

creation are also consistent with his integral approach that considers both the natural and human domains.

The other source for the use of the term Human Ecology is Professor Zamagni, an economist who collaborated in preparing *Centesimus Annus*.⁸⁷⁸ In his view the concept comes from outside the Church, and he mentions one of the possible sources, namely Hirofumi Uzawa.⁸⁷⁹ Uzawa proposes "to search for an economic system in which stable, harmonious processes of economic development may be realized with the maximum degree of individual freedom and due respect to human dignity and professional ethics."⁸⁸⁰ His view is attentive to the conditions needed by the human person: "Scarce resources are classified as social overhead capital when... [they] play a crucial role in order for the average citizen to be able to enjoy the minimum, but still human, properly dignified, life."⁸⁸¹ Government is also seen as helping provide that environment: "Every citizen is accorded a maximum degree of freedom, constrained only by the moral and ethical codes of behaviour, while the power bestowed upon the government is held to the minimum,"⁸⁸² with a restricted role of serving the people. The "role of the State is not to control and govern the

.

⁸⁷⁸ Personal correspondence with Professor Stefano Zamagni, email dated August 1, 2014. "Ti confermo che l'espressione "ecologia umana" appare per la prima volta nella CA di Giovanni Paolo II. L'origine pero' dell'espressione viene da fuori della Chiesa e cioe' dal movimento ecologista che prende le mosse dal celebre "Limits of growth" del Club di Roma del 1970. Nel libro pubblicato da Giustizia e pace (e da me curato) nel 1990 - un anno prima della pubblicazione della CA - c'e' il saggio di Uzawa che ne parla."

⁸⁷⁹ Hirofumi Uzawa, a noted Japanese economist, participated at a Colloquium at the Vatican November 5, 1990, on social and ethical aspects of economics, which contributed to the preparation of *Centesimus Annus*.

⁸⁸⁰ Hirofumi Uzawa, "Institutions, Development, Environment," 194-195.

⁸⁸¹ Ibid., 196.

⁸⁸² Ibid., 197.

people, but rather to maintain and put order into the management of social overhead capital... entrusted by the people."883

Attention must be paid to ecological protection so "that the level of the standard of living or the degree of satisfaction the average individual enjoys is improving at the same rate as the rate of increase in per capita national income... [particularly] when a disruption of natural environments accompanies the process of economic growth."884 He states that the standard theory of value needs to be changed, as it "now has to be defined not only with reference to the pattern of final consumption available to each individual, but also with explicit reference to the choice of economic behavior and the moral, social, cultural, and natural implications a particular choice of economic behavior yields."885 These ideas seem to signal a shift of focus from the economic system to the experience of the person and the social, political, and economic environment which shapes that experience.

These ideas of Uzawa were part of the paper he wrote as a follow up to a seminar of economists convened by John Paul II in November 1990,886 meant to contribute to the pope's reflections as he wrote *Centesimus Annus*. Uzawa's content is consistent with the concept of Human Ecology, but hardly revolutionary for John Paul II, and the term does not appear in any way in Uzawa's paper. I would venture that Cardinal Mejia's account of John Paul II having developed the concept himself, is not incompatible with Zamagni's idea

883 Ibid., 198.

884 Ibid., 199.

885 Ibid., 204.

886 Pontifical Council for Justice and Peace. Social And Ethical Aspects Of Economics.

of his having picked up the term from other schools of thought outside the Church, particularly given the pope's sensitivity to the wider culture, and being the term is so well suited to convey his approach to a wider audience. Neither Mejía nor Zamagni mention Pope Paul VI's use of the term, but it is possible that it might not have escaped John Paul II.

A few things about Centesimus Annus merit special attention. It is noteworthy that it continued the focus of Catholic social thought. It was written to commemorate the one hundredth anniversary of Pope Leo XIII's Rerum Novarum, "formulated for dealing with the question of the condition of workers."887 The conditions in which people live are relevant to the defense of the human persons and their dignity. The social Magisterium has always cared for this,888 and these conditions are present in John Paul II's Human Ecology. He goes further in recalling the magisterial context set by previous documents of Leo XIII "which called attention to the essential bond between human freedom and truth, so that freedom which refused to be bound to the truth would fall into arbitrariness and end up submitting itself to the vilest of passions, to the point of self-destruction,"889 thus making the argument that ideas and their moral implications are part of the human environment and have consequences which deeply affect the lives of persons in a given society. He also states that Leo XIII was compelled by duty not only to address the social conflict but also to address the conditions for the justice which was needed to avoid it.890 Leo XIII did not use the term *Human Ecology*, but his treatment of the conditions of

⁸⁸⁷ Pope John Paul II, Centesimus Annus, §3; Pope Leo XIII, Rerum Novarum, §3.

⁸⁸⁸ Pope John Paul II, Centesimus Annus, §3.

⁸⁸⁹ Ibid., §4; Pope Leo XIII, Libertas.

⁸⁹⁰ Pope John Paul II, Centesimus Annus, §5.

the workers, the moral context of truth and freedom, the concern for the family, and the social context of conflict and justice, already imply a comprehensive approach very consistent with John Paul II's Human Ecology.

Centesimus Annus dwells in a space opened by Leo XIII, asserting the legitimacy of the Church's effort to speak "about specific human situations, both individual and communal, national and international... to analyze social realities, to make judgments about them and to indicate directions to be taken for the just resolution of the problems involved."891 Bringing the social doctrine to illuminate and judge the life of man and society is part of the mission of the Church and its message and for John Paul II, an essential part of the "new evangelization."892 The rights and dignity of workers, the rights to private property, private associations, a limit in working hours and conditions appropriate for women and children, a just wage, and Sunday rest so that each could comply with their religious duties, are among those defended by Rerum Novarum and recalled in Centesimus Annus. Neither employers nor the state can infringe them, and the state has even "the 'strict duty' of providing properly for the welfare of the workers, because a failure to do so violates justice."893 Special attention should be given to protect those who are defenseless.

Most of the issues *Rerum Novarum* raised, are relevant today as well. We are reminded that "*Rerum novarum* criticizes two social and economic systems: socialism and liberalism"⁸⁹⁵ and that "similar processes of economic,"

⁸⁹¹ Ibid.

⁸⁹² Ibid.

893 Ibid., §8.

894 Ibid., §10.

895 Ibid., §10.

social and political transformation are creating the same evils" of "terrible conditions... [for] great multitudes of people."⁸⁹⁶ The concern for the least fortunate is consistent with a fundamental principle of a social Christian view. Solidarity is shown to be grounded in "Pope Leo XIII, who uses the term 'friendship,' a concept already found in Greek philosophy, Pope Pius XI ... with the equally meaningful term 'social charity,' [and] Pope Paul VI expanding the concept to... a 'civilization of love.'"⁸⁹⁷

2. Which Human Ecology?

Although Tucker and Grim have suggested⁸⁹⁸ that the Integral Ecology of Pope Francis which includes both humans and nature is superior to John Paul II's Human Ecology which allegedly downplays the natural environment, this claim is based on an inaccurate understanding of John Paul II's Human Ecology and of the Catholic and biblical understanding of dominion. For in fact, John Paul II's concept includes both the human and natural environment without reservation. John Paul II said that besides being concerned with

the irrational destruction of the natural environment, we must also mention the more serious destruction of the human environment...

_

⁸⁹⁶ Ibid., §11.

⁸⁹⁷ Ibid., §10.

⁸⁹⁸ Mary E. Tucker and John Grim, "Integrating Ecology and Justice: The Papal Encyclical," argue there is significant progress from John Paul II's anthropocentric attitude of dominion, to Benedict XVI's gentler anthropocentrism, to Francis's view which truly embraces and reconciles with nature: "Integral ecology, then... marks an important shift in the Church's conception of the relationship of humans to nature and humans to work... Drawing heavily on biblical language of domination, Pope John Paul II underscores the modern separation of humans from nature... This traditional view stands in marked contrast to his successors' more holistic view of nature.. Pope Benedict XVI moves away from language of domination of nature toward the protection of nature. Yet, he holds to a view of creation as in balance, which differs from the more contemporary perspectives of ecological science, namely that nature is in flux and ecosystems are in dynamic disequilibrium... There is a clear shift here from Pope John Paul II. Yet Pope Benedict XVI still relies on an anthropocentric ethic of "wise use" of nature. Perhaps he was wary that talking about nature's inherent goodness might open him to the charge of neopaganism from conservative factions within the Church... Pope Francis does not seem to have such reservations. Indeed, following St. Francis of Assisi, he invokes "Mother Earth" in the opening paragraph... a broader ethical framework than simply the human context... calling for cosmological ethics ... moves from an anthropocentric to an anthropocosmic perspective."

about preserving the natural habitats of the various animal species threatened with extinction... [but also] to safeguard the moral conditions for an authentic "Human Ecology." Not only has God given the earth to man... but man too is God's gift to man. He must therefore respect the natural and moral structure.⁸⁹⁹

The natural and human are to be understood both as needed and complementary and a joint object of our protection: "It is the task of the State to provide for the defence and preservation of common goods such as the natural and human environments... the State and all of society have the duty of defending those collective goods." It might be argued that John Paul II saw the natural environment as related but distinct from Human Ecology. However, in this 2001 Audience, he clearly includes all creatures and the environment within Human Ecology:

At stake, then, is not only a "physical" ecology that is concerned to safeguard the habitat of the various living beings, but also a "Human" Ecology which makes the existence of creatures more dignified, by protecting the fundamental good of life in all its manifestations and by preparing for future generations an environment more in conformity with the Creator's plan.⁹⁰¹

He repeatedly insists on including the environment within the purview of Human Ecology. 902

Benedict XVI follows in establishing a close relationship between natural and Human Ecology: "Humanity... must be increasingly conscious of the links between natural ecology, or respect for nature, and Human Ecology." He notes "the need to protect the environment and to exercise responsible

-

⁸⁹⁹ Pope John Paul II, Centesimus Annus, §38.

⁹⁰⁰ Ibid., §40.

⁹⁰¹ Pope John Paul II, "God Made Man the Steward of Creation," General Audience, January 17, 2001, §4.

⁹⁰² Pope John Paul II, *Pastores Gregis*, §70. "What is called for is not simply a physical ecology, concerned with protecting the habitat of the various living beings, but a human ecology, capable of protecting the radical good of life in all its manifestations and of leaving behind for future generations an environment which conforms as closely as possible to the Creator's plan."

⁹⁰³ Pope Benedict XVI, "Peace Message 2007," §8.

stewardship of the goods of the earth... Likewise with regard to the human environment,"904 and includes creation within Human Ecology as he asserts "a responsibility towards creation... as gifts of creation belonging to all... What is needed is something like a Human Ecology, correctly understood."905 Benedict XVI elaborates on this: "The deterioration of nature is in fact closely connected to the culture that shapes human coexistence: when "Human Ecology" is respected within society, environmental ecology also benefits."906 By stressing the intimate connection between nature and human condition, he also links their destiny: "Just as human virtues are interrelated, such that the weakening of one places others at risk, so the ecological system is based on respect for a plan that affects both the health of society and its good relationship with nature."907

The words of Cardinal Mejía, who actually drafted the section on Human Ecology in *Centesimus Annus*, help to clarify the issue. He says that John Paul II wanted to extend the concern for natural ecology to include Human Ecology. Furthermore, he believed that this concern should not and could not be limited to visible nature, but from meditating on chapter one of Genesis, where the theme of ecology is anchored, that ecology should include and be crowned with man and woman, their divine image and mutual relationship. John Paul II's Human Ecology, further developed by Benedict XVI, has always encompassed both natural and human realities.

⁹⁰⁴ Pope Benedict XVI, "WYD, Government House," July 17, 2008.

⁹⁰⁵ Pope Benedict XVI, "Speech to the Roman Curia," December 22, 2008.

⁹⁰⁶ Pope Benedict XVI, Caritas in Veritate, §51.

⁹⁰⁷ Ibid.

3. Nature of the human person

Following up on this linking of humans and nature we can note that the Church affirms the value and unique dignity of the human person in being "the only creature on earth which God willed for itself,"908 in the image and likeness of God.909 Socialist atheism which considers "the individual person simply as an element, a molecule within the social organism," as well as the mechanistic view of the rationalism of the Enlightenment deny "the supreme insight concerning man's true greatness, his transcendence in respect to earthly realities, the contradiction in his heart between the desire for the fullness of what is good and his own inability to attain it and, above all, the need for salvation which results from this situation."910 Both subordinate the individual "to the functioning of the socio-economic mechanism," which "deprives the person of his foundation, and consequently leads to a reorganization of the social order without reference to the person's dignity and responsibility."911

As the human person exercises his free choice for the good he experiences his dignity.⁹¹² Likewise, his social nature is lived out in the family and in other economic, social, political and cultural groups in which he freely

908 Pope Paul VI, Gaudium et Spes, §24.

⁹¹² Ibid., "Socialism likewise maintains that the good of the individual can be realized without reference to his free choice, to the unique and exclusive responsibility which he exercises in the face of good or evil.... This makes it much more difficult for him to recognize his dignity as a person, and hinders progress towards the building up of an authentic human community."

⁹⁰⁹ Pope John Paul II, Centesimus Annus, §11.

⁹¹⁰ Ibid., §13.

⁹¹¹ Ibid.

associates, keeping in view the common good. Greated in the image and likeness of God, the human person has the capacity to respond to God's invitation to know the truth and live, without fear, holy and blameless in His presence in love. His response to God's invitation is the essence of all human fulfillment. Anything that fetters the ability to respond to this invitation, gravely harms the human person. Whether it is limiting religious freedom through coercion, imposing living conditions that foster vice or seriously burden the exercise of freedom, discouraging the encounter of human persons in love, friendship or mutual cooperation, or creating a cultural climate which obscures the truth and promotes distorted values for men to pursue, all this wounds the healthy environment, the Human Ecology which the human person needs to flourish. A serious anthropological error is at the base of many of these distortions:

an understanding of human freedom which detaches it from obedience to the truth, and consequently from the duty to respect the rights of others. The essence of freedom then becomes self-love carried to the point of contempt for God and neighbor, a self-love which leads to an unbridled affirmation of self-interest and which refuses to be limited by any demand of justice.⁹¹⁵

One consequence is that man, aware of his capacity to transform and recreate the world through his own work, forgets that all that exists, including his own intelligence and skills, is a gift from God, given with a purpose. His misguided self-love leads him to make arbitrary use of the earth and all things within his reach, with no restraint and without concern regarding their

⁹¹³ Ibid., "the social nature of man is not completely fulfilled in the State, but is realized in various intermediary groups, beginning with the family and including economic, social, political and cultural groups which stem from human nature itself and have their own autonomy."

_

⁹¹⁴ The Holy Bible, Luke 1:73-75; Ephesians 1:3-4.

⁹¹⁵ Pope John Paul II, Centesimus Annus, §17.

purpose or the truth. Instead of cooperating with God in His loving plan of harmony and love, he sets himself up in place of God and abuses nature reaping the harmful fruits of his actions.

In a similar way, man abuses and destroys the human environment. As we have mentioned before, the human person needs an appropriate environment, a healthy ecology purified from elements toxic to his body, his mind or his spirit. John Paul II reminds us that man is also God's gift to man. 917 Through the experience of encounter, man is able to receive the amazing gift of himself, with the richness, depth and mystery of his divine-like nature, as well as the gift of others in love, communion and friendship. But these gifts must be embraced with reverence and care, respecting their nature and purpose, without abusing them as means to our own selfish goals. John Paul II cautions that man must "respect the natural and moral structure with which he has been endowed,"918 both in himself and in others.

4. The innermost layers and fundamental structures of Human Ecology

Although nature has fundamental links to humanity, in Catholic thought the innermost layer of Human Ecology is the relationship of the person with God. We can be sure that we can rely on God's love for us, his constant care and his readiness to forgive. But we don't always acknowledge that, nor receive and embrace the blessings by which God manifests his love to us. We need God and

⁹¹⁶ Ibid., §37. "In all this, one notes first the poverty or narrowness of man's outlook, motivated as he is by a desire to possess things rather than to relate them to the truth, and lacking that disinterested, unselfish and aesthetic attitude that is born of wonder in the presence of being and of the beauty which enables one to see in visible things the message of the invisible God who created them."

⁹¹⁷ Ibid., §38.

⁹¹⁸ **Ibid**.

his graces, but sometimes we deny ourselves of him who can fulfill all our desires and aspirations. Regardless of the circumstances, "conscience... 'the most secret core and sanctuary of a man,' is 'strictly related to human freedom.... [and] For this reason conscience, to a great extent, constitutes the basis of man's interior dignity and, at the same time, of his relationship to God.'"⁹¹⁹ God is always accessible to us, if not in sacraments, then always in prayer. The first concern in building a Human Ecology for ourselves is caring for our relation with God.

Then comes the relationship with ourselves. Each person needs the truth about his own self, his divine nature and vocation, and the reverence, love and care due to his whole reality: body, mind and spirit. This truth can only be found fully in Jesus Christ. Only he "fully reveals man to himself."⁹²⁰ In Christ man can sort out the uncertainties and weaknesses of his broken nature and experience the wonder at his own dignity and vocation.⁹²¹ Made for love and communion, trudging through this valley of tears, all men and women experience, even unconsciously, a deep longing for reconciliation.⁹²²

However, our conscience is meant to make us aware of our misery and sin, only healed by the forgiveness and mercy of God. In turn, this mercy opens us through grace to the glory of our vocation, which can only be achieved with God's help. In this layer of Human Ecology, each person must recognize the

919 Pope John Paul II, Reconciliatio et Penitentiae, §18.

921 Pope John Paul II, *Redemptor Hominis*, §10. "The man who wishes to understand himself thoroughly—and not just in accordance with immediate, partial, often superficial, and even illusory standards and measures of his being—he must with his unrest, uncertainty and even his weakness and sinfulness, with his life and death, draw near to Christ. He must, so to speak, enter into him with all his own self, he must 'appropriate' and assimilate the whole of the reality of the Incarnation and Redemption in order to find himself. If this profound process takes place within him, he then bears fruit not only of adoration of God but also of deep wonder at himself."

⁹²⁰ Pope Paul VI, Gaudium et Spes, §22.

⁹²² Pope John Paul II, Reconciliatio et Penitentiae, §3.

calling to holiness, seek conversion and reconciliation for his sins, and strive with the help of God to attain that holiness in God's presence in love. Whoever neglects this, hurts himself in a serious way.

These two realities, our relationship with God and with ourselves are debatable as parts of Human Ecology. John Paul II does not mention them explicitly as part of the Human Ecology but they can reasonably be construed as implied by his conception of the human person. As they are attitudes and decisions which arise from the core of who we are, our spirit, it is hard to regard them as part of the "environment." On the other hand, these attitudes and decisions are critical to the shaping of our most important moral environment: our personal theology and our identity. As I recognize and open myself to the reality of grace which permeates my existence and all the realities in which I live, I allow myself to be embraced by God's love. As I experience my own affirmation of who I am, I establish the filter or interphase through which I relate to the external environment and the point of reference for building this relationship. This will shape how the external environment impacts me. 923

John Paul II makes a solid contribution to Human Ecology in his view that, the "first and fundamental structure for 'Human Ecology' is the family."⁹²⁴ Here "man receives his first formative ideas about truth and goodness, and learns what it means to love and to be loved, and thus what it actually means to be a person."⁹²⁵ Marriage between husband and wife, in mutual love, until

⁹²³ Pope John Paul II, *Centesimus Annus*, §51. "Thus the first and most important task is accomplished within man's heart. The way in which he is involved in building his own future depends on the understanding he has of himself and of his own destiny."

⁹²⁴ Ibid., §39.

⁹²⁵ Ihid.

death, creates the proper conditions where children can be received as a gift of God and nurtured and educated in body, mind, and spirit, so they can develop their own potential. It also creates the conditions which provide a powerful motive for the spouses to build a strong and lasting bond that will support the long-term enterprise of raising a family. Self-denial and sacrificial love are needed to achieve first, a strong communion between the spouses and second, the more elevated experience of love which occurs when two persons who love each other are united in the transcending experience of giving themselves jointly in love to a third person, in this case, their children. The spouses bond in the communion of selfless love and sacrifice.

This is the moral and spiritual ecology which can awaken, motivate, and mature the selfless love which provides the fulfillment that the human persons seek. Thus, the family becomes the "home" where each of its members can experience belonging, warmth, and safety, and the inviting interaction where love is freely received and given. Unfortunately, the aforementioned anthropological error of detaching freedom from truth leads people to seek their own satisfaction above all. This will translate in several ways: avoiding the project of building a family, or seeing a trophy wife and the "children as one of the many 'things' which an individual can have or not have, according to taste, and which compete with other possibilities."926 This error distorts the Human Ecology which spouses need to grow in their capacity and actualization of selfless love, and which children need to be able to mature in a healthy way.

⁹²⁶ Ibid.

A healthy family provides a child two crucial experiences. One is the experience of the unconditional love, received from his parents who affirms his intrinsic value; this is the foundation of a child's self-esteem and security. The other is the experience of how the love his parents have for each other is capable of overcoming all challenges and creating a loving, secure, and joyful environment for parents and children, of which he is one, experiencing the benefits first hand. The conviction that love is good and strong, and that it brings joy and many other benefits, is thus engraved in a child's spirit. When the family fails to provide this, it fails the child but also fails to provide true fulfillment for the parents.

Also as a next additional layer, according to John Paul II, relationships with extended family, neighborhood, school, work, clubs and associations for recreational, civic or other purposes can be healthy if they are oriented to the good and true, and the mutual relations conducted with respect and value for the dignity of each human person. Thus, the personal space which extends beyond the family in relations of love, friendship, and cooperation with the different groups in which the human person is involved, continue to configure the social fabric which is a key part of the Human Ecology. A good "social ecology" of work, Sechool, and other common spaces is important for the well being and development of the person. Urban planning and urbanization which respond to the moral structure and nature of the human person are also mentioned as important elements in the configuration of a Human Ecology.

⁹²⁷ Ibid., §49.

⁹²⁸ Ibid., §38.

⁹²⁹ Ibid.

5. Culture and society

Shared space in society is also part of what constitutes our Human Ecology. With its beliefs and values, concrete manifestations, lifestyles and customs, the culture deeply influences our own values.

Man receives from God his essential dignity and with it the capacity to transcend every social order so as to move towards truth and goodness. But he is also conditioned by the social structure in which he lives, by the education he has received and by his environment. These elements can either help or hinder his living in accordance with the truth.⁹³⁰

So, the person is not determined by the society in which he lives. However, it would be naïve not to take into account that influence, particularly as we are immersed in it and not always aware of its constant impact on us. For that same reason, we must actively engage in opposing sinful or destructive values and processes and transforming the culture so that the society around us becomes a healthy space:

The decisions which create a human environment can give rise to specific structures of sin which impede the full realization of those who are in any way oppressed by them. To destroy such structures and replace them with more authentic forms of living in community is a task which demands courage and patience.⁹³¹

The consumerism present in society is a symptom of a distorted ethical and cultural system, giving excessive importance to the economy which is only one aspect of human activity.

If economic life is absolutized, if the production and consumption of goods become the center of social life and society's only value, not subject to any other value, the reason is to be found not so much in the economic system itself as in the fact that the entire socio-cultural system, by ignoring the ethical and religious dimension, has been weakened. 932

⁹³¹ Ibid.

⁹³⁰ Ibid.

⁹³² Ibid., §39.

This affects both human and natural ecologies because the cultural and economic systems foster "the problem of consumerism … In his desire to have and to enjoy rather than to be and to grow, man consumes the resources of the earth and his own life in an excessive and disordered way."⁹³³

In John Paul II many concepts about the mutual influence between the human person and the society and culture he lives in, that were implied in previous Catholic social thought, are made clear and evident. This helps understand that SD needs not just specific goals and initiatives such as the MDGs and the SDGs but above all, developing the cultural, moral and relational dimension of the human persons, as well as the healthy cultural and social space that nurtures and supports it.⁹³⁴ Culture is the way of living, the lifestyle which a society has developed. Although "the first and most important task is accomplished within man's heart,"935 it encompasses all of what is human, in activity, laws, customs, ways of relating among people and with the many issues and situations that arise in the life of a society. As "all human activity takes place within a culture and interacts with culture,"936 so, all of it is subject to moral scrutiny to judge whether it contributes to a life consistent with the nature and dignity of the human person or detracts from it. To build culture, "the involvement of the whole man is required, whereby he exercises his creativity, intelligence, and knowledge of the world and of people. Furthermore,

⁹³³ Ibid., §37.

⁹³⁴ Hence the relevance of approaches such as *Sustainable Livelihoods* or the concept of *Social Development* as presented in the UN Copenhagen Declaration on Social Development, 1995.

⁹³⁵ Pope John Paul II, Centesimus Annus, §51.

⁹³⁶ Ibid.

he displays his capacity for self-control, personal sacrifice, solidarity and readiness to promote the common good."937

Although culture also involves the heritage and traditions received, it is in a constant process of reshaping. It influences the people who live in its midst, but is also influenced by the actions of all people, in a particular way the young as they "put these values to the test in one's own life... to make them more real, relevant and personal, distinguishing the valid elements ... from false and erroneous ones, or from obsolete forms which can be usefully replaced by others more suited to the times."938

The pope argues that culture is in constant change adapting to the times and actions of people. If it changes, making progress toward truth, open to purification and enrichment by other realities and cultures, it becomes more human and hospitable. If it welcomes elements based on a distorted human nature, or "becomes inward looking, and tries to perpetuate obsolete ways of living by rejecting any exchange or debate with regard to the truth about man, then it becomes sterile and is heading for decadence."939

Another important aspect of culture and society which John Paul II mentions is "the promotion of a health worthy of the human being:"

This model of health requires that the Church and society create an ecology worthy of man. The environment, in fact, is connected with the health of the individual and of the population: it constitutes the human being's "home" and the complex of resources entrusted to his care and stewardship, "the garden to be tended and the field to be cultivated." 940

.

⁹³⁷ Ibid.

⁹³⁸ Ibid., §50.

⁹³⁹ Ibid.

⁹⁴⁰ Pope John Paul II, "Message for the World Day of the Sick, 2000."

We have covered in chapter one the harmful impact of human action in the environment, such as toxic air and water, and how that comes back to harm the health of the human person. We have also covered in chapters one and two how the moral disposition of people is the main factor weighing in on their decisions that lead to harming the environment: "the external ecology of the person must be combined with an interior, moral ecology, the only one which is fitting for a proper concept of health."941

All members of society are responsible through their life and actions to promote a culture that continues to grow in accordance with truth, with authentic human values, and responds to the nature of the human person. This is a culture which fosters respect for the dignity of the human person, cultivates solidarity and concern for the common good and the good of others, promotes "active commitment to our neighbor and demands of us a shared responsibility for all of humanity. This duty is not limited to one's own family, nation or State, but extends progressively to all mankind."942

Accordingly, it is also a culture of peace, which holds dear the values of forgiveness and reconciliation and takes action to achieve justice and development for all peoples. "This is the culture which is hoped for, one which fosters trust in the human potential of the poor, and consequently in their ability to improve their condition through work or to make a positive contribution to economic prosperity."943 This implies a significant conversion

⁹⁴¹ Ibid.

⁹⁴² Pope John Paul II, Centesimus Annus, §51.

 $^{^{943}}$ lbid., §53, "But to accomplish this, the poor — be they individuals or nations — need to be provided with realistic opportunities. Creating such conditions calls for a concerted worldwide effort to promote development, an effort which also involves sacrificing the positions of income and of power enjoyed by the more developed economies."

and change in values since "this may mean making important changes in established life-styles, in order to limit the waste of environmental and human resources, thus enabling every individual and all the peoples of the earth to have a sufficient share of those resources."944

6. Alienating materialistic cultures

As we see John Paul II's view of culture, we have to note his reflections affected by the particular historical moment. The Iron Curtain had fallen and it was relevant to convey how Communism and Socialism had proved unsustainable economically and politically, but also the profound and lasting damage to the experience of every human person of a totalitarian atheistic regime. People were denied their right to living out their spiritual life, their moral commitments, and their freedom to relate in a creative, joyful and trusting way with others. At the same time, it was critical to warn against taking Capitalism uncritically as the preferred option. Both had to be denounced in their alienating materialism, and guidance given in how to ensure a healthy human space.

Even though man receives from God his essential dignity he is also conditioned by environment, education, and the social structure in which he lives. 945 A person's culture and society "can either help or hinder his living in accordance with the truth. The decisions which create a human environment can give rise to specific structures of sin which impede the full realization of

_

⁹⁴⁴ Ibid.

⁹⁴⁵ Ibid., §38.

those who are in any way oppressed by them."⁹⁴⁶ When the culture is at odds with the truth and nature of the human person, it forms people in destructive ways and leads to diverse modes of alienation. Ideologies and distorted visions of man are often the cause of these inhuman cultures or anti-cultures, both from a socialist or a capitalist approach. Here the pope is clear to denounce both, naming capitalism as the permissive and consumerist solutions:

The theological dimension is needed both for interpreting and solving present-day problems in human society. It is worth noting that this is true in contrast both to the "atheistic" solution, which deprives man of one of his basic dimensions, namely the spiritual one, and to permissive and consumerist solutions, which under various pretexts seek to convince man that he is free from every law and from God himself, thus imprisoning him within a selfishness which ultimately harms both him and others.⁹⁴⁷

Talking specifically about the alienation that harms the people in their consciences, the pope continues: "Marxism criticized capitalist bourgeois societies, blaming them for the commercialization and alienation of human existence." This criticism, however, stemmed from a purely materialistic approach which proposed its own collectivistic type of materialism, but "the historical experience of socialist countries has sadly demonstrated that collectivism does not do away with alienation but rather increases it, adding to it a lack of basic necessities and economic inefficiency." 49

In this line of thought, and from the distortions consequence of financialization and consumerism, among others, reviewed in chapter two, I posit that alienation in capitalist western societies is also very much present

⁹⁴⁶ Ibid.

⁹⁴⁷ Ibid., §55.

⁹⁴⁸ Ibid., §41.

⁹⁴⁹ Ibid.

and very harmful, although it is more subtle and sophisticated. It stems from the above mentioned anthropological error of losing the connection between freedom and truth and thus allowing a distorted view where economic freedom is unlimited. As the pope states: "economic freedom is only one element of human freedom. When it becomes autonomous, when man is seen more as a producer or consumer of goods than as a subject who produces and consumes in order to live, then economic freedom loses its necessary relationship to the human person and ends up by alienating and oppressing him."950

As economies in the developed world have transitioned from satisfying basic needs to providing a more luxurious quality of goods, services and life in general, desires have become disconnected from basic needs and more dependent on "more or less appropriate concept[s] of man and of his true good. A given culture reveals its overall understanding of life through the choices it makes in production and consumption. It is here that the phenomenon of consumerism arises."951 Divorcing economic systems and economic decisions from moral criteria is harmful because the economy cannot distinguish higher forms of satisfying human needs "from artificial new needs which hinder the formation of a mature personality."952

Economy has to be subordinated to a correct anthropology and moral conception. People, consumers, producers and mass media must be educated "in the responsible use of their power of choice."953 An obvious example of a

950 Ibid., §39.

951 Ibid., §36.

⁹⁵² Ibid.

953 Ibid.

"market" or utilitarian approach which leads to "artificial consumption contrary to the health and dignity of the human person... is the use of drugs [which] is a sign of a serious malfunction in the social system; it also implies a materialistic and, in a certain sense, destructive 'reading' of human needs... Drugs, as well as pornography and other forms of consumerism which exploit the frailty of the weak, tend to fill the resulting spiritual void."954

A less obvious example, but also harmful and alienating, is trying to fill the spiritual void with a life style oriented to ""having" rather than "being", and which wants to have more, not in order to be more but in order to spend life in enjoyment as an end in itself."955 This feeds a vicious circle as the "having" can never satisfy the spiritual cravings of the "being," so the void will resurface more acute every time fueling a frenzy of consumerism and the seeking of extreme sports, drugs or other intense experiences. "It is therefore necessary to create life-styles in which the quest for truth, beauty, goodness and communion with others for the sake of common growth are the factors which determine consumer choices, savings and investments.956

This required change implies going beyond selfish criteria and being open to the responsibility of the common good and solidarity. "In this regard, it is not a matter of the duty of charity alone, that is, the duty to give from one's "abundance", and sometimes even out of one's needs, in order to provide what is essential for the life of a poor person." That is, of course, part of living the

954 Ibid.

⁹⁵⁵ Ibid.

⁹⁵⁶ Ibid.

⁹⁵⁷ Ibid.

"Golden Rule," as a Christian or as a human person." The pope is "referring to the fact that even the decision to invest in one place rather than another, in one productive sector rather than another, is always a moral and cultural choice."

Someone alienated from who he truly is by the culture and the prevailing beliefs and lifestyles of his society, is undoubtedly dwelling in an unhealthy Human Ecology. "Alienation — and the loss of the authentic meaning of life — is a reality in Western societies, too. This happens in consumerism, when people are ensnared in a web of false and superficial gratifications rather than being helped to experience their personhood in an authentic and concrete way."959 The working conditions resulting from subordinating humans to productivity also alienates, for example, when work is organized to maximize profits regardless of "whether the worker, through his own labor, grows or diminishes as a person, either through increased sharing in a genuinely supportive community or through increased isolation in a maze of relationships marked by destructive competitiveness and estrangement, in which he is considered only a means and not an end."960 John Paul II focuses alienation on the denial of who the human person essentially is: "The concept of alienation needs to be led back to the Christian vision of reality... When man does not recognize in himself and in others the value and grandeur of the human person, he effectively deprives himself of the possibility of benefitting from his humanity and of entering into that relationship of solidarity and

-

⁹⁵⁸ Ibid., "Given the utter necessity of certain economic conditions and of political stability, the decision to invest, that is, to offer people an opportunity to make good use of their own labor, is also determined by an attitude of human sympathy and trust in Providence, which reveal the human quality of the person making such decisions."

⁹⁵⁹ Ibid., §41.

⁹⁶⁰ Ibid.

communion with others for which God created him."961 Man can choose to not flourish in love, from his own free decision, or conditioned by an anti-human ecology:

Indeed, it is through the free gift of self that man truly finds himself... A man is alienated if he refuses to transcend himself and to live the experience of self-giving and of the formation of an authentic human community oriented towards his final destiny, which is God. A society is alienated if its forms of social organization, production and consumption make it more difficult to offer this gift of self and to establish this solidarity between people.⁹⁶²

In Western society, alienation "exists in various forms of exploitation, when people use one another, and when they seek an ever more refined satisfaction of their individual and secondary needs, while ignoring the principal and authentic needs which ought to regulate the manner of satisfying the other ones too."963 Consumerism focuses the person "solely or primarily with possessing and enjoying... no longer able to control his instincts and passions, or to subordinate them by obedience to the truth."964 Such a person "cannot be free: obedience to the truth about God and man is the first condition of freedom, making it possible for a person to order his needs and desires and to choose the means of satisfying them according to a correct scale of values, so that the ownership of things may become an occasion of growth for him."965

961 Ibid.

962 Ibid.

⁹⁶³ Ibid.

964 Ibid.

965 Ibid.

7. Economy and the Market

The economy is part of human activity and consequently subject to practical and moral considerations as to whether it achieves its purpose of efficiently and effectively, ordering human activity and productivity to satisfy authentic human needs in a way that is consistent with human dignity and nature. The last century has seen two competing visions in this arena, but our discernment cannot be limited to those options. John Paul II asks, "Can it perhaps be said that, after the failure of Communism, capitalism is the victorious social system, and that capitalism should be the goal of the countries now making efforts to rebuild their economy and society?"966 He responds, "We have seen that it is unacceptable to say that the defeat of so-called 'Real Socialism' leaves capitalism as the only model of economic organization."967 Asking whether capitalism can be in some way compatible with a healthy society, John Paul II proposes that unlike with socialism, capitalism can be applied in a way that is compatible with a healthy Human Ecology:

If by "capitalism" is meant an economic system which recognizes the fundamental and positive role of business, the market, private property and the resulting responsibility for the means of production, as well as free human creativity in the economic sector, then the answer is certainly in the affirmative, even though it would perhaps be more appropriate to speak of a "business economy", "market economy" or simply "free economy".

But this valid exercise of capitalism requires certain conditions and social and legal structures that have to be in place to ensure that the spiritual freedom of the human person is not compromised.

⁹⁶⁶ Ibid., §42.

⁹⁶⁷ Ibid., §35.

⁹⁶⁸ Ibid., §42.

But if by "capitalism" is meant a system in which freedom in the economic sector is not circumscribed within a strong juridical framework which places it at the service of human freedom in its totality, and which sees it as a particular aspect of that freedom, the core of which is ethical and religious, then the reply is certainly negative.⁹⁶⁹

A Human Ecology considers the totality of the human person, recognizing the order and priority in which his dimensions are to be fulfilled. Economic and social systems cannot pretend to exclude themselves from this scrutiny. "[R]ealities of marginalization and exploitation remain in the world, especially the Third World, as does the reality of human alienation, especially in the more advanced countries. Against these phenomena the Church strongly raises her voice."970 Both material and spiritual poverty challenge man's true vocation. As "vast multitudes are still living in conditions of great material and moral poverty... there is [also] a risk that a radical capitalistic ideology could spread which refuses even to consider these problems, in the a priori belief that any attempt to solve them is doomed to failure, and which blindly entrusts their solution to the free development of market forces."971

The market can "utilize resources better; ... promote the exchange of products; ... give central place to the person's desires and preferences,"972 but to entrust economic decisions and allocation of resources solely to the market, fails to recognize its limits, since "there are collective and qualitative needs which cannot be satisfied by market mechanisms. There are important human needs which escape its logic. There are goods which by their very nature

⁹⁶⁹ Ibid.

⁹⁷⁰ Ibid.

⁹⁷¹ Ibid.

972 Ibid., §40.

cannot and must not be bought or sold."973 There is "the risk of an 'idolatry' of the market, an idolatry which ignores the existence of goods which by their nature are not and cannot be mere commodities."974

Against this "idolatry," "it is right to speak of a struggle against an economic system, if the latter is understood as a method of upholding the absolute predominance of capital, the possession of the means of production and of the land, in contrast to the free and personal nature of human work."975 The alternative is not a socialist system, "but rather a society of free work, of enterprise and of participation. Such a society is not directed against the market, but demands that the market be appropriately controlled by the forces of society and by the State, so as to guarantee that the basic needs of the whole of society are satisfied."976

As with any human activity a business has a purpose, but in this case the purpose should not be reduced to profits. A business must exercise its nature "as a community of persons who in various ways are endeavoring to satisfy their basic needs, and who form a particular group at the service of the whole of society. Profit is a regulator of the life of a business, but it is not the only one; other human and moral factors must also be considered.⁹⁷⁷

⁹⁷³ Ibid.

974 Ibid.

975 Ibid., §35.

⁹⁷⁶ Ibid.

⁹⁷⁷ Ibid.

8. The Environment

John Paul II calls attention to strong connection between market forces and "the ecological question which accompanies the problem of consumerism and which is closely connected to it. In his desire to have and to enjoy rather than to be and to grow, man consumes the resources of the earth and his own life in an excessive and disordered way." ⁹⁷⁸ Thus, he shows that the environment is mainly a moral issue, deriving from moral choices of people. These decisions are, as well, a symptom of a deeper issue regarding the confusion and disorder with which man seeks his flourishing.

In another expression of the anthropological error that detaches freedom from truth, man uses and abuses of the earth according to his will: "Instead of carrying out his role as a co-operator with God in the work of creation, man sets himself up in place of God and thus ends up provoking a rebellion on the part of nature, which is more tyrannized than governed by him." This reminds us that the disorder in man's action comes from a misguided notion of who he is, originated from his rupture with God and His Plan. Keeping this in mind, the environment is also a key component of Human Ecology as it not only provides for our needs, but speaks the language of God and helps encounter Him.

⁹⁷⁸ Ibid., §37.

979 Ibid.

9. State and Government

Human Ecology needs a "sound theory of the State in order to ensure the normal development of man's spiritual and temporal activities, both of which are indispensable." Recognizing man's social nature and his capacity to exercise freely his responsibility suggests "the organization of society according to the three powers—legislative, executive and judicial—[where] each power be balanced by other powers ... [and] the principle of the 'rule of law,' in which the law is sovereign, and not the arbitrary will of individuals." Along with this, "It is the task of the State to provide for the defense and preservation of common goods such as the natural and human environments, which cannot be safeguarded simply by market forces... [The State has a] duty of defending those collective goods which, among others, constitute the essential framework for the legitimate pursuit of personal goals on the part of each individual."

I find this space of civic freedom to be consistent with a Human Ecology which protects human dignity and his responsible exercise of freedom, whereas "the root of modern totalitarianism is to be found in the denial of the transcendent dignity of the human person who, as the visible image of the invisible God, is therefore by his very nature the subject of rights which no one may violate—no individual, group, class, nation or State."983 The Church has an indispensable mission to safeguard human dignity and truth against any

⁹⁸⁰ Ibid., §44.

⁹⁸¹ Ibid.

982 Ibid., §40.

983 Ibid., §44.

temptation or tendency towards totalitarianism. Precisely for this reason, totalitarian governments, or even formally democratic governments with a populist or messianic bent, will seek to control and limit the Church's voice:

The culture and praxis of totalitarianism also involve a rejection of the Church. The State or the party which claims to be able to lead history towards perfect goodness, and which sets itself above all values, cannot tolerate the affirmation of an objective criterion of good and evil beyond the will of those in power, since such a criterion, in given circumstances, could be used to judge their actions.⁹⁸⁴

It is interesting to note that, historically, those that have sought to enslave or eliminate the Church in the past "democratic" century have been the godless regimes of Hitler's Germany and the host of communist governments. "This explains why totalitarianism attempts to destroy the Church, or at least to reduce her to submission, making her an instrument of its own ideological apparatus."985

John Paul II observes that "the totalitarian State tends to absorb within itself the nation, society, the family, religious groups and individuals themselves."986 The Church seeks not so much to defend itself, but to protect the human person and the institutions which comprise Human Ecology. "In defending her own freedom, the Church is also defending the human person, who must obey God rather than men (cf. Acts 5:29), as well as defending the family, the various social organizations and nations—all of which enjoy their own spheres of autonomy and sovereignty."987 Also, in a similar way, as a more recent development, international bodies such as those in the system of the

⁹⁸⁴ Ibid., §45.

⁹⁸⁵ Ibid.

⁹⁸⁶ Ibid.

⁹⁸⁷ Ibid.

United Nations, other regional bodies such as the European Union, and international courts, basically governed by unelected bureaucrats, find it more convenient to silence or ignore the Church as they advance their own agendas.

The Church, even though it does not endorse any particular political system, "values the democratic system inasmuch as it ensures the participation of citizens in making political choices, [and] guarantees to the governed the possibility both of electing and holding accountable those who govern them."988 Democracy cannot become an idol and needs to be subject to scrutiny of truth and morals: "Authentic democracy is possible only in a State ruled by law, and on the basis of a correct conception of the human person. It requires that the necessary conditions be present for the advancement both of the individual through education and formation in true ideals, and of the 'subjectivity' of society through the creation of structures of participation and shared responsibility."989

Consistent with Allan Bloom's findings seen in the introduction, the pope identifies a misguided "claim that agnosticism and skeptical relativism are the philosophy and the basic attitude which correspond to democratic forms of political life. Those who are convinced that they know the truth and firmly adhere to it are considered unreliable from a democratic point of view, since they do not accept that truth is determined by the majority." However, society needs the truth about the human person to be affirmed. This truth offers a necessary reference point because "if there is no ultimate truth to guide

988 Ibid., §46.

⁹⁸⁹ Ibid.

990 Ibid.

and direct political activity, then ideas and convictions can easily be manipulated for reasons of power. As history demonstrates, a democracy without values easily turns into open or thinly disguised totalitarianism."991

Among the common goods to be protected are the "natural and human environments" which comprise Human Ecology. Among these are human rights, from the most basic: "right to life, [even] from the moment of conception; the right to live in a united family and in a moral environment conducive to the growth of the child's personality; you develop and unfold our gifts through "the right to develop one's intelligence and freedom in seeking and knowing the truth; the right to share in the work... and to derive from that work the means to support oneself and one's dependents; and the right freely to establish a family, to have and to rear children acknowledging that "the source and synthesis of these rights is religious freedom, understood as the right to live in the truth of one's faith and in conformity with one's transcendent dignity as a person.

An important part of the human environment ensuring the healthy participation of all in the civic space, is the health of the political system. When the issues at stake are "not examined in accordance with criteria of justice and morality, but rather on the basis of the electoral or financial power of the groups promoting them..., such distortions of political conduct create distrust and apathy, [in] the general population, which feels abused and

⁹⁹¹ Ibid.

992 Ibid., §40.

993 Ibid., §47.

⁹⁹⁴ Ibid.

⁹⁹⁵ Ibid.

disillusioned."996 This makes it difficult to support"particular interests within the framework of a coherent vision of the common good... [which] is not simply the sum total of particular interests; rather it involves an assessment and integration of those interests on the basis of a balanced hierarchy of values; ultimately, it demands a correct understanding of the dignity and the rights of the person."997 Economic life is also part of the common good, and it "cannot be conducted in an institutional, juridical or political vacuum... it presupposes sure guarantees of individual freedom and private property, as well as a stable currency and efficient public services... the State is to guarantee this security, so that those who work and produce can enjoy the fruits of their labors and thus feel encouraged to work efficiently and honestly."998

There is, and has been for a long time, considerable discussion concerning the role of the state in the economy. Here, we need to set aside ideologies of market or welfare and make room for the discerning criteria of subsidiarity. It is state has a duty to sustain business activities by creating conditions which will ensure job opportunities, by stimulating those activities where they are lacking or by supporting them in moments of crisis. It is when the state has the further right to intervene when particular monopolies create delays or obstacles to development... in exceptional circumstances the State can also exercise a substitute function, when social

- - -

⁹⁹⁶ Ibid.

⁹⁹⁷ Ibid.

⁹⁹⁸ Ibid., §48.

⁹⁹⁹ Pontifical Council for Justice and Peace. *Compendium of the Social Doctrine of the Church*, §§ 351-355; Thomas Piketty, *Capital in the Twenty-First Century*, 136-137; 472-474.

¹⁰⁰⁰ Pope John Paul II, Centesimus Annus, §48.

sectors or business systems are too weak or are just getting under way."¹⁰⁰¹Of course, these interventions "must be as brief as possible, so as to avoid removing permanently from society and business systems the functions which are properly theirs, and so as to avoid enlarging excessively the sphere of State intervention to the detriment of both economic and civil freedom."¹⁰⁰²

The excessive growth and intervention of the state has generated in some cases the so-called "Welfare State," which seemingly provides for many human needs. However, many excesses and abuses have led to a more critical view: "Malfunctions and defects in the Social Assistance State are the result of an inadequate understanding of the tasks proper to the State. Here again the principle of subsidiarity must be respected: a community of a higher order should not interfere in the internal life of a community of a lower order." 1003

Other harms come from this distortion since "by intervening directly and depriving society of its responsibility, the Social Assistance State leads to a loss of human energies and an inordinate increase of public agencies, which are dominated more by bureaucratic ways of thinking." Subsidiarity educates for freedom and responsibility and allows for personal involvement and builds resilience in society, particularly regarding "the condition of refugees, immigrants, the elderly, the sick, and all those in circumstances which call for assistance, such as drug abusers: all these people can be helped effectively only

¹⁰⁰¹ Ibid.

¹⁰⁰² Ibid.

¹⁰⁰³ Ibid.

1004 Ibid.

by those who offer them genuine fraternal support, in addition to the necessary care." 1005

As part of its subsidiary role, the state can and should care for the poor, through the work of private and local initiatives, and intervening only when smaller entities cannot respond to the challenge. Families, for example, might find themselves "without the necessary support from the State and without sufficient resources. It is urgent therefore to promote not only family policies, but also those social policies which have the family as their principle object, policies which assist the family by providing adequate resources and efficient means of support, both for bringing up children and for looking after the elderly, so as to avoid distancing the latter from the family unit and in order to strengthen relations between generations." 1006

Similarly, the state must respect and support "other intermediate communities [which] exercise primary functions and give life to specific networks of solidarity. These develop as real communities of persons and strengthen the social fabric, preventing society from becoming an anonymous and impersonal mass, as unfortunately often happens today. It is in interrelationships on many levels that a person lives, and that society becomes more 'personalized'." According to John Paul II, Pope Leo XIII recognized the duty of the State of "watching over the common good ... while respecting the rightful autonomy of each sector... inasmuch as the individual, the family and

¹⁰⁰⁵ Ibid.

1006 Ibid., §49.

1007 Ibid.

society are prior to the State, and inasmuch as the State exists in order to protect their rights and not stifle them."¹⁰⁰⁸

10. International community

Nations and international organizations have the responsibility to care for that dimension of the human environment which provides for peace and common understanding among nations and peoples. Political and diplomatic activity is also human activity subject to the discernment under truth and moral values. The values of justice, respect for the human dignity of all, and solidarity need to be present here. More developed and richer nations and peoples have a moral duty to come to the aid of poorer nations and people. 1009

The effort in development "calls for a concerted worldwide effort to promote development, an effort which also involves sacrificing the positions of income and of power enjoyed by the more developed economies." ¹⁰¹⁰ This involves not only giving of surplus resources, but might present a more challenging demand: "This may mean making important changes in established life-styles, in order to limit the waste of environmental and human resources, thus enabling every individual and all the peoples of the earth to have a sufficient share of those resources" ¹⁰¹¹

1008 Ibid., §11.

¹⁰⁰⁹ Ibid., §58.

¹⁰¹⁰ Ibid., §52.

¹⁰¹¹ Ibid.

Part B. Benedict XVI

1. Introduction

The first occasion where Benedict XVI explicitly took up the term "Human Ecology" was in a letter to the Pontifical Academy of Social Sciences dated April 27, 2006. However, his homily at his Inaugural Mass also shared his conception of what is most relevant in the environment in which we live and struggle, starting with the life of grace. In this homily, he refers to John Paul II crossing the threshold of the next life, the cardinals faced with the challenge of electing a new pope, and he himself facing the enormous task of leading the Church, concluding that in all these events, we are never alone. We are "surrounded by so great a cloud of witnesses" that we can call upon "the Saints of every age... [and be] led and guided by the friends of God." The communion of Saints which also includes all of us, the baptized, accompanies us, being an important presence in our supernatural ecology, part of our Human Ecology. God, through his Word and his will is also present. To know and accept his will is a source of joy and leads us to our true self. 1014

Benedict XVI uses the image of the desert to illustrate the misery and suffering in which many people live, the desolation of our "inner ecology." ¹⁰¹⁵ He uses the same image to show that the destruction of the natural

¹⁰¹² The Holy Bible RSV, Hebrews 12:1.

¹⁰¹³ Pope Benedict XVI, "Homily at his Inaugural Mass," April 24, 2005.

¹⁰¹⁴ Ibid.

¹⁰¹⁵ Ibid.

environment is a consequence of our impoverished inner life. ¹⁰¹⁶ The Church's mission is "to lead people out of the desert", to pull "us out of the waters of death and brings us into the splendor of God's light, into true life." Only then "does life truly begin. Only when we meet the living God in Christ do we know what life is... Each of us is the result of a thought of God. Each of us is willed, each of us is loved, each of us is necessary." ¹⁰¹⁷ He ends repeating and elaborating on John Paul II's words "Do not be afraid! Open wide the doors for Christ!" As men allow Christ into their lives, Christ reshapes their inner and exterior ecology, taking away "the dominion of corruption, the manipulation of law and the freedom to do as they pleased" and giving them everything of "what makes life free, beautiful and great." ¹⁰¹⁸

2. Human ecology in the Magisterium after John Paul II's Centesimus Annus

Human Ecology had been established before Benedict XVI, not only in John Paul II's writings, but following his lead, also in the wider magisterium of the Church. Cardinal Lopez Trujillo used the phrase in 1996. He spoke of the "remote preparation" needed for marriage which takes place in the different stages of life, primarily through the family, and which involves the option for truth and love through a life of mature faith, a life guided by values, a Christian lifestyle and the desire to achieve fulfillment through the sincere gift of self: "All

¹⁰¹⁷ Ibid.

¹⁰¹⁶ Ibid.

¹⁰¹⁸ Ibid.

of this is part of a 'Human Ecology."¹⁰¹⁹ He addressed the United Nations in 2002 with a similar topic, pleading for the "full recognition of the child's human dignity, of all children, images of God" and their right to "their integral personal development" through "family and society."¹⁰²⁰

He denounced "the moral pollution of the environment that spiritually impedes children from breathing pure air" and stressed the urgency to heed the "requirements of a 'Human Ecology'... [as now happens] When moral values are trampled on with impunity, when the atmosphere is artificially charged with eroticism, when the meaning of human sexuality is emptied and trivialized and children are even induced into unspeakable "lifestyles" and behavior in an alarming climate of permissiveness." ¹⁰²¹

The *Instrumentum Laboris* in preparation for the 1997 Synod of America in 1997 referred to "the trials of many families, the fundamental structures of 'Human Ecology' and the 'sanctuaries of life,'" which have prompted "the Pastors of the People of God in all America … in many ways to practice solidarity through initiatives" locally and nationally.¹⁰²²

The Holy See's Statement to the Third Ministerial Conference of the World Trade Organization in 1999 requested international trade and Multilateral Environment Agreements to develop "in ways that are fair, non protectionist and able to cope with the most urgent problems of the poorest countries, so as to promote the conditions necessary for authentic Human

-

¹⁰¹⁹ Pontifical Council for the Family, *Preparation for the Sacrament of Marriage*, §31.

 $^{^{\}rm 1020}$ Cardinal Alfonso López Trujillo, "Special Session of the United Nations on Children."

¹⁰²¹ Ibid.

¹⁰²² Synod of Bishops, Special Assembly for America, *Instrumentum Laboris*.

Ecology," working for a time when poor "countries are able to integrate themselves within the international community, while keeping their ability to promote the human and sustainable development of their citizens," paying attention to "human rights, labor questions, environmental degradation, biotechnology and health," and avoiding "child labor, organized prostitution, slavery and forced labor, and the proscription of labor unions... [and] any kind of protectionism."1023 The Holy See was present again in Johannesburg in 2002 noting the ethical and moral challenge posed in sustainable development by the need of a "profound change in modern civilization's typical patterns of consumption and production... [and] not only a 'physical' ecology that is concerned to safeguard the habitat of the various living beings, but also a 'Human Ecology,' which rests primarily on ensuring and safeguarding moral conditions in the actions of the human being in the human environment."1024 It argued that Human Ecology required an "education in ecological responsibility[that] cannot be rooted in mere sentiment or empty wishes... [but that] entails a genuine conversion in way of thought and behavior,' promoting a true culture of life, which should be the basis for the new culture of sustainable development."1025 The Holy See asserted clearly that the challenge is more ethical than technical.

Finding Human Ecology to be an urgent issue, the Holy See insisted on it in the UN's sessions on Sustainable Development in 2003 and 2004, reminding the UN of "the first Principle of the Rio Declaration, which states that "human"

-

 $^{^{\}rm 1023}$ Holy See's Statement, Third Ministerial Conference of the World Trade Organization.

 $^{^{\}rm 1024}$ Holy See's Intervention at the WSSD, Johannesburg, 2002.

¹⁰²⁵ Ibid.

beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature»," and "that the human being is central to sustainable development. We have to reflect on Human Ecology; we need to start an ecological conversion; we have to change our models of production and consumption; we have to examine seriously the problem of poverty with all its multidimensional elements." 1026 It challenged the participants concerning the need for solidarity demanded by the justice of a common heritage:

Sustainable development is aimed at inclusion.... [what] we need to do is to develop a sense of responsibility for our common endeavor, through the *establishment of global partnerships in a spirit of solidarity and burden-sharing.* The earth and all its resources are part of the "common heritage of all humanity". This understanding fosters interdependence, stresses responsibility and underlines the importance of the principle of global solidarity.¹⁰²⁷

In 2004 the Holy See insisted in recalling "that 'human beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.' For this reason we believe that sustainable development must always be considered within the context of an authentic Human Ecology... [with the need for solidarity] The marginalized, while stakeholders, are often deprived of their voice at the negotiating table." The holistic approach to the human person, the moral connection with the economy and lifestyles, and the call to solidarity are all part of the Catholic contribution to the SD debate.

_

 $^{^{\}rm 1026}$ Holy See's Intervention at the 11th Session of the UN Commission on Sustainable Development, 2003.

¹⁰²⁷ Ibid.

¹⁰²⁸ Holy See's Intervention at the 2nd Committee of the General Assembly of the UN on Sustainable Development, 2004.

Also in 2004, the International Theological Commission quoted John Paul II's *Evangelium Vitae* recalling that "man has a specific responsibility towards the environment ... ranging from the preservation of the natural habitats of the different species of animals and other forms to 'Human Ecology' properly speaking ... a clear and strong ethical direction ... which respects the great good of life, of every life,"1029 thus reinforcing the unity of concern for both the natural and human ecology and their interdependence.

In 2005, at the Fourth Ministerial Conference of the Bologna Process, Mons. Józef Miroslaw Zycinski, Archbishop of Lublin, called for a recognition of "the central value of human dignity and its basic role in the society of the new Europe. John Paul II used the term 'Human Ecology' to denote the set of basic values necessary to promote the integral growth of the human person."¹⁰³⁰ These values "constitute the essence of our moral, spiritual and cultural growth... [and] will only persist if they are rooted in a transcendental background"¹⁰³¹ and this heritage is recognized and cultivated.¹⁰³² As we've seen in chapters one through three, there is a tendency to focus only in the economic and material aspects of human development, while this statement recalls the importance of integral development and the transcendent dimension.

_

 $^{^{\}rm 1029}$ International Theological Commission, Communion and Stewardship.

¹⁰³⁰ Holy See's Statement at the 4th Ministerial Conference of the Bologna Process.

¹⁰³¹ Ibid. "Those fundamental values, acquired through a decisive contribution of Christianity, which can be summarized in the affirmation of the transcendent dignity of the human person, the value of reason, freedom, democracy, the constitutional state and the distinction between political life and religion"

¹⁰³² Ibid. "By penetrating the culture of the continent of Europe, which was for a long time known as Christendom (Christianitas), the Gospel created the intellectual climate in which universal human values were recognized when human brotherhood and the equality of all the children of our heavenly Father were stressed."

At the 2006 International Conference on Agrarian Reform and Rural Development, the Holy See stated that "the criterion of environmental sustainability alone, placed at the centre of development strategies in recent decades, cannot constitute an effective response unless it is based on an authentic Human Ecology," which both asserts "the responsibility of the human person towards himself, others, creation and the Creator, [and] recognizes that 'man remains above all a being who seeks the truth and strives to live in that truth."1033 It further stated that "the first and fundamental structure for Human Ecology is the family, in which man receives his first formative ideas about truth and goodness, and learns what it means to love and to be loved, and thus what it actually means to be a person."1034 This is of particular relevance in rural areas where "the rural family is in fact 'called to manage with its work the little family enterprise, but also to transmit the idea of relations based on the exchange of mutual knowledge, values, ready assistance and respect.' When the family encounters difficulties or is no longer able to carry out its function, the entire rural community suffers the grave and painful consequences."1035

Speaking at the Ecosoc in 2006, the Holy See recalled the key link between the natural and the human environment and its importance for sustainable development: "In addition to the irrational destruction of the natural environment, there has been the more serious destruction of the human environment. Although people are rightly worried about preserving natural habitats, too little effort has been made to safeguard the moral

 $^{^{1033}\,} Holy$ See's Intervention at the International Conference on Agrarian Reform and Rural Development, 2006, §3.

¹⁰³⁴ Ibid., §4.

¹⁰³⁵ Ibid.

conditions for an authentic Human Ecology,"¹⁰³⁶ noting "there is already a growing acknowledgement that good environmental policies are by extension good people policies too."¹⁰³⁷

It is interesting to see the importance given in this statement to energy issues,¹⁰³⁸ which Benedict XVI, in his next use of the term Human Ecology, would also emphasize, in the context of the moral-religious dimension of choices and actions which can easily lead to exclusion, non-development, injustices, conflicts and wars.¹⁰³⁹

3. The Human Ecology of dialogue in the common public space

In an increasingly global and pluralistic culture, Benedict XVI realized the need to develop a virtual space and common language which would allow believers of different faiths and non-believers of different persuasions to engage reasonably in dialogue regarding the conditions and destiny of the common planet and cultural space we all share. Human Ecology implies, even requires, the acknowledgement that we all benefit and suffer from the common space, and that we all impact it in different ways by our lifestyles, ideas, words and actions. It is therefore natural that all stakeholders, certainly all human persons, should have the ability to engage in the decisions which will shape our common future.

¹⁰³⁶ Holy See's Intervention at the 14th Session of the Commission on Sustainable Development of the Ecosoc.

-

¹⁰³⁷ Ibid.

¹⁰³⁸ Ibid. "Energy is central to achieving sustainable development goals. With more than 1.6 billion people still lacking access to electricity worldwide and 2.4 billion using traditional biomass, improving access to reliable, affordable and environmentally friendly energy services is a major challenge to poverty eradication and the achievement of the MDGs... access to clean, reliable energy services is a vital prerequisite for alleviating poverty."

¹⁰³⁹ Pope Benedict XVI, "Message of Peace 2007," §9.

The forums which have explicitly addressed these issues have been dominated by international bodies and diplomatic structures. Although in the 2002 WSSD in Johannesburg, a significant groundswell of NGOs demanded more participation in the process, this has yet to happen in a significant way. More relevant is the fact that the dominating discourse prevalent in these international organizations is grounded in a reductive worldview (the policy science pragmatism and the underlying secularism seen in chapters 1 and 2) which understands itself as fair and neutral, while excluding alternative worldviews, particularly faith traditions. Facing this, I posit that Pope Benedict XVI's speeches construe that Human Ecology requires a common space for dialogue among all peoples, cultures and traditions, where the predominance of a particular worldview does not stifle or deny the right of expression to any other, and where the appeal of reasoned argument and the common good carries the day in the discussion.

Benedict XVI consistently argued for a space of dialogue not inimical to faith traditions and that is basically grounded in moral reasoning. He painstakingly built the case for moral reasoning which deepens the understanding of the human person, accessible to and compatible with human reason and faith. In the controversially publicized speech at Regensburg he defended moral reasoning as a key piece of the Western world view and showed how the Church and Christian philosophy have been instrumental in forming that view.

In the most quoted and misunderstood passage of the Regensburg Address, Benedict XVI presents "the reasons why spreading the faith through violence is something unreasonable... [and how] not to act in accordance with reason is contrary to God's nature... [In] Greek philosophy, this statement is self-evident. But for Muslim teaching, God is absolutely transcendent. His will is not bound up with any of our categories, even that of rationality."¹⁰⁴⁰ Here he argues that some faith traditions are supportive of moral reasoning while others are not. In the Christian faith, which incorporated Greek philosophy, faith and God require by their very nature the proper use of reason. Revelation through Scripture had already paved the way for this happy union. "In the beginning was the *logos*,... and the *logos* is God," says the Evangelist.¹⁰⁴¹

The encounter between the Biblical message and Greek thought did not happen by chance... [arguably there was] the intrinsic necessity of a rapprochement between Biblical faith and Greek inquiry."¹⁰⁴² Therefore "from the very heart of Christian faith and, at the same time, the heart of Greek thought now joined to faith, Manuel II was able to say: Not to act 'with logos' is contrary to God's nature."¹⁰⁴³ From a God who is Logos–reason–it is only natural that harmony between faith and reason has always been at the heart of Christianity and its legacy to the Western world.¹⁰⁴⁴

However, there has been an effort towards a "dehellenization of Christianity—a call which has more and more dominated theological discussions since the beginning of the modern age," 1045 mostly in three stages:

294

¹⁰⁴⁰ Pope Benedict XVI, "Faith, Reason and the University, Regensburg."

¹⁰⁴¹ The Holy Bible, John: 1,1.

¹⁰⁴² Pope Benedict XVI, "Faith, Reason and the University, Regensburg."

¹⁰⁴³ Ibid.

¹⁰⁴⁴ Ibid. This union "with the subsequent addition of the Roman heritage, created Europe and remains the foundation of what can rightly be called Europe."

¹⁰⁴⁵Ibid.

first, the Reformation seeking to purify sola scriptura from philosophy, second, the liberal theology of the nineteenth and twentieth centuries purifying faith from theology and worship in favor of a humanitarian moral message, and third, cultural pluralism seeking to purify faith from the acculturation of Hellenism, human reason included. 1046 This process has yielded an understanding where "first, only the kind of certainty resulting from the interplay of mathematical and empirical elements can be considered scientific... [and a] second point... that by its very nature this method excludes the question of God, making it appear an unscientific or pre-scientific question"¹⁰⁴⁷ thus reducing arbitrarily the realm of science and reason.

As a result "it is man himself who ends up being reduced, for the specifically human questions about our origin and destiny, the questions raised by religion and ethics, then have no place within the purview of collective reason as defined by 'science', so understood"1048 and are therefore regarded as subjective. "The subjective 'conscience' becomes the sole arbiter of what is ethical. In this way, though, ethics and religion lose their power to create a community and become a completely personal matter." 1049 This undermines any foundation for a common understanding of justice, of good and evil, or of any common goal for members of society beyond the merely practical. "This is a dangerous state of affairs for humanity, as we see from the disturbing pathologies of religion and reason which necessarily erupt when reason is so reduced that questions of religion and ethics no longer concern it. Attempts to

¹⁰⁴⁶ Ibid.

¹⁰⁴⁷ Ibid.

¹⁰⁴⁸ Ibid.

¹⁰⁴⁹ Ibid.

construct an ethic from the rules of evolution or from psychology and sociology, end up being simply inadequate."¹⁰⁵⁰

Benedict XVI proposes avoiding foreseeable dangers by "broadening our concept of reason and its application... doing so only if reason and faith come together in a new way... [allowing theology] within the wide-ranging dialogue of sciences, not merely as a historical discipline and one of the human sciences, but precisely as theology, as inquiry into the rationality of faith." This will foster not only the proper approach to science and reason but also "that genuine dialogue of cultures and religions so urgently needed today. In the Western world it is widely held that only positivistic reason and the forms of philosophy based on it are universally valid." This view alienates and excludes many cultures and faith traditions.

As this view is generally held by governments of the more developed nations and international organizations, the resulting cultural dominance is added to the economic and political dominance, developing an imperialism which aggravates the experience of oppression and dependence, an experience of injustice inimical to peace. "A reason which is deaf to the divine and which relegates religion into the realm of subcultures is incapable of entering into the dialogue of cultures." 1054

¹⁰⁵⁰ Ibid.

¹⁰⁵¹ Ibid.

¹⁰⁵² Ibid.

 1053 Ibid. "The world's profoundly religious cultures see this exclusion of the divine from the universality of reason as an attack on their most profound convictions."

¹⁰⁵⁴ Ibid.

Modern scientific reason has to recognize its limits and acknowledge the issues which must be entrusted to philosophy and theology. "For philosophy and, albeit in a different way, for theology, listening to the great experiences and insights of the religious traditions of humanity, and those of the Christian faith in particular, is a source of knowledge, and to ignore it would be an unacceptable restriction of our listening and responding." 1055 The historical fact that Christian faith has integrated and supported human reason as a key foundation of Western thought and culture, certainly allows its participation in the dialogue, but Benedict XVI has also taken the initiative to encourage it: "It is to this great logos, to this breadth of reason, that we invite our partners in the dialogue of cultures." 1056

Having established the birthright of Christian thought in Western culture, in the lecture prepared for the Sapienza University of Rome, Benedict XVI shows the role of philosophy and theology in moral reasoning and the validity of faith traditions in the public discourse. Benedict XVI begins the lecture recalling the Jubilee of Universities where the Sapienza not only hosted and organized the event, but above all took responsibility for the prophetic and complex proposal to elaborate a new humanism for the third millennium, the very same effort so significant in his pontificate.

Benedict XVI argues the right and duty of the Church to participate in public argument concerning the common good, from the identity of the Church

¹⁰⁵⁵ Ibid.

¹⁰⁵⁶ Ibid.

 1057 Students protests impeded the lecture, delivered later by someone else. Ironically, the Sapienza was founded in 1303 by Pope Boniface VIII as the first pontifical university.

1058 Pope Benedict XVI, "La Sapienza," 2008.

and also from its legitimacy in terms of non-believers. Under the care of the Pope, the Church "lives in the world; its circumstances, its history, its example and its message inevitably influence the entire human community... the state of religions and the situation of the Church—her crises and her renewal—affect humanity in its entirety."1059 It is thus unreasonable and naïve to exclude the Church from the discussion. As the Pope increasingly becomes a voice for the ethical reasoning of humanity, he acknowledges that "the objection immediately arises: surely the Pope does not really base his pronouncements on ethical reasoning, but draws his judgments from faith and hence cannot claim to speak on behalf of those who do not share this faith."1060 But, to respond to that objection "the absolutely fundamental question must be asked: What is reason? How can one demonstrate that an assertion—especially a moral norm—is 'reasonable?'"1061 He then accepts the challenge to show that the Church can contribute with reasoned argument, and even more, that this contribution lies at the core of her tradition.

Benedict proposes the example of Socrates debating Euthyphro, who defended the mythical religion and cult. Socrates, and the Greek philosophy that the Church made its own, affirmed "reasoned enquiry concerning the truly great God, and concerning the true nature and meaning of the human being, did not strike them as problematic, as a lack of due religious sentiment: rather, it was an essential part of their way of being religious... [to accept] reason's laborious search to attain knowledge of the whole truth as part of their own

¹⁰⁵⁹ Ibid.

¹⁰⁶⁰ Ibid.

1061 Ibid.

identity."¹⁰⁶² Here, the reference to truth as the purpose of reasoned enquiry raises an unavoidable issue. If we, as the community of people, have given up on the possibility of truth, and therefore on the possibility of discerning what is truly good, then we are forced to use reasoned enquiry merely as due process to negotiate competing claims with no hope of attaining what is true and good.

The Church created the university and "the true origin of the university lies in the thirst for knowledge that is proper to man. The human being wants to know what everything around him is. He wants truth." The desire for truth and for the good is inscribed in the nature of the human person. "Man desires to know—he wants truth. Truth in the first instance is something discerned... Yet truth is never purely theoretical... truth means more than knowledge: the purpose of knowing the truth is to know the good. This is also the meaning of Socratic enquiry." 1064

Benedict recalls Jürgen Habermas, saying, of one of the sources which legitimates a constitutional charter, that "the reasonable manner in which political disputes are resolved... cannot simply be a fight for arithmetical majorities, but must have the character of a 'process of argumentation sensitive to the truth' (wahrheitssensibles Argumentationsverfahren)." Benedict XVI continues saying, "I find it significant that Habermas speaks of sensibility to the truth as a necessary element in the process of political argument, thereby reintroducing the concept of truth into philosophical and political debate." ¹¹⁰⁶⁵

¹⁰⁶² Ibid.

¹⁰⁶³ Ibid.

¹⁰⁶⁴ Ibid.

¹⁰⁶⁵ Ihid.

"Pilate's question becomes unavoidable: What is truth? And how can it be recognized? ... What is reasonable? How is reason shown to be true?" 1066 The question remains: how do we achieve the truth that will render us the good? In the medieval university, "besides the faculty of jurisprudence, there were faculties of philosophy and theology, which were entrusted with the task of studying the human being in his totality, thus safeguarding sensibility to the truth. One might even say that this was the permanent and true purpose of both faculties." 1067

Benedict XVI elaborates at length on the fruitful relationship between "theology and philosophy... in which neither of the two can be totally separated from the other, and yet each must preserve its own task and its own identity," 1068 a relationship which has yielded truth and good verified, in its history: "the history of the humanism that has grown out of the Christian faith, demonstrates the truth of this faith in its essential nucleus, thereby giving it a claim upon public reason. Of course, much of the content of theology and faith can only be appropriated within the context of faith, and therefore cannot be demanded of those to whom this faith remains inaccessible." 1069 But because of this, it should be acknowledged that "the Christian faith is never solely a "comprehensive religious doctrine" in Rawls' sense, but is a purifying force for reason, helping it to be more fully itself." 1070

¹⁰⁶⁶ Ibid.

¹⁰⁶⁷ Ibid.

¹⁰⁶⁸ Ibid.

¹⁰⁶⁹ Ibid.

¹⁰⁷⁰ Ibid.

The harmony and mutual help between faith and reason which the Church has developed, makes a needed contribution to the world, because "the danger for the western world... is that today, precisely because of the greatness of his knowledge and power, man will fail to face up to the question of the truth."1071 Thus, "if reason, out of concern for its alleged purity, becomes deaf to the great message that comes to it from Christian faith and wisdom, then it withers like a tree whose roots can no longer reach the waters that give it life. It loses the courage for truth and thus becomes not greater but smaller."1072

Benedict further buttresses these claims by recurring to John Rawls and showing that he concurs with the need for comprehensive religious doctrines and perceives a reasonableness "in the fact that such doctrines derive from a responsible and well thought-out tradition in which, over lengthy periods, satisfactory arguments have been developed in support of the doctrines concerned... the acknowledgment that down through the centuries, experience and demonstration—the historical source of human wisdom—are also a sign of its reasonableness and enduring significance."¹⁰⁷³ The Pope represents such "a community of believers in which a particular wisdom about life has evolved in the course of the centuries of its existence... a community that preserves within itself a treasury of ethical knowledge and experience important for all humanity: in this sense, he speaks as the representative of a form of ethical reasoning."¹⁰⁷⁴ Therefore, at La Sapienza as in any public forum "it is the Pope's task to safeguard sensibility to the truth; to invite reason to set out ever anew

¹⁰⁷¹ Ibid.

¹⁰⁷² Ibid.

¹⁰⁷³ Ibid.

¹⁰⁷⁴ Ibid.

in search of what is true and good, in search of God; to urge reason, in the course of this search, to discern the illuminating lights that have emerged during the history of the Christian faith."¹⁰⁷⁵

Having established the Christian origins of thought in Western culture, and the validity of faith traditions in the public discourse, Benedict XVI further develops his argument in the German Parliament, proposing the shared quest for a common notion of justice and good. He starts with the notion that "what should ultimately matter for a politician... must be a striving for justice... [subordinated] to the will to do what is right, and to the understanding of what is right... 'Without justice—what else is the State but a great band of robbers?', as Saint Augustine once said." 1077

Seeking what is right is the fundamental duty of a politician, and history has shown that both the law and the majority cannot be the ultimate criterion. "Unlike other great religions, Christianity has never proposed a revealed law to the State and to society, that is to say a juridical order derived from revelation. Instead, it has pointed to nature and reason as the true sources of law—and to the harmony of objective and subjective reason, which naturally presupposes that both spheres are rooted in the creative reason of God." He traces the lineage of law from the fusion of stoic philosophy and Roman Law, through the Christian Middle Ages, the Enlightenment, the Declaration of Human Rights and the German Basic Law of 1949, establishing the Christian understanding of

¹⁰⁷⁵ Ibid.

 $^{^{\}rm 1076}$ Pope Benedict XVI, "Speech at the Bundestag."

¹⁰⁷⁷ Ibid.

¹⁰⁷⁸ Ibid.

reason and nature as the universally valid sources of law, understood as "nature and conscience, where conscience is nothing other than... reason that is open to the language of being." 1079

The question of whether an "is" can lead to an "ought" comes up again in the positivist argument of Kelsen, which according to Benedict XVI, leads to a view where "the classical sources of knowledge for ethics and law are excluded. This is a dramatic situation which affects everyone, and on which a public debate is necessary. Indeed, an essential goal of this address is to issue an urgent invitation to launch one."1080 While Benedict recognizes that "the positivist world view in general, is a most important dimension of human knowledge and capacity that we may in no way dispense with," he warns about the danger we had identified in chapters one through three in the reduction of scientism in its view of man and the world, as "positivist reason considers itself the only sufficient culture and banishes all other cultural realities to the status of subcultures, it diminishes man, indeed it threatens his humanity... [generates] a state of culturelessness and at the same time extremist and radical movements emerge to fill the vacuum."1081

This situation implies that "if something is wrong in our relationship with reality, then we must all reflect seriously... [and] We must listen to the language of nature and we must answer accordingly... there is also an ecology of man. Man too has a nature that he must respect and that he cannot manipulate at will... He is intellect and will, but he is also nature, and his will is

¹⁰⁷⁹ Ibid.

¹⁰⁸⁰ Ibid.

¹⁰⁸¹ Ihid.

rightly ordered if he respects his nature, listens to it and accepts himself for who he is."1082 Citing John of Salisbury, Benedict XVI argues that "an immutable objective truth also exists, whose origin is in God, accessible to human reason and which concerns practical and social action. It is a natural law that must inspire human laws and political and religious authorities, so that they may promote the common good."1083 This law, as a true and consistent quality of reality, an "is", demands an "ought", "a property that John calls "equity," that is, the attribution to each person of his own rights. From this stem precepts that are legitimate for all peoples, and in no way can they be abrogated."1084

In this quest to listen to the nature of the natural world and of man, we can draw from Europe's (and the West's) cultural heritage, which "arose from the encounter between Jerusalem, Athens and Rome—from the encounter between Israel's monotheism, the philosophical reason of the Greeks and Roman law. This three-way encounter has shaped the inner identity of Europe."1085 This is the common quest for justice, to discern between good and evil, in a dialogue that will contribute to the understanding and ordering of the common space we all share. Accordingly, the Church's "tradition does not speak from blind faith, but from a rational perspective which links our commitment to building an authentically just, humane and prosperous society to our ultimate assurance that the cosmos is possessed of an inner logic accessible to human reasoning,"1086 therefore accessible to other faiths and persuasions. The Church

-

¹⁰⁸² Ibid.

¹⁰⁸³ Pope Benedict XVI, "John of Salisbury."

¹⁰⁸⁴ Ibid.

¹⁰⁸⁵ Pope Benedict XVI, "Faith, Reason and the University, Regensburg."

¹⁰⁸⁶ Pope Benedict XVI, "'Ad Limina' Visit USA bishops," 2012.

proposes for dialogue this "moral reasoning based on the natural law ... grounded on her conviction that this law is not a threat to our freedom, but rather a "language" which enables us to understand ourselves and the truth of our being, and so to shape a more just and humane world." The Church proposes her moral teaching to other faiths and non believers "as a message not of constraint but of liberation, and as the basis for building a secure future. 1088

The positivist and secularist view seeks to disqualify faith traditions from participating in public argument, but the "Church's witness, then, is of its nature public: she seeks to convince by proposing rational arguments in the public square. The legitimate separation of Church and State cannot be taken to mean that the Church must be silent on certain issues, nor that the State may choose not to engage, or be engaged by, the voices of committed believers in determining the values which will shape the future of the nation." 1089

Believers have every right to engage; society needs their voice. "Denying the right to profess one's religion in public and the right to bring the truths of faith to bear upon public life has negative consequences for true development. The exclusion of religion from the public square—and, at the other extreme, religious fundamentalism—hinders an encounter between persons and their collaboration for the progress of humanity."¹⁰⁹⁰ "Man bears within himself a specific capacity for discerning what is good and right. Affixed in him as a seal

¹⁰⁸⁷ Ibid.

¹⁰⁸⁸ Ibid.

¹⁰⁸⁹ Ibid.

1090 Pope Benedict XVI, Caritas in Veritate, §56.

by the Creator, synderesis urges him to do good. Impelled by it, the human being is required to develop his conscience by forming and using it in order to direct his life freely based on the essential laws which are natural law and moral law."¹⁰⁹¹

For this to happen, "it is more important than ever to educate the consciences of our contemporaries in order to prevent science from becoming the criterion of good and to ensure that man is respected as the centre of creation and not made the object of ideological manipulation, arbitrary decisions or the abuse of the weaker by the stronger." 1092 Now that in many universities, the freedom to advance views that differ from the consensus has been relegated to "safe zones," as positivist orthodoxies and individual sensitivities have the power to exclude such views from the public debate, Benedict XVI recalls what made universities such a fundamental contribution to Europe and the Western world: "Universitas: the reality that despite our specializations ... we made up a whole, working in everything on the basis of a single rationality with its various aspects and sharing responsibility for the right use of reason."1093 He continues, "Even in the face of such radical skepticism it is still necessary and reasonable to raise the question of God through the use of reason, and to do so in the context of the tradition of the Christian faith: this, within the university as a whole, was accepted without question."1094

¹⁰⁹¹ Pope Benedict XVI, "Address to Interacademic Conference on 'The Changing Identity of the Individual."

¹⁰⁹² Ibid.

 $^{^{\}rm 1093}$ Pope Benedict XVI, Faith, Reason and the University, Regensburg.

¹⁰⁹⁴ Ibid.

Pope Benedict's careful and reasoned argument for the necessity of reasoned dialogue in today's global and diversified culture and society contrasts with the efforts in universities, social media, and other social spaces, to suppress voices that dissent from the prevailing opinion, labeling them as 'hate speech' so as to deny them any legitimate right. This will also be treated in a section on culture and society further in this chapter. Benedict's approach is particularly relevant when discussing the nature of the human person, addressed in the following section, as a healthy Human Ecology must respond to that nature.

4. Nature of the Human Person

We can see the development of thought with its debt to his predecessor when Benedict XVI quotes John Paul II to insist that "not only has God given the earth to man, who must use it with respect for the original good purpose for which it was given to him, but man too is God's gift to man. He must therefore respect the natural and moral structure with which he has been endowed." 1095 Erroneous visions of man can lead to misguided conceptions of society and cause much harm. We need "a Human Ecology that can favor the growth of the 'tree of peace.' For this to happen, we must be guided by a vision of the person untainted by ideological and cultural prejudices or by political and economic interests which can instill hatred and violence." 1096

 1095 Pope Benedict XVI, "Message for World Day of Peace 2007," $\S 8.$

¹⁰⁹⁶ Ibid., 10.

It is crucial to consider "the question of human freedom, with its vast implications for a sound vision of the person and the achievement of affective maturity within the broader community. Inner freedom is in fact the condition for authentic human growth." In a Human Ecology "where such freedom is lacking or endangered, young people experience frustration and become incapable of striving generously for the ideals which can give shape to their lives as individuals and as members of society." 1097

The Church must teach the truth about man's nature to "protect man from self-destruction. What is needed is something like a Human Ecology, correctly understood." This also involves teaching

the nature of the human being as man and woman, and demands that this order of creation be respected, [with] faith in the Creator and a readiness to listen to the "language" of creation. To disregard this would be the self-destruction of man himself, and hence the destruction of God's own work... [The desire to redefine freely sex and sexual orientation] often expressed and understood by the term "gender" ultimately ends up being man's attempt at self-emancipation from creation and the Creator. 1099

Man, wanting to be able "always and exclusively—to determine everything that concerns him... lives in opposition to the truth, in opposition to the Creator Spirit."¹¹⁰⁰ The Church with her teaching must protect man from cultural trends which distort his Human Ecology.

-

¹⁰⁹⁷ Pope Benedict XVI, to the 12th Plenary Assembly of the Pontifical Academy of Social Sciences.

 $^{^{\}rm 1098}$ Pope Benedict XVI, "Traditional Exchange of Christmas Greetings, 2008."

¹⁰⁹⁹ Ihid

¹¹⁰⁰ Ibid. "Rain forests deserve indeed to be protected, but no less so does man, as a creature having an innate "message" which does not contradict our freedom, but is instead its very premise."

5. Fundamental Structures of Human Ecology

The spiritual environment we develop, which influences our decisions and consequently the rest of our life in many ways, is expressed in the life of faith, the struggle "between sin and grace which embraces all the other conflicts which trouble the human heart: the conflict between error and truth, vice and virtue, rebellion and co-operation, war and peace,"1101 and strongly affects our Human Ecology. "Faith, lived out in the fullness of charity and communicated to new generations, is an essential element in the building of a better future and safeguarding intergenerational solidarity, [and in] every human effort to build a civilization of love."1102 One manifestation of a sound spiritual environment is the gift of joy, which is a fruit of the Holy Spirit: "Joy is the gift that sums up all the other gifts. It is the expression of happiness, of being in harmony with ourselves, which can only come from being in harmony with God and with his creation."1103

"As a spiritual being, the human creature is defined through interpersonal relations. The more authentically he or she lives these relations, the more his or her own personal identity matures." 1104 As, the person strives in this spiritual quest, subduing pride and selfishness, he becomes more aware of the Human Ecology of interpersonal relations surrounding him, and is more capable and willing to engage in loving relationships, thus becoming

¹¹⁰¹ Pope Benedict XVI, to the 12th Plenary Assembly of the Pontifical Academy of Social Sciences.

¹¹⁰² Ibid.

¹¹⁰³ Pope Benedict XVI, "Traditional Exchange of Christmas Greetings, 2008."

¹¹⁰⁴ Pope Benedict XVI, Caritas in Veritate, §53.

harmoniously embedded in a community of love, a profound dimension of Human Ecology:

This word [agape] expresses the experience of a love which involves a real discovery of the other, moving beyond the selfish character that prevailed earlier. Love now becomes concern and care for the other. No longer is it self-seeking, a sinking in the intoxication of happiness; instead it seeks the good of the beloved: it becomes renunciation and it is ready, and even willing, for sacrifice.¹¹⁰⁵

By this process, which actively involves his spiritual life, a person attains the fullness of his identity and purpose, while at the same time transforming his existential environment, the Human Ecology in which he lives, following the model of Christ. "It is part of love's growth towards higher levels and inward purification that it now seeks to become definitive... out of the closed inward-looking self towards its liberation through self-giving, and thus towards authentic self-discovery and indeed the discovery of God: "Whoever seeks to gain his life will lose it, but whoever loses his life will preserve it" (Lk 17:33), as Jesus says throughout the Gospels." The model is Jesus, leading "through the Cross to the Resurrection: the path of the grain of wheat that falls to the ground and dies, and in this way bears much fruit. Starting from the depths of his own sacrifice and of the love that reaches fulfilment therein, he also portrays in these words the essence of love and indeed of human life itself." 1107

In this way love strengthens and harmonizes in a healthy exchange the bonds and mutual interdependence we have with other persons and beings and the realities of our Human Ecology, bringing forth their true identity. In Christ

¹¹⁰⁵ Pope Benedict XVI, Deus Caritas Est, §6.

¹¹⁰⁶ Ibid. cf. Mt 10:39; 16:25; Mk 8:35; Lk 9:24; Jn 12:25.

¹¹⁰⁷ Ibid.

we discover our true identity.¹¹⁰⁸ "Love brings one out of oneself in order to discover and recognize the other; in opening himself to otherness it also affirms the identity of the subject, for the other reveals me to myself."¹¹⁰⁹ Rooted in this identity, "the love of man and woman is... an expression of, the love of Christ and the Church (cf. Eph 5:32), so too the family, grounded in that love, is called to be a 'domestic church,' a place of faith, of prayer and of loving concern for the true and enduring good of each of its members."¹¹¹⁰ Only in this fundamental experience of love can family flourish, as the next section argues.

6. Family as foundation of Human Ecology

Benedict XVI like John Paul II focuses on the need to address family as part of Human Ecology teaching that the family "based on the lifelong fidelity of a man and a woman consecrated by the marriage covenant and accepting of God's gift of new life... stands at the foundation of society, and... [is key] for the formation of sound consciences and the building of a civilization of love." ¹¹¹¹ Family, "as the first school of wisdom, a school which trains its members in the practice of those virtues which make for authentic happiness and lasting fulfillment", educates all members and those who come in contact with it, in many different ways: In parents' "integral human and spiritual formation for their children"; in the experience that "each person, whether the smallest child or the oldest relative, is valued for himself or herself, and not seen simply as a

¹¹⁰⁸ Pope Paul VI, Gaudium et Spes, §22.

¹¹⁰⁹ Pope Benedict XVI, "Address to Interacademic Conference on 'The Changing Identity of the Individual."

 $^{^{\}rm 1110}$ Pope Benedict XVI, "Homily Mount of Precipice," 2009.

¹¹¹¹ Ibid.

means to some other end"; in the "proper role of women, as well as their particular charisms and talents... their indispensable role in creating that 'Human Ecology' which our world... so urgently needs: a milieu in which children learn to love and to cherish others, to be honest and respectful to all, to practice the virtues of mercy and forgiveness."

Likewise it educates in "Joseph's strong and fatherly example... [of] virtues of a manly piety, fidelity to one's word, integrity and hard work"; and "how authority placed at the service of love is infinitely more fruitful than the power which seeks to dominate."¹¹¹² This explains "something of the essential role of the family as the first building-block of a well-ordered and welcoming society... [and] the duty of the State to support families in their mission of education, to protect the institution of the family and its inherent rights, and to ensure that all families can live and flourish in conditions of dignity."¹¹¹³

Regretfully, family is now weakened, both in its culture, as in its functional and demographic structures, since "many nations or groups of nations lack a sufficient number of young people to renew their population." Benedict XVI explains this as the result of multiple and complex causes, "but its ultimate roots can be seen as moral and spiritual; they are linked to a disturbing deficit of faith, hope and, indeed, love." Lack of generosity and "perhaps the lack of such creative and forward-looking love is the reason why many couples today choose not to marry, why so many marriages fail, and why

¹¹¹² Ibid.

¹¹¹³ Ibid.

¹¹¹⁴ Benedict XVI to the 12th Plenary Assembly of the Pontifical Academy of Social Sciences, 2006.

¹¹¹⁵ Ibid.

birth rates have significantly diminished."¹¹¹⁶ Even when children are born, they sometimes suffer this moral and spiritual weakness:

It is children and young people who are often the first to experience the consequences of this eclipse of love and hope. Often, instead of feeling loved and cherished, they appear to be merely tolerated. In "an age of turbulence" they frequently lack adequate moral guidance from the adult world, to the serious detriment of their intellectual and spiritual development. Many children now grow... often exposed solely to materialistic visions of the universe, of life and human fulfillment.¹¹¹⁷

Family, authentic families are the building block of a healthy Human Ecology. We all have a duty to support them. Particularly in the case of "children and young people [who] are by nature receptive, generous, idealistic and open to transcendence. They need above all else to be exposed to love and to develop in a healthy Human Ecology, where they can come to realize that they have not been cast into the world by chance, but through a gift that is part of God's loving plan." As we saw in chapter two, the family is key to positive educational, social and economic outcomes. "Parents, educators and community leaders, if they are to be faithful to their own calling, can never renounce their duty to set before children and young people the task of choosing a life project directed towards authentic happiness, one capable of distinguishing between truth and falsehood, good and evil, justice and injustice, the real world and the world of "virtual reality."" This formation received in the family makes a huge difference in young people as they mature, both in the outcomes of their own life and what they can contribute to culture and society.

¹¹¹⁶ Ibid.

¹¹¹⁷ Ibid.

¹¹¹⁸ Ibid.

¹¹¹⁹ Ibid.

7. Culture and Society

Following John Paul II's approach to the human person and culture, Benedict XVI reaffirms the place of moral good at the core of culture: "At the heart of every culture, whether perceived or not, is a consensus about the nature of reality and the moral good, and thus about the conditions for human flourishing."1120 At the service of that flourishing, "the Church... is called, in season and out of season, to proclaim a Gospel which not only proposes unchanging moral truths but proposes them precisely as the key to human happiness and social prospering."1121 Precisely when moral good is scarce, does the contribution of faith shine: "The young Christian community moved forward to oppose the perversity in the culture around them (cf. Acts 2:40), to care for one another (cf. Acts 2:44-47)... to heal the sick (cf. Acts 5:12-16)," and to defend and give witness to their faith. 1122 Throughout history and across the globe, the Church has had witness and loving service at the core of her mission: "those pioneering Priests, Sisters and Brothers who came to these shores, ...Their whole lives were a selfless Christian witness. They became the humble but tenacious builders of so much of the social and spiritual heritage which still today brings goodness, compassion and purpose to these nations." 1123 Benedict XVI continues stating how the moral choice for the good of those in the Church is expressed in actions that influence and shape the culture: "Her plea for justice on behalf of those unfairly treated and her practical example of holiness ... the network of schools that they established here and for the witness of their

¹¹²⁰ Pope Benedict XVI, "Ad Limina" Visit USA bishops, 2012

¹¹²¹ Ibid.

¹¹²² Pope Benedict XVI, "World Youth Day, Barangaroo," 2008.

¹¹²³ Ibid.

consecrated life... through education and healthcare, but especially by highlighting the spiritual dimension of the questions that feature prominently in contemporary debate."¹¹²⁴

Sharing his experience of both the wonder of creation, and the recognition of the scars it bears, Benedict also expressed the wonder of humanity's goodness and its achievements "but also [that] the social environment—the habitat we fashion for ourselves—has its scars; wounds indicating that something is amiss. Here too, in our personal lives and in our communities, we can encounter... a poison which threatens to corrode what is good, reshape who we are, and distort the purpose for which we have been created."1125 These wounds are compounded by the denial by which evil permeates the culture as entertainment; Benedict XVI seeks to unmask this disguise: "Alcohol and drug abuse, and the exaltation of violence and sexual degradation... could anyone standing face to face with people who actually do suffer violence and sexual exploitation 'explain' that these tragedies, portrayed in virtual form, are considered merely 'entertainment'?"1126

The dictatorship of relativism, which Benedict XVI repeatedly denounces, forges in Human Ecology "something sinister which stems from the fact that freedom and tolerance are so often separated from truth... that there are no absolute truths to guide our lives... Yet, experiences, detached from any consideration of what is good or true, can lead, not to genuine freedom, but to moral or intellectual confusion, to a lowering of standards, to a loss of self-

-

 $^{^{1124}\,\}mbox{Pope}$ Benedict XVI, "World Youth Day, Government House," 2008.

¹¹²⁵ Pope Benedict XVI, "World Youth Day, Barangaroo," 2008.

¹¹²⁶ Ibid.

respect, and even to despair."1127 Thus, the culture can be oriented by what is good and true, corresponding to an authentic anthropology, and providing a space for healthy Human Ecology, or it can distort, harm and poison human lives.

Alienating Cultural Tendencies -While Pope Benedict XVI closely follows John Paul II's approach to culture, his emphasis shifts from the more political to the social dynamics and lifestyles. The actions, words, and lifestyles of all of us shape the culture and our common environment. The individualistic approach supports the notion that our rights stop when we threaten the rights of others, but the way we impact culture is often overlooked, unless it is extreme. Some words and behaviors are damaging and should be avoided even if they are not illegal. "Let everyone reject the destructive power of hatred and prejudice, which kills men's souls before it kills their bodies!"1128

Benedict XVI squarely denounces cultural tendencies that abet violence. "It is understandable that visions of man will vary from culture to culture. Yet what cannot be admitted is the cultivation of anthropological conceptions that contain the seeds of hostility and violence."1129 These ideas are often rooted in a distorted idea of God. "Equally unacceptable are conceptions of God that would encourage intolerance and recourse to violence against others. This is a point which must be clearly reaffirmed: war in God's name is never acceptable! When a certain notion of God is at the origin of criminal acts, it is a sign that

¹¹²⁷ Ibid.

¹¹²⁸ Pope Benedict XVI, "Homily Mount of Precipice," 2009.

¹¹²⁹ Pope Benedict XVI, "Message World Day of Peace 2007," §10.

that notion has already become an ideology."1130 Fostering violence, or moral corruption is obviously damaging, but denying, restricting or discouraging words and witness which nourish and reaffirm our spirits, or what is good and true, is also an act of aggression against Human Ecology. Nowadays it goes beyond ignoring or neglecting, as "some current cultural trends contain elements that would curtail the proclamation of these truths, whether constricting it within the limits of a merely scientific rationality, or suppressing it in the name of political power or majority rule, they represent a threat not just to Christian faith, but also to humanity itself and to the deepest truth about our being and ultimate vocation, our relationship to God."1131 The supposed neutral space no longer tolerates competition to the secularist narrative. "When a culture attempts to suppress the dimension of ultimate mystery, and to close the doors to transcendent truth, it inevitably becomes impoverished and falls prey, as the late Pope John Paul II so clearly saw, to reductionist and totalitarian readings of the human person and the nature of society."1132

Likewise, political power can never be the ultimate criteria or resource to judge what fosters a healthy society. "With her long tradition of respect for the right relationship between faith and reason, the Church has a critical role to play in countering cultural currents which, on the basis of an extreme individualism, seek to promote notions of freedom detached from moral truth." Faith traditions do not and cannot have power to impose their values, but they do have a critical role in public moral reasoning, particularly as

. .

¹¹³⁰ Ibid.

¹¹³¹ Pope Benedict XVI, "'Ad Limina' Visit USA bishops," 2012.

¹¹³² Ibid.

¹¹³³ Ibid.

evinced by the "grave threats to the Church's public moral witness presented by a radical secularism which finds increasing expression in the political and cultural spheres... attempts being made to limit ... the freedom of religion... to deny the right of conscientious objection on the part of Catholic individuals and institutions with regard to cooperation in intrinsically evil practices... [and]reduce religious freedom to mere freedom of worship without guarantees of respect for freedom of conscience."1134

8. The Economy, Market and Development

The market and the economy, as well as the efforts for development have to recognize the close link between natural and Human Ecology, and that decisions are not merely technical, but above all, moral. "Economic activity cannot solve all social problems through the simple application of *commercial logic*. This needs to be *directed towards the pursuit of the common good*." 1136 The issues of energy illustrate this since increased energy is needed for development and the surge in demand for resources has led to hoarding and speculation, while "some parts of the planet remain backward and development is effectively blocked, partly because of the rise in energy prices." 1137

An approach to market, economy and development which is not based on the dignity of the human person and the consequent solidarity, leads to

¹¹³⁴ Ibid.

¹¹³⁵ Pope Benedict XVI, *Caritas in Veritate*, §40, "modern technological thinking can suggest that investment is merely a technical act, not a human and ethical one."

¹¹³⁶ Ibid., 36.

¹¹³⁷ Pope Benedict XVI, Message World Day of Peace 2007, §9.

unjust situations, grievances, conflicts, and war.¹¹³⁸ "Indeed, if development were limited to the technical-economic aspect, obscuring the moral-religious dimension, it would not be an integral human development, but a one-sided distortion which would end up by unleashing man's destructive capacities."¹¹³⁹ In equitable access to energy, "there is a *pressing moral need for renewed solidarity*, especially in relationships between developing countries and those that are highly industrialized. The technologically advanced societies can and must lower their domestic energy consumption, either through an evolution in manufacturing methods or through greater ecological sensitivity."¹¹⁴⁰ So, the virtue of austerity is needed, but also that of solidarity: "What is also needed, though, is a worldwide redistribution of energy resources, so that countries lacking those resources can have access to them. The fate of those countries cannot be left in the hands of whoever is first to claim the spoils, or whoever is able to prevail over the rest."¹¹⁴¹

This needed "solidarity with poor countries in the process of development can point towards a solution of the current global crisis... by means of financial plans inspired by solidarity — so that these countries can take steps to satisfy their own citizens' demand for consumer goods and for

-

¹¹³⁸ Ibid. "The destruction of the environment, its improper or selfish use, and the violent hoarding of the earth's resources cause grievances, conflicts and wars, precisely because they are the consequences of an inhumane concept of development."

¹¹³⁹ Ibid.; Pope Paul VI, *Populorum Progressio*, §20. "If development calls for an ever-growing number of technical experts, even more necessary still is the deep thought and reflection of wise men in search of a new humanism, one which will enable our contemporaries to enjoy the higher values of love and friendship, of prayer and contemplation"

¹¹⁴⁰ Pope Benedict XVI, Caritas in Veritate, §49

¹¹⁴¹ Ibid.; On this moral duty, Pope Paul VI, Populorum Progressio, §§48,49.

development — [so that]... true economic growth be generated... [and sustain] the productive capacities of rich countries."¹¹⁴²

The moral dimension and virtue have to be taken into accounts at all levels and instances of economic activity. "The economy needs ethics in order to function correctly... an ethics which is people-centred... Efforts are needed... to ensure that the whole economy — the whole of finance — is ethical... by its respect for requirements intrinsic to its very nature." Particularly after the last crisis, "finance, ... which wreaked such havoc on the real economy—now needs to go back to being an instrument directed towards improved wealth creation and development." 1144

It "must be used in an ethical way... the entire financial system has to be aimed at sustaining true development... [which is not] incompatible with the effective capacity to produce goods. Financiers must rediscover the genuinely ethical foundation of their activity, so as not to abuse the sophisticated instruments" harming other stakeholders in the process as we saw in chapter two. The "market does not exist in the pure state. It is shaped by the cultural configurations which define it and give it direction. Economy and finance, as instruments, can be used badly when those at the helm are motivated by purely selfish ends" 1145 Consequently "it is not the instrument that must be called to

1142 Pope Benedict XVI, Caritas in Veritate, §27.

1144 Ibid., §65.

¹¹⁴³ Ibid., §45.

¹¹⁴⁵ Ibid., §36; Also in Pope Paul VI, Populorum Progressio, §§23,26.

account, but individuals, their moral conscience and their personal and social responsibility."¹¹⁴⁶

For some time the conviction which held that the economy "must be autonomous... shielded from 'influences' of a moral character, has led man to abuse the economic process in a thoroughly destructive way... economic, social and political development, if it is to be authentically human, needs to make room for the *principle of gratuitousness* as an expression of fraternity."1147 This "gratuitousness is present in our lives in many different forms, which often go unrecognized because of a purely consumerist and utilitarian view of life. The human being is made for gift, which expresses and makes present his transcendent dimension."1148 Following John Paul II, Benedict XVI affirms that the "economic sphere is neither ethically neutral, nor inherently inhuman and opposed to society... and precisely because it is human, it must be structured and governed in an ethical manner,"1149 but to "traditional principles of social ethics like transparency, honesty and responsibility [that] cannot be ignored or attenuated," he adds "in commercial relationships the principle of gratuitousness and the logic of gift as an expression of fraternity can and must find their place within normal economic activity."1150

As human activity, the market and the economy have to respect human nature to avoid harming it. If "the market is governed solely by the principle of the equivalence in value of exchanged goods, it cannot produce the social

1146 Pope Benedict XVI, Caritas in Veritate, §36.

¹¹⁴⁷ Ibid., §34.

¹¹⁴⁸ Ibid.

¹¹⁴⁹ Ibid., §36.

¹¹⁵⁰ Ibid.

cohesion that it requires in order to function well. Without internal forms of solidarity and mutual trust, the market cannot completely fulfil its proper economic function."¹¹⁵¹ "What is needed, therefore, is a market that permits the free operation, in conditions of equal opportunity... Alongside profit-oriented private enterprise and the various types of public enterprise... [there should also be] commercial entities based on mutualist principles and pursuing social ends to take root and express themselves."¹¹⁵²

Solidarity builds the social capital that strengthens resilience and goodwill in society. There are now firms that seek profit, but also non-profit purposes supporting social goals and "the 'economy of communion'... 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... to view profit as a means of achieving the goal of a more humane market and society." 1154

Even more, "the very plurality of institutional forms of business gives rise to a market which is not only more civilized but also more competitive." This applies to organizations but also to the human persons involved. "Space also needs to be created within the market for economic activity carried out by subjects who freely choose to act according to principles other than those of

1151 Ibid., §35.

1152 Ibid., §38.

¹¹⁵³ Ibid., §39, "economic forms based on solidarity, which find their natural home in civil society without being restricted to it, build up society."

1154 Ibid., §46.

¹¹⁵⁵ Ibid.

pure profit, without sacrificing the production of economic value in the process."1156

Consequently "justice must be applied to every phase of economic activity, because this is always concerned with man and his needs. Locating resources, financing, production, consumption and all the other phases in the economic cycle inevitably have moral implications. Thus every economic decision has a moral consequence."1157 As a corollary to this, there is "a growing conviction that business management cannot concern itself only with the interests of the proprietors, but must also assume responsibility for all the other stakeholders who contribute to the life of the business: the workers, the clients, the suppliers of various elements of production, the community of reference."1158

Responsible business should avoid then, "a speculative use of financial resources that yields to the temptation of seeking only short-term profit, without regard for the long-term sustainability of the enterprise, its benefit to the real economy and attention to the advancement, in suitable and appropriate ways, of further economic initiatives in countries in need of development."1159 There are many issues relevant to this: "the dignity of the individual and the demands of justice require, particularly today, that economic choices do not cause disparities in wealth to increase in an excessive and morally unacceptable manner" 1160 Human Ecology, as developed in the previous chapters, presents a harmonious and integrated view of nature, man

¹¹⁵⁶ Ibid., §37.

¹¹⁵⁷ Ibid.

¹¹⁵⁸ Ibid., §40.

¹¹⁵⁹ Ibid.

¹¹⁶⁰ Ibid., §32.

and society, where realities are interdependent. Concurring, "[e]conomic science tells us that structural insecurity generates anti-productive attitudes wasteful of human resources... there is a convergence between economic science and moral evaluation. Human costs always include economic costs, and economic dysfunctions always involve human costs"¹¹⁶¹ Consequently, "the human consequences of current tendencies towards a short-term economy—sometimes very short-term—need to be carefully evaluated. This requires further and deeper reflection on the meaning of the economy and its goals, as well as a profound and far-sighted revision of the current model of development, so as to correct its dysfunctions and deviations."¹¹⁶² This is a task in which economists can profit from the input a Catholic view of man, his social nature, and his activity, can provide.

9. The Environment

Humans have to take responsibility for the environment. "Our faith in creation is the ultimate basis of our responsibility for the earth. The earth is not simply our property, which we can exploit ... it is a gift of the Creator, who designed its innate order and has thus given us guidelines which we... need to respect." That order in matter, its mathematical structure, "is the basis of the modern natural sciences." Beyond that, "The fact that the earth and the cosmos mirror the Creator Spirit also means that their rational structures

¹¹⁶¹ Ibid.

¹¹⁶² Ibid.

¹¹⁶³ Pope Benedict XVI, "Traditional Exchange of Christmas Greetings," 2008.

¹¹⁶⁴ Ibid.

which, beyond their mathematical order, become almost tangible in scientific experimentation, also have an inherent ethical orientation."¹¹⁶⁵

"Since faith in the Creator is an essential part of the Christian creed, the Church cannot and must not limit herself to passing on to the faithful the message of salvation alone. She has a responsibility towards creation, and must also publicly assert this responsibility." 1166 The Church "must assert this responsibility in the public sphere... She must above all protect mankind from self-destruction... Just as human virtues are interrelated, such that the weakening of one places others at risk, so the ecological system is based on respect for a plan that affects both the health of society and its good relationship with nature." 1167 "Alongside the ecology of nature, there exists what can be called a 'Human' Ecology, which in turn demands a 'social' ecology. All this means that humanity, if it truly desires peace, must be increasingly conscious of the links between natural ecology, or respect for nature, and human ecology." 1168 Any view that intends to separate nature and humanity, is misguided. 1169

Our relation with the environment is not reduced to the practical and material. Attuned to the wonders of God's creation, we should be frequently in awe "praising the name of the Lord who is 'majestic in all the earth'. Immersed in contemplation of the 'work of his fingers' (Ps 8), the perils of spiritual

¹¹⁶⁵ Ibid.

¹¹⁶⁶ Ibid.

¹¹⁶⁷ Pope Benedict XVI, Caritas in Veritate, §51.

¹¹⁶⁸ Pope Benedict XVI, "Message World Day of Peace 2007," §8.

¹¹⁶⁹ Ibid. "Experience shows that disregard for the environment always harms human coexistence, and vice versa... there is an inseparable link between peace with creation and peace among men."

alienation from creation [should] become plainly evident."¹¹⁷⁰ The harmony in our relationship with ourselves, our fellow men and the environment stems from our relationship with God. "When 'man turns his back on the Creator's plan, he provokes a disorder which has inevitable repercussions on the rest of the created order."¹¹⁷¹

Responding to a question regarding climate change, Benedict XVI describes the role of the Church not in technical aspects, seeing that the Church's role is to encourage us, as part of our human vocation and responsibility "to rediscover the Face of the Creator in Creation, to rediscover in the Creator's presence our responsibilities for his Creation, which he has entrusted to us, to form the ethical capacity for a lifestyle that we must adopt if we wish to tackle the problems of this situation and if we really want to reach positive solutions."1172 Once again, we cannot detach our actions from truth. "Human beings interpret and shape the natural environment through culture, which in turn is given direction by the responsible use of freedom, in accordance with the dictates of the moral law."1173 If scientism is the prevailing approach in our culture, nature is deprived of meaning and purpose. When we decline or neglect the duties of conscience and freedom, "[w]hen nature, including the human being, is viewed as the result of mere chance or evolutionary determinism, our sense of responsibility wanes."1174 On the contrary, as we receive gratefully and reverently the gift of creation we

_

 $^{^{1170}}$ Pope Benedict XVI, to the Ecumenical Patriarch of Constantinople, 7^{th} Symposium of the Religion, Science and the Environment Movement, 2007.

¹¹⁷¹ Ibid.

¹¹⁷² Pope Benedict XVI, "Interview during the flight to Australia," 2008.

¹¹⁷³ Pope Benedict XVI, Caritas in Veritate, §48.

¹¹⁷⁴ Ibid.

recognize "the wonderful result of God's creative activity, which we may use responsibly to satisfy our legitimate needs, material or otherwise, while respecting the intrinsic balance of creation. If this vision is lost, we end up either considering nature an untouchable taboo or, on the contrary, abusing it." "The way humanity treats the environment influences the way it treats itself, and vice versa. This invites contemporary society to a serious review of its life-style, which, in many parts of the world, is prone to hedonism and consumerism, regardless of their harmful consequences." 1176

The resistance to change lifestyles shown in chapter 2 suggests that the challenge goes beyond practical or technical issues. "What is needed is an effective shift in mentality which can lead to the adoption of *new life-styles* 'in which the quest for truth, beauty, goodness and communion with others for the sake of common growth are the factors which determine consumer choices, savings and investments." What makes the challenge more daunting is the indivisible reality of life encompassing nature and humanity: "It takes in not only the environment but also life, sexuality, marriage, the family, social relations: in a word, integral human development... It would be wrong to uphold one set of duties while trampling on the other. Herein lies a grave contradiction in our mentality and practice today: one which demeans the person, disrupts the environment and damages society." It would be "contrary to authentic development to view nature as something more

_

¹¹⁷⁵ Ibid.

¹¹⁷⁶ Ibid., §51.

¹¹⁷⁷ Ibid.

¹¹⁷⁸ Ibid.

important than the human person. This position leads to attitudes of neopaganism or a new pantheism."¹¹⁷⁹

Consistent with this integral approach and the general sense of what animates sustainable development, "the subject of development is also closely related to the duties arising from *our relationship to the natural environment*. The environment is God's gift to everyone, and in our use of it we have a responsibility towards the poor, towards future generations and towards humanity as a whole."¹¹⁸⁰

10. State and Government

Nowadays, "the State finds itself having to address the limitations to its sovereignty imposed by the new context of international trade and finance... increasing mobility both of financial capital and means of production, material and immaterial. This new context has altered the political power of States." 1181 Benedict XVI hopes that, when "the role of public authorities has been more clearly defined, one could foresee an increase in the new forms of political participation... through the activity of organizations operating in civil society; in this way it is to be hoped that the citizens' interest and participation in the *res publica* will become more deeply rooted." 1182 These new conditions have brought challenges in "new forms of competition between States as they seek to attract foreign businesses... by means of a variety of instruments, including

¹¹⁸⁰ Ibid.

¹¹⁷⁹ Ibid., §48.

¹¹⁸¹ Ibid., §24.

¹¹⁸² Ibid.

favourable fiscal regimes and deregulation of the labour market."¹¹⁸³ These are consequences of adapting to globalization that "have led to a *downsizing of social security systems* as the price to be paid for seeking greater competitive advantage in the global market, with consequent grave danger for the rights of workers, for fundamental human rights and for the solidarity associated with the traditional forms of the social State... [also limiting] the freedom or the negotiating capacity of labour unions."¹¹⁸⁴

The state has to work for the common good, but should never intend to be solely responsible for it. Subsidiarity and participation of citizens and institutions must have a space. "Solidarity is first and foremost a sense of responsibility on the part of everyone with regard to everyone, and it cannot therefore be merely delegated to the State." Likewise, there are realms of human life from which the state should abstain. "When the State promotes, teaches, or actually imposes forms of practical atheism, it deprives its citizens of the moral and spiritual strength that is indispensable for attaining integral human development and it impedes them from moving forward with renewed dynamism as they strive to offer a more generous human response to divine love." 1186

¹¹⁸³ Ibid., §25.

¹¹⁸⁴ Ibid.

¹¹⁸⁵ Ibid., §38.

¹¹⁸⁶ Ibid., §29.

11. The International Community

In his message for the World Day of Peace, January 1st, 2007. Benedict XVI makes reference to John Paul II, recalling the close connection between the natural ecology and Human Ecology, and emphasizing the link between peace with creation and peace among men. As John Paul II does, Benedict XVI emphasizes the need for a correct vision of the person, and he condemns those visions which encourage hostility and violence. He uses the issue of energy to show how a concept of development that is not integral and human centered will end in both the destruction of the environment and conflict among men. 1187 In this context, he uses the terms "social ecology" and "ecology of peace."

"Preservation of the environment, promotion of sustainable development and particular attention to climate change are matters of grave concern for the entire human family. No nation or business sector can ignore the ethical implications present in all economic and social development." Scientific research shows the worldwide impact that irresponsible human actions in any one place or region can have. Such actions are morally reprehensible "because they always harm human coexistence, and thus betray human dignity and violate the rights of citizens who desire to live in a safe environment." 1189

The responsibility must be shared by all. "Industrializing countries are not morally free to repeat the past errors of others, by recklessly continuing to

¹¹⁸⁷ Pope Benedict XVI, "Message World Day of Peace 2007," §§8-10.

 $^{^{1188}}$ Pope Benedict XVI, to the Ecumenical Patriarch of Constantinople, 7^{th} Symposium of the Religion, Science and the Environment Movement, 2007.

¹¹⁸⁹ Ibid.

damage the environment [but] it is also the case that highly industrialized countries must share 'clean-technologies' and ensure that their own markets do not sustain demand for goods whose very production contributes to the proliferation of pollution."¹¹⁹⁰

Given the increasing interdependence globalization has brought, there is a need to "manage the global economy; to revive economies hit by the crisis; to avoid any deterioration of the present crisis...; to bring about integral and timely disarmament, food security and peace; to guarantee the protection of the environment and to regulate migration: for all this, there is urgent need of a true world political authority."¹¹⁹¹ This is quite controversial, particularly as the United Nations system and other international bodies as the IPCC have shown, that such an authority could be ideologically compromised. However difficult it is to apply the principles of common good and subsidiarity, the need remains. This authority would need to be regulated by law, to observe consistently the principles of subsidiarity and solidarity, to seek to establish the common good, and to make a commitment to securing authentic integral human development inspired by the values of charity in truth" 1192 It would also need "to be universally recognized and to be vested with the effective power to ensure security for all, regard for justice, and respect for rights." 1193

"In order not to produce a dangerous universal power of a tyrannical nature, the governance of globalization must be marked by subsidiarity...

¹¹⁹⁰ Ibid.

 1191 Pope Benedict XVI, Caritas in Veritate, §67.

¹¹⁹² Ibid.

¹¹⁹³ Ibid.

Globalization certainly requires authority, insofar as it poses the problem of a global common good that needs to be pursued. This authority, however, must be organized in a subsidiary and stratified way."¹¹⁹⁴ The more powerful countries are, the more resistant they are to the idea of a global authority which could abuse its power, but themselves are reluctant to recognize their own abuses, for example, when in cultural, commercial or political relations, "economically developed or emerging countries export... [a] reductive vision of the person and his destiny to poor countries. This is the damage that 'superdevelopment' causes to authentic development when it is accompanied by 'moral underdevelopment."¹¹⁹⁵

12. Interdisciplinarity in Human Ecology

Corresponding to chapter two's analysis, the challenges of integral human development and "the correlation between its multiple elements requires a commitment to *foster the interaction of the different levels of human knowledge* in order to promote the authentic development of peoples." 1196 The Catholic Church, through Pope Benedict XVI, contributes articulating a sound approach. He states that joint action is not enough. It "needs to be given direction, because 'all social action involves a doctrine.' In view of the complexity of the issues, it is obvious that the various disciplines have to work together through an orderly interdisciplinary exchange" 1197 involving also the

1194 Ibid., §56.

¹¹⁹⁵ Ibid., §29.

¹¹⁹⁶ Ibid., §30.

¹¹⁹⁷ Ibid.

levels of research, policy and practice. But we also need generous commitment, consistent with reason. "Human knowledge is insufficient and the conclusions of science cannot indicate by themselves the path towards integral human development. There is always a need to push further ahead: this is what is required by charity in truth. Going beyond, however, never means prescinding from the conclusions of reason, nor contradicting its results."1198 "This means that moral evaluation and scientific research must go hand in hand, and that charity must animate them in a harmonious interdisciplinary whole, marked by unity and distinction."1199Building on John Paul II, he affirms that the Church can be very effective in this, as its social doctrine has "an important interdisciplinary dimension." 1200 This doctrine "allows faith, theology, metaphysics and science to come together in a collaborative effort in the service of humanity. It is here [that it] displays its dimension of wisdom. Paul VI had seen clearly that among the causes of underdevelopment there is a lack of wisdom and reflection, a lack of thinking capable of formulating a guiding synthesis, for which "a clear vision of all economic, social, cultural and spiritual aspects" is required."1201 As we have seen in chapters one and three, the difficulties that plague contemporary sciences, such as, segmentation of knowledge, the rejection of metaphysics by the human sciences, the difficulties encountered by dialogue between science and theology are damaging not only to the development of knowledge, but also to the development of peoples, because these things make it harder to see the integral

_

¹¹⁹⁸ Ibid.

¹¹⁹⁹ Ibid., §31.

¹²⁰⁰ John Paul II, Centesimus Annus, §59.

¹²⁰¹ Pope Benedict XVI, Caritas in Veritate, §31.

good of man in its various dimensions.¹²⁰² While we have seen how many identify the need for interdisciplinary efforts to achieve an integrated view needed to confront these challenges of sustainable development, the Church has experience of centuries to contribute.

¹²⁰² Ibid.

Part C. Catholic Human Ecology after John Paul II and Benedict XVI

1. Recent Developments

As mentioned in the Introduction, at the beginning of the research in 2010, there was hardly any mention of Human Ecology in Catholic scholarship, outside of the Magisterium. However, as Benedict XVI gave more attention to it, particularly in his encyclical *Caritas in Veritate*, the concept started to receive wider attention. In January 2012, at the Angelicum in Rome, in cooperation with Institut Français and Université Paris Diderot, a round-table was held on Human Ecology and Sustainable Development. The reflections here were mostly centered on defending the place of the human in ecology. They did not explore so much the more wide-ranging implications of Human Ecology, as found in John Paul II and Benedict XVI.

One scholar present, Dominique Lecourt, recalled that in the recent past, science has been entrusted to power the industrial growth which will increasingly deliver material goods, and bring peace by rationally ordering social relations with an ethics for a "model of life: concern of the universal, therefore end of selfishness, equality of all before a defined objective truth." 1204 This view of science, that can be regarded as "scientism," or "positivism," only allows for observable facts with which scientists mathematically build

15141, 351

¹²⁰³ Ibid., §51.

¹²⁰⁴ Dominique Lecourt, "Écologie humaine." Table ronde : Ecologie humaine et développement durable. Angelicum, Rome.

consistent knowledge. Lecourt says this has been the norm for scientific research, education and progress. 1205

However, science, enabling industrialization, the atom bomb, as well as genetic and psychiatric manipulation, has multiplied the damage in human and natural environments, triggering scientific ecology to try to solve the problems, oscillating between affirmations that science will doom us and science will save us. Even among the ecologically concerned, opposing camps fight each other armed with science. Finally, there are those who reject economic growth, and the technology and science that power it, and "a certain Western philosophical tradition. They make fun of 'scientism' and 'positivism'... reject their ambitions to, using science, submit nature to the power of man. And... many political ecologists will attack the 'Judeo-Christian' roots of modern rationalism. Thus, they pave the road to a perilous revival of paganism." 1206

R.P. Joseph D'Amécourt O.P., held the notion that Kant's secular morality had been proved ineffectual by the horrors of World War II, showing that not all progress is good, and that human reason could not self-regulate and was therefore incapable of supporting a universal morality, therefore requiring an adequate anthropology for a sound ecology. Here Christianity could contribute.¹²⁰⁷

Stéphane Bauzon explored how recognizing the dignity in nature requires acknowledging man's nature and dignity in it. The defense of the earth has taken to an irrational fear bordering on misanthropic, and even to arguing

¹²⁰⁵ Ibid.

¹²⁰⁶ Ibid.

¹²⁰⁷ Joseph D'Amecourt, "Écologie humaine." Table ronde : Ecologie humaine et développement durable.

for animal rights as if seeking to recognize sensualism or some type of spirits in them.

The ecological compassion ... results in refusing the man's right to exist, this time not as a race but as being a species dangerous for the Earth... There does not exist however, a dignity of the Earth without a Human Ecology... the human is the only being capable, not only to distinguish the difference between Good and Evil but also to believe with all its heart in his own dignity and the dignity of the Earth.¹²⁰⁸

These are valuable contributions but hardly revolutionary. As said, they concentrate on arguing for a space for the human in ecology, and recognizing the need for the human dignity and his spiritual and moral dimension to advance a better approach to nature. The more holistic and integrated vision would be advanced in a later event.

More recently, in March 2016, a Conference on Human Ecology at the Catholic University of America (CUA) presented the concept in direct connection with the tradition of Catholic Social Doctrine. CUA has also created the Institute for Human Ecology (IHE), very much in line with this thesis' perspective, defining that "Human Ecology is the systematic study of human beings in their relationships with one another, with various human communities, and with the natural world;" "shared among all the living organisms on the planet... Human ecology is thus also the systematic study of human flourishing," and that having a "systematic character and its care for evidence and argumentative rigor, it is... a science... not just of the natural world (natural science) or of social and/or political phenomena (social science), but of all sources of human values, aspirations and understanding, indeed of all reality... [including] philosophy, theology, and the humanities." According to

¹²⁰⁸ Stéphane Bauzon, "La dignité de la Terre." Table ronde : Ecologie humaine et développement durable.

the IHE, Human Ecology requires therefore "rigorous multi-disciplinary academic research... [regarding] the nature of human flourishing from a variety of disciplinary perspectives, seeking particularly to illuminate the social sciences in those places where they intersect with and are illuminated by Catholic Social Doctrine." 1209

The 2016 conference on Human Ecology focused on "Integrating Business and 125 Years of Catholic Social Doctrine." This seems most appropriate given that the themes encompassed by Human Ecology are those that Catholic Social Doctrine (CSD) has considered, 1210 although presenting them as Human Ecology has a much better appeal to the current culture and to non confessional audiences. Dealing with ecological sustainability and some of the challenges for an equitable society, the response is to rely in the moral responsibility of the human person, who has to respond according to God's mandate and with virtue.

Quoting extensively from Benedict XVI's Address to the Bundestag, one participant, Pakaluk, lays out the enterprise of Human Ecology: "to lead a moral revival that begins in listening to nature and has at its end the recovery of our relationship with reality, and the re-humanization of culture." This quest involves moral ownership of all human activity. "The market made me do it' is a moral cop-out," observes Cremers. "Competition and pressure are real, but

_

¹²⁰⁹ Institute for Human Ecology web page, http://theinstituteforhumanecology.com/about-us-ihe/#whatishumanecology

¹²¹⁰ Frank Hanna, "What Kind of Virtuous Relationships Lead to Prosperity," 111, "Catholic social teaching is, in a way, a synonym for human ecology."

¹²¹¹ Catherine Pakaluk, "Leonine Foundations of Human Ecology," 53.

there is an allegiance beyond the market to obey God and love your neighbor."¹²¹²

According to Spitzer, "religion has an incredibly important social value... The undermining of religion and the undermining especially of the humanitarian efforts of religion is a huge gash right in the fabric of a proper and authentic Human Ecology." Bachiochi argues that, to provide the moral conditions for an authentic Human Ecology, families must raise children in virtue, and schools educate in virtue, but to support this, we must put effort in "recreating an economy that is on the side of child-raising families," support the "renaissance of classic Catholic education... inculcating... the moral and intellectual virtues," and renewing parishes as Catholic communities of mutual aid who truly love and care for those in need. 1214

However, Western society is depriving man of the religious, repeating the main anthropological error of socialism denounced by *Centesimus Annus*, an error which led to the failure of socialist systems. Governments are seeking to restrict, if not erase religion from society, by forcing faith-based organizations, through litigation, to violate their consciences or be pushed out of business by the force of law or, with NGOs, on the international level, by making "humanitarian aid and support contingent on embracing abortion and contraception." The moral/cultural foundation is being progressively lost, that is, the "preconditions for a free, just and creative society... a political

¹²¹² Martijn Cremers, in "Panel Discussion III," 18.

 $^{^{\}rm 1213}$ Robert Spitzer, in "Panel Discussion III," 19.

¹²¹⁴ Erika Bachiochi, "Safeguarding the Moral Conditions for an Authentic Human Ecology," 101-102.

¹²¹⁵ Mary Eberstadt, "Fighting the Good Fight: Religious Liberty vs. The Sexual Revolution," 107-108.

system, an economic system, and a moral/cultural system... without which neither of the other two can be made to work."¹²¹⁶

There seems to be a consensus regarding the decay of Western culture. "What about the public moral culture that John Paul II said was so crucial to the proper functioning of democracy and the free economy?... Well, that has eroded"1217 Therefore, "without virtue in a democratic people, John Adams memorably warns us, democracy always commits suicide."1218 Even more, without love, even cardinal virtues disappear since "why should the powerful and mighty renounce their capacity of domination? The liberal system must acknowledge the existence of an unsymmetrical gift at its foundation. Gift is love."1219 Without acknowledging the spiritual dimension in the human, and consequently free moral choice and God, there is no reason for sacrificing selfinterest; therefore, no practical solution, but more significant, no horizon or explanation for heroism, virtue and the noblest actions realized by men and celebrated in so many expressions of culture. When denying transcendence, "metaphysics and the enlightenment have proved themselves incapable of thinking the human person correctly in her relational interiority and freedom... to understand human agency as free and imbued with spiritual meaning not only technical efficiency, we need a hermeneutical approach that understands sense and not only explain facts."1220

-

¹²¹⁶ Michael Novak, "The Human Ecology of Social Justice," 69.

¹²¹⁷ George Weigel, "Catholic Social Doctrine and 21st Century America," 60.

¹²¹⁸ Erika Bachiochi, "Safeguarding the Moral Conditions," 100.

¹²¹⁹ Martin Schlag, "What is the Impact of Faith in Capitalism?" 39.

¹²²⁰ Ibid.

Virtuous relationships lead to spiritual prosperity: that is true human flourishing. "Marriage and the family are the most important element of our human ecology, they are the best source of joy and happiness," but we hardly spend the effort, care and witness they deserve. 1221

A substantial part of the 2016 conference focused on business and economics and did not spare criticism: "The current economic model is unsustainable... finance should work for the economy, not the other way around. That also means that economies [have] to work for the common good."1222 Finances have contributed to a distortion: "Over the last decades, a class of rentiers has reemerged because for whatever reason, asset growth has become bigger than economic growth." Thus, financial growth which is not in service of economic activity, "i.e. activities that are only profitable for individuals without any correspondence to works or service to others," only benefits the financial sector, depriving society of resources and initiative. 1223

Consumerism is the other distortion which "takes consumption beyond its reasonable and moral limits... reduces investment, thrift and savings, thus undermining the basis of a good capitalist economy." Consumerism not only distorts the economy, it harms the moral ecology: "the decadent consumer habits of the first world are disproportionately impacting the world's poor, sociological data confirms quite clearly that it is the most vulnerable, fragile human beings that are most threatened by, and least equipped to protect

1221 Frank Hanna, "What Kind of Virtuous Relationships Lead to Prosperity," 117.

341

 $^{^{\}rm 1222}$ Christopher Wasserman, "What is the Role of Gift and Justice in Economics and Business?" 77.

¹²²³ Martin Schlag, "What is the Impact of Faith in Capitalism?" 35.

¹²²⁴ Ibid., 38.

themselves from, a deteriorating moral environment."¹²²⁵ This consumer logic applied wholesale to life has the effect of turning all human realities in goods that can be chosen basically on selfish self-interest, depriving much of human life of the richness of gift and virtue: "[i.e.] the sharp decline in marriage... [has] harmed poor communities who are also the ones who need the economic benefits of marriage the most."¹²²⁶

The response, of course, is to apply virtue to the action of humans in the economy. Solidarity and temperance imply that "prosperity belongs to a community, not an individual, and ... that prosperity consists in abundance, not excess." Likewise, "applied to business the virtue of justice promotes a system that produces goods that are really good, services that truly serve, and wealth that really creates value." 1228

Particularly in finance "courage plays an important role in business in connection with risk... the inherent short-termism in finance destroys the inner good of courage." Without virtue, agents "prefer easy gain without risk, or at least that the risk might be borne by others. This is where the moral hazard comes in. There has been too much moral hazard, created by a collusion of political and financial power: risks and externalities have been borne by others." This response in terms of virtue aligns well with the call of Pope Francis to an ecological conversion.

¹²²⁵ Erika Bachiochi, "Safeguarding the Moral Conditions," 98.

1227 Robert Kennedy, "What are the Links between Virtue and Prosperity?" 41.

¹²²⁶ Ibid

¹²²⁸ Martin Schlag, "What is the Impact of Faith in Capitalism?" 38.

¹²²⁹ Ibid., 37.

¹²³⁰ Ibid.

2. Laudato Si

This work concerns Human Ecology in John Paul II and Benedict XVI. Although Pope Francis falls outside the scope of this work, it is appropriate to comment how Laudato Sí receives and elaborates on the legacy of Human Ecology, given the increased presence of Human Ecology in Catholic scholarship and the wider society. According to Cardinal Peter Turkson, prefect of the Dicastery for Promoting Integral Human Development, "Laudato si" follows in this great tradition [of Leo XIII's Rerum Novarum and John Paul II's Centesimus Annus]. As Pope Francis himself has said, it is not a 'green encyclical,' it is a 'social encyclical'... So there is a direct progression among these three encyclicals."1231 This is key to Human Ecology, as a tendency in the current culture would strive to enlist Laudato Sí and Pope Francis in the support of environmental concerns, missing the core of his message. Affirming it as a "social encyclical," Pope Francis emphasizes the unity and interdependence of the ecological and the human, and brings in the context of the whole of the Church's tradition of social thought. Social encyclicals, each address the "new things" of their age, but "they all affirm one of the timeless principles of Catholic social teaching—the universal destination of goods. Essential to human ecology, this is the idea that the fruits of the earth belong to

_

¹²³¹ Peter Turkson, "Is Business to Care for our Common Home?", 123.

all people, and that the right to private property is conditional on this need being met."¹²³²

Early in *Laudato si'* John Paul II's call to an ecological conversion and the concern for Human Ecology are brought together as part of the same social issue. Pope Francis asks us to hear, and respond to, the cry of the earth and the cry of the poor. Not only are we grievously damaging our common home, but—in doing so—we are wounding the poor and excluded of the world. Every man's vocation to love, to solidarity and to sharing our common home are themes which reinforce the affinity between Catholic social teaching and Human Ecology. Human Ecology is inseparable from the notion of the common good, a central and unifying principle of social ethics. The common good is 'the sum of those conditions of social life which allow social groups and their individual members relatively thorough and ready access to their own fulfilment." 1235

Human Ecology involves all of the human environment and reality, including nature, housing and urban development: "Having a home has much to do with a sense of personal dignity and the growth of families. This is a major issue for Human Ecology... At the same time, creativity should be shown in integrating rundown neighborhoods into a welcoming city." Human Ecology also includes man's spiritual and moral nature and his own body. "Human Ecology also implies another profound reality: the relationship between human

¹²³² Ibid.

¹²³³ Pope Francis, Laudato si', §5.

 $^{^{\}rm 1234}$ Peter Turkson, "Is Business to care for our common home?", 122.

¹²³⁵ Pope Francis, Laudato si', §156.

¹²³⁶ Ibid., §152.

life and the moral law, which is inscribed in our nature... Pope Benedict XVI spoke of an 'ecology of man,' based on the fact that 'man too has a nature that he must respect and that he cannot manipulate at will." 1237

Accepting our bodies and their nature as a gift from God "is vital for welcoming and accepting the entire world as a gift from the Father and our common home, whereas thinking that we enjoy absolute power over our own bodies turns, often subtly, into thinking that we enjoy absolute power over creation. Learning to accept our body, to care for it and to respect its fullest meaning, is an essential element of any genuine Human Ecology." This is a critical challenge now that gender ideology abets notions of multiple, even coexisting genders, of fluid gender identities, and of the right to reconfigure our bodies, to the gender/sex with which we feel more identified at a given time, regardless of the genetic and physical traits with which we were born: "Valuing one's own body in its femininity or masculinity is necessary [so] we can joyfully accept the specific gifts of another man or woman, the work of God the Creator, and find mutual enrichment. It is not a healthy attitude which would seek 'to cancel out sexual difference because it no longer knows how to confront it."" 1239

Francis reaffirms previous teaching in saying that nature and humanity are bound so that what harms one harms the other: "We cannot adequately combat environmental degradation unless we attend to causes related to human and social degradation. In fact, the deterioration of the environment and

1237 Ibid., §155.

¹²³⁸ Ibid.

¹²³⁹ Ibid.

of society affects the most vulnerable people on the planet."¹²⁴⁰ He questions those who in ideological zeal would care for nature while overlooking human suffering: "It is troubling that, when some ecological movements defend the integrity of the environment, rightly demanding that certain limits be imposed on scientific research, they sometimes fail to apply those same principles to human life. There is a tendency to justify transgressing all boundaries when experimentation is carried out on living human embryos."¹²⁴¹

More to the point: "It is clearly inconsistent to combat trafficking in endangered species while remaining completely indifferent to human trafficking, unconcerned about the poor, or undertaking to destroy another human being deemed unwanted. This compromises the very meaning of our struggle for the sake of the environment." 1242 It is also a symptom of a disconnect related to a deep internal poverty at its root. 1243 "It is no coincidence that, in the canticle in which Saint Francis praises God for his creatures, he goes on to say: "Praised be you my Lord, through those who give pardon for your love." Everything is connected. Concern for the environment thus needs to be joined to a sincere love for our fellow human beings and an unwavering commitment to resolving the problems of society." 1244

To encourage this unity, Francis offers Saint Francis as example "of care for the vulnerable and of an integral ecology lived out joyfully and authentically... patron saint of all who study and work in the area of ecology...

1240 Ibid., §48.

1241 Ibid., §136.

1242 Ibid., §91.

 $^{\rm 1243}$ Amadei, Engineering for Sustainable Human Development, 481-482.

1244 Pope Francis, Laudato si', §91.

346

particularly concerned for God's creation and for the poor and outcast. He loved, and was deeply loved for his joy, his generous self-giving, his openheartedness." ¹²⁴⁵ Saint Francis also did this with profound joy and peace. ¹²⁴⁶ This leads again to the need of an ecological conversion, a deep spiritual change. "Caring for our common home requires, as Pope Francis says, not just an economic and technological revolution, but also a cultural and spiritual revolution—a profoundly different way of approaching the relationship between people and the environment, a new way of ordering the global economy." ¹²⁴⁷

Laudato si' is a prophetic, wake-up call for a dramatic change, in politics, the economy, the concern for the environment and the solidarity with which we treat each other, especially the poor. He says that the "urgent challenge to protect our common home includes a concern to bring the whole human family together to seek a sustainable and integral development." 1248 "I urgently appeal, then, for a new dialogue about how we are shaping the future of our planet. We need a conversation which includes everyone, since the environmental challenge we are undergoing, and its human roots, concern and affect us all." 1249 and, "a true ecological approach always becomes a social approach; it

-

¹²⁴⁵ Ibid., §10.

¹²⁴⁶ Ibid., "He was a mystic and a pilgrim who lived in simplicity and in wonderful harmony with God, with others, with nature and with himself. He shows us just how inseparable the bond is between concern for nature, justice for the poor, commitment to society, and interior peace."

 $^{^{\}rm 1247}$ Peter Turkson, "Is Business to care for our common home?", 126.

¹²⁴⁸ Pope Francis, *Laudato si'*, §13.

¹²⁴⁹ Ibid., §14.

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." 1250

While following the path laid out by John Paul II and Benedict, consistent in the same view of Human Ecology, Pope Francis does contribute a new voice and a new approach to reach out to all people who share our common home, to build together a Human Ecology that cares for all.

¹²⁵⁰ Ibid., §49.

Chapter 6 - Conclusions

1. The concept of Human Ecology

As said in the introduction, the concept of "Human Ecology" in Pope John Paul II's 1991 Encyclical *Centesimus Annus* contains significant insights. The connection with ecology resonates with abundant concerns, expectations and commitments in the current global culture. Ecology has the appeal and widespread support of a moral cause but also evokes that longing for harmony and communion with nature, which, in a sense, we all desire. And, despite what critics of human action say, the word 'human' has a humanitarian, humane feel to it, with connotations of good, virtuous, compassionate, and ethically appropriate behavior. The positive moral implications of Human Ecology derive from what is naturally consistent with and proper for healthy human beings. Human Ecology is a powerful concept which stimulates the imagination and awakens a positive emotional response. It also wraps up a century of thought and research on Human Ecology and millennia of reasoned argument and reflection of the Christian tradition in social issues.

John Paul II wanted to draw attention to the urgent issues damaging natural ecology, but saw clearly that it was much more than a technical or political challenge concerning the natural environment. It was a moral one, rooted in a distorted anthropology and wreaking even more appalling devastation in human and social life. It was clear to him that both the ecology of nature and ecology borne of human action, society and culture, were interdependent to a degree that made it impossible and counterproductive to

separate. Not only was nature the abode and resource for human life, but caring for it was also part of man's mission. Benedict XVI reaffirmed the unity of human and natural ecology, connecting this unity to the concept of integral human development. "The book of nature is one and indivisible: it takes in not only the environment but also life, sexuality, marriage, the family, social relations: in a word, integral human development." Thus, Human Ecology complements natural ecology and broadens it in three distinct aspects. First, it includes human persons as a key part of the ecological community. Second, it includes not only the material and physical dimension, but also the metaphysical and spiritual, as part of the whole human reality. Third, it includes the dimension of time, and consequently, future generations. It also fills the gaps and corrects the distortions prevalent in the policy sciences due to their mutilated view of the human persona and society, providing the moral and spiritual dimension, and ordering the goods the human person needs to flourish.

Catholic Human Ecology shows how to integrate the environment and conditions which foster the healthy development and flourishing of the human person, solving the apparent contradictions with a comprehensive view of the human person, society and the natural environment. Its interdisciplinary approach also has the capacity to integrate harmoniously many concerns and initiatives relevant to the human person, which, have less opportunity to be taken into account when isolated.

-

¹²⁵¹ Pope Benedict XVI, Caritas in Veritate, §51.

2. Human Nature

Providing the most beneficial environment for the human person, requires a clear notion of who the human person is and how he flourishes. We must know what nurtures and what poisons him, so we can do no harm, and rather, contribute in a positive way. As humans live in relation, sharing common spaces and realities, Human Ecology must consider what is the "good life" for human beings and what is a "good" model of social organization which can provide the conditions for such "good life." We are inevitably dealing with the truth about the human persons and how they relate to each other. We are talking necessarily about anthropology and ethics, and the common good which we need to achieve working together, so that all will benefit from it.

Thus, knowing who the human is, the truth about his nature and purpose, is crucial. Getting it wrong has disastrous consequences. John Paul II clearly warns that:

one of the most obvious weaknesses of present-day civilization lies in an inadequate view of man... [this is] the age of man's abasement to previously unsuspected levels, the age of human values trampled on as never before... [due to] the drama of man being deprived of an essential dimension of his being, namely, his search for the infinite, and thus faced with having his being reduced in the worst way.¹²⁵²

As seen in chapter one, policy sciences and the anthropology behind Sustainable Development (SD) ignores or neglects the spiritual dimension of the human person, which is chapter two is made evident in the distortions of financialization, consumerism, a materialistic approach to human flourishing and the disregard to important social realities, egregiously, that of the family. Chapters three and five address the underlying anthropological flaws

_

¹²⁵² Pope John Paul II, "Inaugural Speech at Puebla," §I.9.

proposing a wholesome and holistic approach to the human person. The key distortion is the denial of man's metaphysical and spiritual nature. According to Benedict XVI, the spiritual dimension born of God's particular love to each human person grants a dignity to each person: "Man is God's image and cannot be reduced to a mere portion of nature or a nameless element in the human city." 1254 To build a harmonious society, this controversy has to be addressed. Human ecology is a common space which therefore has to be built through common agreement, which is why dialogue is a required condition for Human Ecology.

3. Dialogue as key to Human Ecology

Benedict XVI saw clearly that, in a global and interdependent society, a Human Ecology which seeks to provide for the common good, for the best environment for the flourishing of all human persons, has to be developed in common agreement. Chapters one, two and three show the social engineering mindset prevalent behind SD along with its conviction of it being the scientific and reasonable, and thus, the only valid approach that everyone should accept This position is certainly not open to or conducive to dialogue. Catholics and other faith traditions, as well as non-believers of many persuasions, must enter into dialogue and reasoned inquiry, coming to common notions of justice and what is right, which must be guided by truth and the good. Benedict's appeal was that "a public debate is necessary. Indeed, an essential goal of this address

-

¹²⁵³ Pope Benedict XVI, "Speech at the Bundestag," "a Creator God is what gave rise to the idea of human rights, the idea of the equality of all people before the law, the recognition of the inviolability of human dignity in every single person."

¹²⁵⁴ Pope John Paul II, "Inaugural Speech at Puebla," §I.9.

is to issue an urgent invitation to launch one."1255 The first steps in this dialogue are setting out ground rules and setting aside what would render it invalid.

a) Regarding the scope

In the current culture, there is a valuable and healthy trend towards a holistic approach, which is very compatible with Human Ecology. Regretfully, as seen in chapters one, two and three, there are also some positions which rely on what is empirical and practical, denying what is perceived as spiritual and impractical a right to participate. Positivism, scientism, Rawls secular liberalism, Maslow's notion of man, pragmatism and the policy sciences, all emphatically reject and disqualify, in different degrees, metaphysical, theological, moral and spiritual contributions to the dialogue. They deny the existence of anything beyond the tools of their discipline.

Empirical science can provide insight into the empirical. It is inadequate, however, to shed light on the metaphysical and the supernatural. This is where philosophy and theology, through both faith and reason, are needed. The rejection by empiricist/secularist positions of notions concerning truth and the good brings up two issues, one epistemological and another anthropological. First, if we are to reach any relevant conclusion regarding what is good for the human person or society, a working concept of truth is needed. Second, truth and the good are not only practical concepts needed to process decisions in daily life, but even more, the fulfillment of the human person depends on his capacity to attain truth and the good.

-

¹²⁵⁵ Pope Benedict XVI, "Speech at the Bundestag."

Hopefully, the tendency toward an open and holistic dialogue will help include scholars and researchers from diverse disciplines, governments, faith traditions, and the different groups and communities in society. Likewise, the limitations of policy sciences and the scientistic view, and their regretful consequences explored in the first three chapters argue that, the debate must be open to contributions from research, policy and practice, as well as philosophy, faith and the empirical and non-empirical disciplines.

b) Regarding the method

According to Benedict XVI, "human knowledge... is imperfect, because it is subject to finiteness, to human limitations. Nevertheless, it grows and is perfected, thanks to the experience and elaboration of correct and consistent reasoning, able to make connections between concepts and the reality, through discussion, exchanges and knowledge that is enriched from one generation to the next."1256 In seeking what is just and right for the common good, reasoned argument draws from experience, science and reflection to understand the nature of the created world, the human person and society, to understand the "natural law that must inspire human laws and political and religious authorities, so that they may promote the common good."1257 The tendency in many universities to exclude positions that differ from or are critical of the mainstream convictions, is not helpful. The process as it applies to any of the particular issues arising in Human Ecology will often require, due to its complexity, an multidisciplinary, or even, transdisciplinary approach.

¹²⁵⁶ Pope Benedict XVI, "John of Salisbury."

¹²⁵⁷ Ibid.

4. Clarifying some issues

a) Man, nature and faith

Throughout history, 1258 nature has shaped the life of humanity, and humans have impacted nature in many ways as well. Currently, due to a large population over all the earth and to technology which amplifies the impact of human action, the interdependence of man and nature is greater than ever. If we ignored any higher purpose and limited our view to evolution, we might consider man the successful predator who dominates the environment. Considering man's transcendent nature open to purpose and moral conscience, Catholic Human Ecology lays out a responsible role for mankind in regards to the whole of the environment and the duty to care for it. The natural and human environment are integrated, and such a healthy Human Ecology guides human persons to care for both in a comprehensive way.

As seen in chapters one, three and five, Christian faith recognizes nature as God's gift as well as man's duty to use nature and care for it with awe and respect. Also seen in chapters one and three, secular ideologies from the Enlightment such as positivism and scientism, have generated the most damaging consequences to the environment As argued on chapter two, with its drive for economic growth, overconsumption, and profits, secular Capitalism, is today the greatest cause of fuel emissions and waste. In Russia and countries behind the Iron Curtain, Communism caused untold pollution of every kind. In

-

 $^{^{1258}}$ Jared Diamond, *Guns, Germs, and Steel.* Diamond's argument shows the significant and lasting influence of the natural environment on people's culture and history.

current China, Communism combined with Capitalism, is doing it again. On the contrary, Christian faith is the best source of the energy and motivation needed to confront the environmental challenges.

b) Bias of the policy sciences and secular liberalism

The basic approach for policy sciences is pragmatism with its epistemological relativism, which claims to be free of metaphysical and moral considerations. Although it presents itself as neutral, it does not restrict itself to a useful tool. Rather, it dismisses metaphysics and theology, and sees itself "incompatible with religions or philosophies that embrace a metaphysical realism."1259 Thus, it ignores anything which does not fit its method. As this core of policy sciences is the foundation for UN policies, including Sustainable Development, this distortion comes up also there, for example, when Sachs defines SD as a "normative or ethical view of the world, a way to define the objectives of a well-functioning society, one that delivers wellbeing for its citizens today and for future generations... [and which] urges us to have a holistic vision of what a good society should be."1260 This view intends to become the overarching view which defines the wellbeing of man and what a good society is, dismissing the moral and spiritual, while promoting reproductive rights and gender ideology. Claiming to be neutral and at the same time forcing ideological commitments presents a contradiction which is not helpful to the dialogue.

1259 Simmonds, Truth and Climate Change, 43.

¹²⁶⁰ Sachs, The Age of Sustainable Development, 11.

Something similar can be said of secular liberalism as argued in chapter three. It pretends to be neutral but denies faith traditions and metaphysics, any participation in the public debates which shape our destiny as societies. It dismisses moral or spiritual considerations, and favors unacknowledged secular values, such that any expression of sexual initiative merits protection while expressions of faith are considered threats to be avoided. Its underlying premise is the affirmation of each one's unexamined claims or desires as rights. Thus, it's based on self-interest to be negotiated with competing claims from other individuals, configuring a conflictive approach. Human Ecology, on the other hand, aims at the common space which is best for human flourishing, a common space which we all have a common interest in achieving since it benefits us all. While allowing for self-interest, Human Ecology subordinates it to the common good which includes other values. Thus, Sustainable Development needs to be decoupled from the pragmatism prevalent in the policy sciences, and incorporate more open and enriching views such as, the 1995 Copenhagen Declaration on Social Development, 1261 and the Catholic tradition in social issues. This would yield a Human Ecology that offers a much more positive approach and a more objective and holistic view.

c) Learning from Human Ecology's history

The continued interest in Human Ecology, by a number of different disciplines, attests to its universal appeal, and to the challenge of defining it. From the beginning, Human Ecology was seen as having a unifying force for the disciplines dealing with human issues. Through different approaches, it has

¹²⁶¹ UN, "Copenhagen Declaration on Social Development."

encompassed factors of population, habitat and its resources, relations of cooperation, competition, and conflict, stages of dominance and succession, technology and culture, economy and politics, social capital and resilience. Human Ecology is not one problem but a complex reality to be oriented towards the common good and as such involves situations to be improved, and interrelated problems to be solved. This broad experience from many scientific disciplines provides a solid support for a comprehensive "transdisciplinary" approach, even reducing the focus on academic disciplines to combine research, policy, and practice, and drawing the expertise of people from many walks of life, cooperating with each other to achieve results pursuant to the common good.

5. Applying Human Ecology to Sustainable Development

We have reviewed how reductive positions, in their exclusion of metaphysics, the moral, and the spiritual, end up obscuring the reality of nature, the human person, and society. Pragmatism and policy sciences not only ignore the most important dimensions and purposes needed for human development and fulfillment, but in their denial of values, end up imposing their own. Maslow's anthropology would reduce spiritual needs to a luxury restricted to a privileged few, while dismissing the value of faith traditions. Rawls's secular liberalism reduces justice to fairness ignoring the truth and the good, devaluing moral ties to family, faith and community, and excluding any values other than those of the current democratic liberal society. These distortions injure human

life in many aspects, among them, issues highly relevant to Sustainable Development.

a) Economic Development

The economy is not geared to the common good or to the flourishing of the human person. Economics has developed its own logic and, instead of serving human society, it establishes the market with its laws and the paradigm of unceasing growth, and its requirements of globalization and trade, steering people and society to serve them. The "iron law" of climate change as stated by Pielke, where growth will overcome any other consideration, repeats itself in analogous situations. Growth and the market are unquestionable, and the "trickle down" concept and the Kuznets curve, strive inadequately to argue that growth is good for the poor and for the environment, obscuring evidence that shows otherwise. Growth seems no longer a technically supported policy, but a creed. Economy focuses on growth, instead of the tangible needs of people. This consumes resources, energy, human efforts, money and credit, and generates polluting emissions and waste, all in excess.

The disordered growth of the financial sector, no longer focused on financial services to the economy, but rather on speculation and financial products serving no other purpose than generating profits, creates risks and huge catastrophes for the world economy injuring the livelihoods of hundreds of millions of people. Presenting the economy as technical, thus value-free, while manipulating enormous amounts of money in sophisticated ways, has given the financial sector the power to influence laws and policies to their own benefit, deepening economic inequalities.

Human Ecology must help refocus the purpose of economy on the efficient allocation of resources to serve the needs and well-being of people and society, always subordinated to the common good and the higher purpose of human existence. The growth paradigm and consumerism have to be seriously questioned regarding their sustainability, and market dynamics have to be discerned and controlled by society and the State so as to ensure that they serve the common good. As part of this, the economy should seek to foster an integral development that addresses extreme poverty and inequalities. These issues have been identified within the wider culture, but there are strong forces opposing change. There is a need of education and cultural work to help people in business, the media, and consumers realize that their economic decisions and choices are moral actions and that they bear responsibility for how they shape their own lives and a society which fosters participation and solidarity for all.

b) Social Development

Social development is presented in UN documents as integral, but in practice, for example, in the MDGs/SDGs, is reduced to the most practical and material as with the exception of the ideological commitment to reproductive rights and gender ideology. Ethics, moral values, human dignity, the spiritual dimension, and the rights to religious freedom are ignored or denied when conflicting with more practical goals. This is consistent with Maslow's approach in which more basic, survival, needs such as food, health, and lodging, are pursued, while other concerns are relegated as unimportant.

There are dangers in reducing Social Development to the MDGs/SDGs, such as focusing on the goals or outcomes while overlooking other important concerns, adopting a social engineering approach in which development is technically planned disregarding human initiative, neglecting the conditions for achieving outcomes in a sustainable way, and disregarding more integral approaches which consider the many elements involved and encourage wider participation of people in the community, strengthen the social fabric, build resilience, and allow people to own and steer their development in a responsible and sustainable manner.

The 1995 Copenhagen Summit presented an integral approach to Social Development incorporating spiritual, religious, and ethical values, human dignity and human rights, social justice and solidarity, acknowledging the family as the basic unit for society and social development, equality, respect, peace, democracy, mutual responsibility and cooperation, and according full respect for the various religious and ethical values and cultural backgrounds of people and communities. However, in current Sustainable Development documents, the importance of families and faith communities, ethical and spiritual values, social justice, solidarity, and most of the values that imply moral virtue are totally absent. The way the Copenhagen summit has been ignored is something that merits research. The scope of concerns and issues it raises must be taken into account for a truly integral Social Development which respects and cares for the people involved.

¹²⁶² UN, "Copenhagen Declaration on Social Development," §§2, 3, 8, 9, 25, 26, 29.

Regarding poverty and inequality, there is little initiative besides arguing that growth will in some way help with poverty. Although, the academic consensus is more concerned about imbalances generated from population control and decline, UN policies seem to have an ideological commitment to population control and reproductive rights understood as abortion, sterilization and birth control. The damaging impact of the consumerist lifestyle is not really addressed, and the relevant factors for happiness, satisfaction, or general well-being are not considered. Healthy lifestyles must be proposed and supported.

Social Development must be centered in human persons, with their families and communities, and with their culture, faith and values. The first step in acknowledging human dignity is to recognize the role of human persons as the most important actors in the process of development and their free and responsible participation as key to the success of the effort. Ethics needs faith traditions and reasoned inquiry to be rooted, and so, religious freedom, the realm of human conscience and spiritual life, has to be protected and fostered.

c) Environmental Protection

The environment is considered in the SDGs, but these do not provide a comprehensive, integrated approach. In many ways, the SDGs express underlying political agendas. Even though economic growth and consumerist lifestyles have been shown to be the most impactful in terms of the CO₂ emissions polluting the atmosphere, there is no serious effort to do anything about them. Growth even pushes consumerist lifestyles on developing countries likely increasing the volume of future emissions.

Changing lifestyles and overcoming the iron commitment to growth in the economy are huge challenges. Assuming responsibility and helping in whatever ways necessary to share access to food, energy, and health resources with the billions who lack them, requires generosity, sacrifice, and commitment. There is also the need to assist the poor with the adaptation and protection regarding the damaging effects of climate to their frail situations. All these actions and changes will not happen simply by tweaking policies and budgets. They imply giving up profits, advantages, comforts, and therefore, require a conversion, a change of mind and heart, to act with solidarity towards the common good and those less fortunate. Of course, as Amadei notes, "many of those with the power to effect the necessary changes have the least motivation to alter the status quo that gave them the power." This includes not only the private sector but also politicians, aid agencies, NGOs and civil society organizations. That is why this requires a conversion, motivated by faith, going beyond self-interest.

Faith can also help people see the environment as God's gift to man, to be admired, used, and cared for, with reverence and awe. Caring for nature then becomes part of our mission and our concerns, part of our duty to give God glory. This is not merely a demanding duty, but as we rejoice in the wonders of creation, we find joy in caring for it and cooperating so that its greatest glory be manifest. Thus, nature becomes also a source of energy and motivation.

¹²⁶³ Amadei, Engineering for Sustainable Human Development, 3.

6. Possible themes for further development

Having defined and explored Human Ecology in chapters one and four, and its links with SD in chapters two and three, this thesis set the scene for examining contributions made by popes John Paul II and Benedict XVI in chapter five. Overall this thesis has thus demonstrated that the role of humanity open to transcendence plays a key part in viable sustainability. Moreover, as sustainability's purpose should be geared to the human person, this accurate view of humanity is needed to ensure its success. This chapter now reflects, from the Catholic contributions, some aspects relevant to an approach that includes the spiritual dimension that can then support a healthy Sustainable Development (SD).

A public space must be developed, including venues, vocabulary, and concepts, where the concerns of people of all faith traditions and non-faith persuasions can contribute in dialogue regarding the decisions of society towards the common good. To support this, methods and initiatives should be developed for multidisciplinary and transdisciplinary work on the aforementioned challenges.

This dialogue also involves proposing an understanding of the human that recognizes the value of the spiritual and moral dimension, and one which the public space should respect and support. Likewise an understanding of human freedom and human rights in the context of social interaction and the common good should also be proposed and afforded the same respect and support.

An understanding of politics and economics as serving the common good must be renewed. This requires tasking politics with transparency, accountability, and integrity. It requires an economy not predicated on self-interest and continuous growth, but on efficient satisfaction of people's needs and strengthening a foundation for the common good. It necessitates reformulating progress and Sustainable Development to serve human persons in an integral way which respects their transcendent dimension. The Church can provide the more substantial theoretical and ethical support for economic positions, such as those already critical of financialization, overconsumptive lifestyles, and the growth paradigm, as well as for integration and interdisciplinarity in development, and strategies prioritizing energy for all and climate change adaptation to protect the poor.

Recognized in many studies as key to the wellbeing and flourishing of human persons, *the family is an essential space of Human Ecology*, and needs to be acknowledged and supported. Likewise, the concepts of gratuitousness and of gift, advanced by Benedict XVI, and their implied disposition of generous self-giving, have to regain space in social interaction, including the economic and political. It will also help to identify which aspects of secular liberalism, the policy sciences, and other prevalent concepts, currently undermine Human Ecology and the corrections that are warranted.

A sound Human Ecology can contribute by providing *a persuasive* rationale in the context of the common good, and the moral and spiritual motivation for change. Churches and faith traditions must rise up to inspire with the best of virtue and the human vocation, to infuse human pursuits with

their true meaning and purpose. It is the task of the Church and faith traditions to propose a personal path of conversion towards a life of virtue and solidarity and service to the common good.

7. Themes to deepen spiritual reflection on Human Ecology

a) Ecology, Human Ecology and holiness

The ecology of nature and Human Ecology are deeply intertwined. Injustice and abuse in one affects the other. 1264 Furthermore, the response of mankind very closely decides the fate of the creation we so much love. Along with care for the natural environment, we also have to care for a "Human Ecology" that provides the space for the dignity and fulfillment of the human person and the good life for all, according to God's plan. 1265 According to Vatican II, both social and ecological problems arise from man: "The truth is that the imbalances under which the modern world labors are linked with that more basic imbalance which is rooted in the heart of man." 1266 The fate of mankind and of creation is decided in each person's heart. Jesus Christ gives us back our heart so we can love and serve. 1267 The environment suffers because the human person and society suffer. Every time we choose evil and sin, we are harming the little ones: creation and our vulnerable brothers and sisters. Human Ecology shows that the best environmentalist is the saint, who loves in the image of Jesus Christ.

¹²⁶⁴ Pope John Paul II, *Centesimus Annus*, §37; Pope Benedict XVI, World Day of Peace 2007, §8; *Caritas in veritate*, §51; "World Day of Peace 2010," §11.

366

¹²⁶⁵ Pope John Paul II, Centesimus Annus, §38; Evangelium Vitae, §42.

¹²⁶⁶ Pope Paul VI, Gaudium et spes, §10.

¹²⁶⁷ The Holy Bible, Ezekiel 36:26.

The best planned, reasoned out, and engineered solutions are worthless without the wisdom which penetrates the mystery of human nature, and without wisdom's fulfillment in the myriad ways love binds us in familial and social relations and gives us a purpose that transcends ourselves. We need truth, and we need the truth that only God can provide.

b) Reconciliation and Ecology

The theology of reconciliation helps Christians understand the human relationship with creation. Ecology and Human Ecology have as their foundation a Trinitarian dimension which imprints its relational dynamic of love. The anthropological consequence of the Trinity is the human being made for relationship and encounter at his deepest core. Although, relationship and love fulfill man; this has been ruptured by original sin and our own sins. Therefore, we are called to reconciliation at four fundamental levels, as outlined in Pope John Paul II's encyclical Reconciliatio et Paenitentia: "Four reconciliations which repair the four fundamental rifts; reconciliation of man with God, with self, with the brethren and with the whole of creation."1268 This reconciliatory perspective lends itself to exploring the "culture of encounter" (so often proposed by Pope Francis and the Latin American bishops' document of Aparecida) with the environment and our brethren. The answer to a "culture of waste" is the "culture of encounter", a culture of giving and of charity, but also a culture that fosters our encounter with creation, in reverent wonder at God's gift to us

-

¹²⁶⁸ Pope John Paul II, Reconciliatio et Paenitentia, §26.

Healthy self-interest has much to contribute to the Human Ecology, but only if enhanced and complemented by love. It is in our own enlightened self-interest to recognize that we need to strive beyond it, seeking virtue and making a gift of ourselves to others, to achieve the fullness of joy, the fruit of authentic flourishing. Self-interest, justice, reason and rights are all good, but we need heroic virtue, forgiveness, and charity, to achieve the best expression of humanity and of social harmony.

c) Christocentrism

Christian faith leads to a way of encounter as a positive response to ecological challenges. Inspired by anthropological pessimism, the environmental landscape of ideas is often littered with moralistic and conflictive approaches emphasizing negative aspects of human relationship with and impact on nature, resulting in a "grave assault not only on nature, but also on human dignity itself."1269 Rather than limit and place conditions on human interaction, the Catholic faith looks to abundance in our relationship with creation in love, as expressed magnificently by St. Paul: "For all things are yours, and you are Christ's; and Christ is God's."1270 When mankind is understood in a distinctive Christological way, all things belong to man, in full conformity with the biblical account of Genesis. Because man is made for God, and called to live in the image of Christ, all things belong to him. 1271 A theological anthropocentrism, or Christocentrism, which affirms the unique dignity of man as the center of creation and whose distinctive trait is the

¹²⁶⁹ Benedict XVI, "Message for the World Day of Peace 2010," §13.

¹²⁷⁰ The Holy Bible, 1 Corinthians 21:23.

¹²⁷¹ Holy See, Catechism of the Catholic Church, 27.45.356; Pope Paul VI, Gaudium et Spes, §22.

relationship with God, is able to harmonize the "superior role of human beings"¹²⁷² with the responsibility to serve creation in achieving the fullness of being.

d) Power is service

Biblical scholarship helps understand today's environmental challenges. God's command for man to "subdue" creation in the book of Genesis, is derived from our sharing in the kingly mission of Christ, 1273 and so, is a profoundly Christological commandment, as is our duty to order society according to a Human Ecology. To criticize Christianity for promoting the abuse of creation or our fellow men is to misunderstand the meaning Jesus has given to power and authority:

The exercise of authority is *service*: we must never forget that true power, at any level, is service, whose bright summit is upon the Cross. Benedict XVI... [reminded us that] although man frequently equates authority with control, dominion, success, for God, authority is always synonymous with service, humility, love... [as] Jesus who kneels to wash the Apostles' feet, "and says to his disciples: "You know that the rulers of the Gentiles lord it over them... It shall not be so among you." 1274

John Paul II said "dominion granted to man by the Creator is not an absolute power, nor can one speak of a freedom to 'use and misuse,' or to dispose of things as one pleases." Abuse of both the natural and Human Ecology comes from revering the power of exercising reason and freedom without reference to what is good and true. 1276 this is not Christianity but its corruption and betrayal.

¹²⁷⁴ Pope Francis, "Address to the International Union of Superiors General," §2.

1276 Pope Leo XIII, Libertas, 15; Pope John Paul II, Centesimus Annus, §4.

369

¹²⁷² Benedict XVI, "Message for the World Day of Peace 2010," §13.

¹²⁷³ Pope John Paul II, Christifideles laici, §14.

 $^{^{\}rm 1275}$ Pope John Paul II, Sollicitudo Rei Socialis, §34

e) Charity, Solidarity and Human Ecology

Human Ecology is the healthy environment conducive to authentic human fulfillment. 1277 Charity in truth is the force which leads to human development and fulfillment as well as to the healthy ordering of society through justice and the common good, 1278 fostering a Human Ecology. Being a common space, Human Ecology requires the existence of a public space and language for the community of peoples and states to reflect and debate what is truly right and just while drawing from nature, conscience and reason to seek in common the defense of human rights, peace and justice. 1279 Human Ecology requires a public space not constrained by fundamentalism, relativism, positivism or any ideology or prejudice, but open to all women and men of good will.¹²⁸⁰ Human Ecology also requires that family, work, architecture, urbanism, lifestyles and all of culture respond to authentic human nature. A human economy must not be ruled by greed or consumerism, but use its wealth and resources in solidarity, among people and nations, so the world's population can satisfy its needs and live in dignity. Responsible stewardship over nature must ensure its protection and the sustainability of the entire human family now and in the future. 1281

Popes John Paul II and Benedict XVI emphasized the need for a change of lifestyles, for solidarity, suffering with others, and using and having less in order to give more to others. Solidarity should be a guiding principle for

1277 Pope John Paul II, Centesimus Annus, §38.

¹²⁷⁸ Pope Benedict XVI, Caritas in Veritate, §§1-2, 6-7.

¹²⁷⁹ Benedict XVI, "Speech at the Bundestag."

 $^{^{\}rm 1280}$ Benedict XVI, "Speech at the Bundestag."; Address to La Sapienza.

¹²⁸¹ Pope Benedict XVI, Caritas in Veritate, §§50, 51.

engaging specific environmental problems. In the complex and many-sided issue of climate change, solidarity will provide a worthy reason to change overconsumptive lifestyles, and will also favor approaches that emphasize adaptation, that is, helping vulnerable communities and even ecosystems who are at risk, rather than investing first in technological or long term economic solutions which disregard the immediate needs of the poor. We must engage specific ecological issues such as climate change, water availability, food, biodiversity, energy, resources extraction and economics, pollution, and others, with direct impact on the poor.

f) Ecology, Human Ecology and evangelization

Finally, the interest of modern culture, especially in the youth, on issues of ecology and Human Ecology can be a great avenue to encounter Jesus Christ. Benedict XVI said, "And in this we must take care to perceive the signs of the times in our epoch, namely, to identify the potentials, aspirations and obstacles we encounter in today's culture and in particular the wish for authenticity, the yearning for transcendence, and concern to safeguard Creation and to communicate fearlessly the response that faith in God offers." Reflection, experience, and action in nature can point any person, believers and non-believers alike, to authentic transcendence itself, the Creator of the world. Human Ecology can also help to evangelize culture by framing urgent social issues, such as those related to the family or to Sustainable Development, in an appealing way, with an objective reference to nature and placing individual rights in the context of the common good.

-

¹²⁸² Pope Benedict XVI, General Audience, November 28, 2012.

This path invites Catholics to evangelize and reach those who are on the peripheries: "We cannot forget that evangelization is first and foremost about preaching the Gospel to those who do not know Jesus Christ, or who have always rejected him. Many of them are quietly seeking God, led by a yearning to see his face, even in countries of ancient Christian tradition." Experiences of nature and beauty can provide opportunities for responding to "missionary activity [which] still represents the greatest challenge for the Church." Since we "cannot passively and calmly wait in our church buildings," by living a Human Ecology in communion with creation we can literally move into the streets, fields and forests.

¹²⁸³ Pope Francis, Evangelii Gaudium, §15.

¹²⁸⁴ Pope John Paul II, *Redemptoris Missio*, §40.

¹²⁸⁵ CELAM, Aparecida Document, §548.

Bibliography

- Alberti, M. "The effects of urban patterns on ecosystem function." *International Regional Science Review.* 28 (2) (2005): 169-192.
- ---. "Climate change and place." *Places* 20 (2) (2008): 4-7.
- Alberti, M., Marzluff. J. Shulenberger, E., Bradley, G. Ryan, C. and C. Zumbrunnen. "Integrating Humans Into Ecology: Opportunities And Challenges For Urban Ecology." *BioScience.* Vol. 53, No.12. (2003)
- Amadei, Bernard. Engineering for Sustainable Human Development: A Guide to Successful Small-Scale Community Projects. Reston: ASCE Press, 2014.
- Ambrozic, José. "Beyond Public Reason on Energy Justice: Solidarity and Catholic Social Teaching." *Colorado Journal of Environmental Law and Policy*. 21, no. 2 (2010): 381-398.
- ---. "La Humanidad despierta a la Ecología," El Comercio, July 2, 2013.
- ---. "Hombre y Contaminación," El Comercio, July 9, 2013.
- Bachiochi, Erika. "Safeguarding the moral conditions for an authentic human ecology." In *Human Ecology*, Conference Proceedings. Washington D.C.: The Catholic University of America, (2016): 97-103.
- Barrows, Harlan H. Geography as Human Ecology, *Annals of the Association of American Geographers*, Vol. 13, No. 1 (Mar., 1923): 1-14 Pub. by: Taylor & Francis, Ltd. on behalf of the Association of American Geographers.
- Baudrillard, Jean. *In the Shadow of the Silent Majorities*. New York: Semiotext, 1983.
- Bates, Daniel G. and Judith Tucker. Introductory remarks in *Human Ecology: Contemporary Research and Practice*, eds., Springer (2010).
- Bauzon, Stéphane. "La dignité de la Terre." *Table ronde : Ecologie humaine et développement durable*. Angelicum, Rome. 23 janvier 2012.
- Berliet, Jean-Pierre. *Risk shifting, Justice, and Solidarity in Catholic Social Teaching*. Unpublished paper, June 27, 2016.
- Blanchard, Troy C., John R Bartkowski, Todd L. Matthews, and Kent R. Kerley. Faith, Morality and Mortality: The Ecological Impact of Religion on Population Health. *Social Forces* Volume 86, Number 4, The University of North Carolina Press. (June 2008):1591-1620.
- Bloom, Allan. *The Closing of the American Mind*. New York: Simon & Schuster Paperbacks, 1987.
- Blue Letter Bible. "Dictionary and Word Search for radah (Strong's 7287)". Blue Letter Bible. 1996-2011. 5 Jun 2011. Accessed Oct 11, 2018,

- http://www.blueletterbible.org/lang/lexicon/lexicon.cfm?Strongs=H7287&t=KJV
- Boquet, Shenan J. "By Their Fruits (and Their Names) You Shall Know Them," Human Life International. April 8, 2017. Accessed Oct 11, 2018, https://www.hli.org/2017/04/by-their-fruits-and-names/
- Bourne, Lisa. "As Pope, other Vatican officials champion UN Goals, Holy See instead has moral objections," Lifesite News. Apr 5, 2017. Accessed Oct 11, 2018, https://www.lifesitenews.com/news/struggle-in-the-vatican-over-take-on-un-environmentalist-project
- ---. "Pope's emissary slams UN population control efforts." Apr 7, 2017.

 Accessed Oct 11, 2018, https://www.lifesitenews.com/news/popes-emissary-slams-un-population-control-efforts?utm_source=LifePetitions+petition+signers&utm_campaign=a9e ee59e32Catholic_1_171_17_2017&utm_medium=email&utm_term=0_c5c75ce94 0-a9ee659e32-398917325
- Brooks, Arthur C. Gross National Happiness. New York: Basic Books, 2008.
- Brooks, David. "The Heart Grows Smarter," *New York Times, Opinion*, November 5, 2012. Accessed Oct. 11, 2018, http://www.nytimes.com/2012/11/06/opinion/brooks-the-heart-grows-smarter.html?_r=0
- Bruhn, John G. "Human ecology: A unifying science?" *Human Ecology* Vol. 2, No. 2 (Apr. 1974): 105-125. Springer, Accessed Oct. 11, 2018, http://www.jstor.org/stable/4602290.
- Carson, Rachel. Silent Spring. New York: Houghton Mifflin, 1962.
- Catholic News Agency. "Same-Sex Marriage Will Impact Religious Liberty Say Experts," June 12, 2006. Accessed Oct. 11, 2018, http://www.catholicnewsagency.com/news/samesex_marriage_will_impact_religious_liberty_say_experts/
- ---. "D.C. Council Members Push for Same Sex 'Marriage' Compromise," Nov. 21, 2009. Accessed Oct. 11, 2018, http://www.catholicnewsagency.com/news/d.c._council_members_push_for_same_sex_marriage_compromise/
- ---. "Rutherford Institute Takes Case of Boy Given Psych Evaluation After Drawing Jesus," Dec. 17, 2009. Accessed Oct. 11, 2018, http://www.catholicnewsagency.com/news/rutherford_institute_takes_case_of_boy_given_psych_evaluation_after_drawing_jesus/
- Catton, William R. and Riley Dunlap. "A New Ecological Paradigm for a Post Exuberant Sociology", *America Behavioral Scientist*, Vol. 24 No. 1, Sept/Oct 1980.

- CELAM, Fifth General Conference, Aparecida. May 2007. Accessed Oct. 11, 2018, http://www.celam.org/aparecida/Ingles.pdf
- Center for International Environmental Law (CIEL), "Smoke & Fumes." Accessed May 20, 2017, https://www.smokeandfumes.org/fumes
- Chaput, O.F.M. Cap, Charles J. Remarks to City Club of Denver, March 1, 2005, Accessed April 6, 2010, http://www.archden.org/index.cfm/ID/278/Addresses/
- ---. OSCE Conference on Anti-Semitism and Other Forms of Intolerance (Session 5) June 9, 2005, Cordoba, Spain, Accessed March 28, 2010, http://www.archden.org/index.cfm/ID/278/Addresses/
- ---. "Christmas under Siege around the World", Religious Freedom Panel Remarks, December 14, 2005, Washington, DC, Accessed March 29, 2010, http://www.archden.org/index.cfm/ID/278/Addresses/
- ---. "Seeing Clearly", 1st Annual Orange County Prayer Breakfast, Garden Grove, CA, December 7, 2006, Accessed March 29, 2010, http://www.archden.org/index.cfm/ID/278/Addresses/
- ---. Religion and the common good, John Cardinal Krol Conference, Philadelphia, April 21, 2007, Accessed March 29, 2010, http://www.archden.org/index.cfm/ID/278/Addresses/
- ---. "Religious Tolerance and the Common Good", Talk Delivered At The Path To Peace Foundation seminar "Catholic Students and the Common Good: Building a Better World" in New York on May 22, 2007, Accessed March 28, 2010, http://www.archden.org/index.cfm/ID/278/Addresses/
- ---. Acceptance Remarks: "The Canterbury Award", May 7, 2009, Accessed March 29, 2010, http://www.archden.org/index.cfm/ID/2019
- ---. "The Vocation of Christians in American Public Life," Monday, March 1, 2010 at Houston Baptist University, Accessed March 2, 2010, http://www.archden.org/index.cfm/ID/3489
- Mona Charen. What the Times Misses about Poverty. *National Review*. September 14, 2018. Accessed Sept 19, 2018, https://www.nationalreview.com/2018/09/new-york-times-story-misunderstands-poverty/
- Cicero, Tusculanas, II,5,13.
- Cremers, Martijn. In "Panel Discussion III." In *Human Ecology*, Conference Proceedings.. Washington D.C.: The Catholic University of America, (2016): 16-19.
- D'Amecourt, Joseph. "Écologie humaine." *Table ronde : Ecologie humaine et développement durable.* Angelicum, Rome. 23 janvier 2012.

- Daboub, Juan José. "How do we integrate environment, business and faith?" In *Human Ecology*, Conference Proceedings. Washington D.C., The Catholic University of America, (2016): 127-133.
- Dagdeviren, Hulya (SOAS), Rolph van der Hoeven (ILO), and John Weeks (SOAS) "Redistribution Matters: Growth for Poverty Reduction." ILO & SOAS. (October 2000).
- Daly, Mary C., Andrew J. Oswald, Daniel Wilson, and Stephen Wu. Dark "Contrasts: The Paradox of High Rates of Suicide in Happy Places," Tendencias21, April 2011, 4. Accessed Oct. 11, 2018, http://www.tendencias21.net/attachment/270439/
- Dawkins, Richard. *The Selfish Gene,* (Oxford: Oxford University Press, 1989) 123, V., quoted in Robert Spaemann, *Essays in Anthropology,* Eugene, OR: Cascade Books, 2010, 6.
- Deneen, Patrick J. "Moral Minority." First Things. April 2017, 49-54.
- ---. "The Ignoble Lie." *First Things*. April 2018. Accessed March 11, 2018, https://www.firstthings.com/article/2018/04/the-ignoble-lie
- del Noce, Augusto. Carta a Rodolfo Quadrelli. Unpublished, 1985. Quoted in Scola, Angelo. "Famiglia, nuova evangelizzazione e cultura contemporanea," in AA.VV., *La famiglia: dono e impegno speranza dell'umanità*, Libreria Editrice Vaticana, Ciudad del Vaticano 1998.
- Diamond, Jared. Guns, Germs and Steel. New York: W.W. Norton & Co., 1997.
- Doig, Germán. *Derechos Humanos y Enseñanza Social de la Iglesia*. Lima: VE, 1991.
- Dollar, David, Kleineberg, Tatjana and Kraay, Aart. "Growth Still Is Good for the Poor." *Policy Research working paper; no.WPS 6568*. Washington, DC: World Bank Group, August 2013. doi/pdf/10.1596/1813-9450-6568.
- Dunlap, R. E., Van Liere, K. D., Mertig, A. G., and Jones, R. E. "New Trends in Measuring Environmental Attitudes: Measuring endorsement of the New Ecological Paradigm: A revised NEP scale." *Journal of Social Issues*, 56(3), (2000): 425-442.
- Dunlap, R. E., and Van Liere, K. D.. "The new environmental paradigm: A proposed measuring instrument and preliminary results." *Journal of Environmental Education*, 9(1), (1978): 10–19.
- Dyball, Robert and Barry Newell. *Understanding Human Ecology*. London: Routledge, 2015.
- Eberstadt, Mary. "Fighting the good fight: religious liberty vs. The sexual revolution." In *Human Ecology*, Conference Proceedings. Washington D.C.: The Catholic University of America, (2016): 105-110.
- Figari, Luis Fernando. Longing for Infinity. Lima: Vida y Espiritualidad, 2006.

- ---. La Dignidad del Hombre y los Derechos Humanos. Lima: FE, 1991.
- Fortin, Ernest L. *Collected Essays*, Volume 3, Reprinted in Human Rights, Virtue, And The Common Good: Untimely Meditations In Religion And Politics. J. Brian Benestad ed., 1996.
- Frankl, Victor E. Man's Search for Meaning. New York: Pocket Books, 1963.
- Fromm, Erich. The Art of Loving. New York: Harper, 1956.
- García Quesada, Alfredo. La cultura de hoy y la reconciliación. *Vida y Espiritualidad*. Vol 25, Set-Dic, Issue 74, (2009): 11-30, Centro Cultural de Investigación y Publicaciones Vida y Espiritualidad, Lima.
- Garza, Emilio M. "Thoughts on Conscience and Ourselves," Conference at the Hispanic Leadership Conference, St Malo, Denver, August 2006.
- Gheorghiu, Virgil. *The Twenty-Fifth Hour*. Richmond Hill, Ontario, Canada: Simon & Schuster of Canada, Ltd., 1950.
- Glanzberg, Michael, "Truth", The Stanford Encyclopedia of Philosophy (Winter 2016 Edition), Edward N. Zalta (ed.), accessed March 19, 2018, https://plato.stanford.edu/archives/win2016/entries/truth/
- Golley, Frank Benjamin. *A History of the Ecosystem Concept in Ecology*. New Haven: Yale University Press, 1993.
- Goode, J. P. "The human response to the physical environment." *Journal of Geography* 3, (1904): 333–43.
- Gottman, John M. What Predicts Divorce?: The Relationship Between Marital Processes and Marital Outcomes. New York, NY, U.S.A.: Lawrence Erlbaum Associates, Inc., 1993.
- Grisez, Germain and Russell Shaw. *Fulfillment In Christ*. Notre Dame, Indiana: University of Notre Dame Press, 1991.
- Gross, Matthias. "Human Geography and Ecological Sociology: The Unfolding of a Human Ecology, 1890 to 1930 and Beyond," *Social Science History 28*, no. 4 (2004): 575-605.
- Grygiel, Stanislaw. "Antropología para un Occidente postmoderno" (interview), «Humanitas» 31 (2003): 502. Accessed Oct. 11, 2018. https://issuu.com/humanitas60/docs/humanitas_31_pdf
- Guruswamy, Lakshman D. "Energy Poverty." *Annual Review of Environment and Resources*, Vol. 36, (2011): 139-161. Accessed Oct. 11, 2018, https://ssrn.com/abstract=1955068 or http://dx.doi.org/10.1146/annurev-environ-040610-090118
- ---. *International Environmental Law. 4th Edition*. St. Paul: West Publishing Co., 2012.
- ---. *International Energy and Poverty*. New York: Routledge, 2016.

- Haberman, Clyde. The Unrealized Horrors of Population Explosion. *The New York Times. Retro Report.* May 31, 2015. Accessed Oct. 11, 2018, https://www.nytimes.com/2015/06/01/us/the-unrealized-horrors-of-population-explosion.html?smid=tw-share&_r=2
- Habermas, Jurgen. Truth and Justification. Cambridge, MA: MIT Press, 2003.
- ---. Between Naturalism and Religion. Cambridge: Polity Press, 2008.
- Habermas, Jurgen, and Joseph Ratzinger. *The Dialectics of Secularization: On reason and religion*. San Francisco: Ignatius Press, 2006.
- Hanna, Frank. "What kind of virtuous relationships lead to prosperity" In *Human Ecology*, Conference Proceedings. Washington D.C.: The Catholic University of America, (2016): 111-117.
- Hauser, Philip. "Demography and Ecology," *Academy of Political and Social Science*, 129.
- Hawley, Amos H. Human Ecology. New York: Ronald Press, 1950.
- Hayes, Edward C. *Sociological Construction Lines: A Dissertation*. Chicago: University of Chicago Press, 1905 [1902].
- ---. "The 'social forces' error." *American Journal of Sociology.* 16: (1911): 613–25.
- Hobbes, Thomas. *The Leviathan* (Indianapolis: Hackett Publishing, 1994), Book 1, Chapter 13, p. 76, quoted in Jameson Taylor, "Beyond Nature: Karol Wojtyla's Development of the Traditional Definition of Personhood," *The Review of Metaphysics* 250 (December 2009): 415-454, 439.
- Holy See. *Catechism of The Catholic Church*. Vatican City: Libreria Editrice Vaticana, 1993.
- ---. Synod of Bishops Special Assembly for America *Instrumentum Laboris*, 1997. Accessed Oct. 11, 2018, http://www.vatican.va/roman_curia/synod/documents/rc_synod_doc_01091997_usa-instrlabor_en.html
- ---. Statement at the Third Ministerial Conference of the World Trade
 Organization Dec 2, 1999. Accessed Oct. 11, 2018,
 http://www.vatican.va/roman_curia/secretariat_state/1999/document
 s/rc_seg-st_19991202_wto_en.html
- ---. Intervention at the World Summit on Sustainable Development,
 Johannesburg, South Africa, September 2, 2002. Accessed Oct. 11, 2018,
 http://www.vatican.va/roman_curia/secretariat_state/documents/rc_s
 eg-st_doc_20020902_martino-johannesburg_en.html
- ---. Intervention at the 11th Session of the UN Commission on Sustainable Development, April 30, 2003. Accessed Oct. 11, 2018,

- http://www.vatican.va/roman_curia/secretariat_state/2003/document s/rc_seg-st_20030430_sustainable-development_en.html
- ---. Intervention at the Second Committee of the General Assembly of the United Nations on Sustainable Development (Item 88). October 5, 2004.

 Accessed Oct. 11, 2018,

 http://www.vatican.va/roman_curia/secretariat_state/2004/document s/rc_seg-st_20041005_sustainable-development_en.html
- ---. Statement at the Fourth Ministerial Conference of the Bologna Process Bergen (Norway), 19-20 May 2005. Accessed Oct. 11, 2018,
 http://www.vatican.va/roman_curia/secretariat_state/2005/document
 s/rc_seg-st_20050519_bologna-process_en.html
- ---. Intervention at the International Conference on Agrarian Reform and Rural Development. Porto Alegre, March 6-10, 2006. Accessed Oct. 11, 2018, http://www.vatican.va/roman_curia/secretariat_state/2006/document s/rc_seg-st_20060307_nota-porto-alegre_en.html
- ---. Intervention at the 14th Session of the Commission on Sustainable

 Development of the Ecosoc, May 11, 2006. Accessed Oct. 11, 2018,

 http://www.vatican.va/roman_curia/secretariat_state/2006/document-s/rc-seg-st-20060511 ecosoc en.html
- ---. Intervention at the 15th Session of the Commission on Sustainable
 Development of the UN Economic and Social Council, May 10, 2007.
 Accessed Oct. 11, 2018,
 http://www.vatican.va/roman_curia/secretariat_state/2007/document
 s/rc_seg-st_20070510_ecosoc_en.html
- ---. Intervention at the 54th General Conference of the International Atomic Energy Agency (I.A.E.A.), September 21, 2010. Accessed Oct. 11, 2018, http://www.vatican.va/roman_curia/secretariat_state/2010/document s/rc_seg-st_20100921_iaea_en.html
- Hopkins, Ed. "Inequality, Happiness and Relative Concerns: What Actually is their Relationship?" University of Edinburgh, January, 2008. Accessed Oct. 11, 2018, http://homepages.econ.ed.ac.uk/~hopkinse/ineqsurvey.pdf
- Horkheimer, Max and Theodor W Adorno. *Dialectic of Enlightenment*.

 Translated by John Cumming. London: Verso, 1976, quoted in Robert Spaemann, *Essays in Anthropology*, Eugene, OR: Cascade Books, 2010, 57.
- Hulme, Mike. Why We Disagree about Climate Change: Understanding Controversy, Inaction and Opportunity. New York: Cambridge University Press, 2009.
- Hymowitz, Kay S. "Boy Trouble Family breakdown disproportionately harms young males—and they're falling further behind." *The Social Order*, (Autumn 2013). Accessed Oct. 11, 2018, https://www.city-journal.org/html/boy-trouble-13615.html

- International Theological Commission *Communion and Stewardship*. July, 2004. Accessed Oct. 11, 2018, http://www.vatican.va/roman_curia/congregations/cfaith/cti_documen ts/rc_con_cfaith_doc_20040723_communion-stewardship_en.html
- International Union for Conservation of Nature, World Conservation Strategy:
 Living Resource Conservation for Sustainable Development. (Gland,
 Switzerland: IUCN, 1980), quoted in Sachs, The Age of Sustainable
 Development, New York: Columbia University Press, 2015, 5.
- Jackson, Tim. Prosperity Without Growth. London: Earthscan, 2009.
- Kaminsky, Graciela L., Carmen M. Reinhart, and Carlos A. Végh. *When It Rains, It Pours: Procyclical Capital Flows And Macroeconomic Policies*. Working Paper 10780. National Bureau of Economic Research, Cambridge, MA. September 2004. Accessed Oct. 11, 2018, http://www.nber.org/papers/w10780
- Kant, Emmanuel. Crítica de la razón pura.
- Kelly, Anthony J. "Expanding Theology: Faith in a World of Connections." Australian Catholic University, 2003. Accessed Feb 20, 2017, https://resource.acu.edu.au/ankelly/Chapter1.htm
- Kennedy, Robert. "What are the links between virtue and prosperity" In *Human Ecology*, Conference Proceedings. Washington D.C.: The Catholic University of America, (2016): 41-45.
- Kirkpatrick, David D. "The Conservative-Christian Big Thinker," *New York Times*, Dec, 20, 2009. Accessed Oct. 11, 2018, http://www.nytimes.com/2009/12/20/magazine/20george-t.html?_r=2&scp=1&sq=chaput&st=cse
- Knutsson, Per. "The Sustainable Livelihoods Approach: A Framework for Knowledge Integration Assessment." *Human Ecology Review*, Vol. 13, No. 1, 2006. Accessed Oct. 11, 2018, http://www.humanecologyreview.org/pastissues/her131/knutsson.pdf
- Kormondy, Edward J. *Concepts of Ecology*, 4th Ed. Upper Saddle River, NJ: Pearson, 1996.
- Kuhn, Thomas S. *The Structure Of Scientific Revolutions*. Chicago: University of Chicago Press, 1970.
- Kuznets, Simon. "National Income, 1929–1932". 73rd US Congress, 2d session, Senate document no. 124, 1934. Accessed June 21, 2015, https://fraser.stlouisfed.org/scribd/?title_id=971&filepath=/docs/publi cations/natincome_1934/19340104_nationalinc.pdf.
- Lambert, Craig. The Science of Happiness. *Harvard Magazine*, January-February 2007, Accessed Oct. 11, 2018, http://harvardmagazine.com/2007/01/the-science-of-happiness.html

- Lasch, Christopher. *Culture of Narcissism.* New York: WW Norton, 1991.
- Last, Jonathan V. "Paul Ehrlich: Even Worse than the New York Times Says He Is." *The Weekly Standard*, Jun 02, 2015. Accessed Oct. 11, 2018, http://www.weeklystandard.com/paul-ehrlich-even-worse-than-the-new-york-times-says-he-is/article/962990#.VwEGJ82jVb9.facebook
- Lasswell, Harold D. And Abraham Kaplan. *Power and Society*. New Haven, CT: Yale University Press, 1950.
- Lasswell, Harold. *A preview to the Policy Sciences*. Chicago: American Elsevier Publishing, 1971.
- Lecourt, Dominique. "Écologie humaine." *Table ronde: Ecologie humaine et développement durable.* Angelicum, Rome. 23 janvier 2012.
- Leopold, Aldo. Sand County Almanac. Oxford: Oxford University Press, 1987.
- Locke, John. *Two Treatises of Government*, (New York: Cambrige University Press, 1993), quoted in Taylor, Jameson. "Beyond Nature: Karol Wojtyla's Development of the Traditional Definition of Personhood." *The Review of Metaphysics* 250 (December 2009): 415-454, 439.
- Looney, Robert. "Democracy Is the Answer to Climate Change." *Foreign Policy*. June 1, 2016. Accessed Oct. 11, 2018, http://foreignpolicy.com/2016/06/01/democracy-is-the-answer-to-climate-change/
- López Trujillo, Cardinal Alfonso. Pontifical Council for the Family, Special Session of the United Nations on Children. May 9, 2002. Accessed Oct. 11, 2018, http://www.vatican.va/roman_curia/secretariat_state/documents/rc_s eg-st_doc_20020509_trujillo-onu_en.html
- Luhmann, Niklas. Social Systems. Stanford: Stanford University Press, 1995.
- Marten, Gerald G. *Human Ecology: Basic Concepts for Sustainable Development*. New York: Earthscan, 2001.
- Martinez de Anguita, Environmental Solidarity, pre-publication, quoted in Mary Taylor, "'Environmental Ethics and the Philosophical, Theological, and Literary Foundations for a Metaphysics of Nature". PhD diss., Universidad Rey Juan Carlos, 2012.
- Marzluff, J.; Shulenberger, E.; Endlicher, W.; Alberti, M.; Bradley, G.; Ryan, C.; Zumbrunnen, C.; Simon, U. (Eds.). *Urban Ecology: An International Perspective on the Interaction Between Humans and Nature*, 2008.
- Maslow, Abraham H. "A Theory of Human Motivation." Originally Published in *Psychological Review*, 50, 370-396. 1943. Accessed Oct. 11, 2018, http://psychclassics.yorku.ca/Maslow/motivation.htm
- ---. *New Knowledge in Human Values*. Chicago: Gateway Editions, 1970.

- ---. *Religions, Values and Peak-Experiences*. New York: Viking Press, 1970.
- McKenzie, Roderick D. "The Scope of Human Ecology." *The American Sociological Society*. (1926): 141-154.
- Mosher, Steven and Anne Morse. "The New York Times Throws in the Towel on "Overpopulation"." Population Research Institute. Jun 2, 2015. Accessed Oct. 11, 2018, https://www.pop.org/?s=The+New+York+Times+Throws+in+the+Tow el
- Moynihan, Daniel P. "The Negro Family: The Case For National Action." Office of Policy Planning and Research. United States Department of Labor. March 1965. Accessed Oct. 11, 2018, http://dol.gov/oasam/programs/history/webid-meynihan.htm
- ---. "Defining Deviancy Down." *American Educator*. American Federation of Teachers. Winter 1993/1994, 10-18.
- Mullarkey, Maureen. The Toxic Legacy of Rachel Carson. 4/27/15. Accessed April 28, 2015, http://www.firstthings.com/blogs/mullarkey/2015/04/the-toxic-legacy-of-rachel-carson
- Muth, Rodney, Mary Finley, Marcia Muth, Harold D. *Lasswell: An Annotated Bibliography*, ed New Haven Press, New Haven CT, 1990.
- Neuhaus, Richard John. *American Babylon, Notes Of A Christian Exile*. New York: Basic Books, 2009.
- Newman, John Henry Cardinal. *An Essay on the Development of Christian Doctrine*. Notre Dame, Indiana: Notre Dame Press, 1989.
- Novak, Michael. "The Human Ecology of social justice." In *Human Ecology*, Conference Proceedings. Washington D.C.: The Catholic University of America, (2016): 65-70.
- Obama, Barack. Presidential Memorandum -- International Initiatives to Advance the Human Rights of Lesbian, Gay, Bisexual, and Transgender Persons. The White House. Office of the Press Secretary. December 06, 2011. Accessed Oct. 11, 2018, https://obamawhitehouse.archives.gov/the-press-office/2011/12/06/presidential-memorandum-international-initiatives-advance-human-rights-l
- Odum, Eugene P. *Ecological Vignettes: Ecological Approaches to Dealing with Human Predicaments*. Amsterdam: Harwood Academic Publishers, 1998.
- ---. "Ecosystems Ecologist and Environmentalist". *University of Georgia Wilson Center for Humanities and Arts*. Accessed October 12, 2012, http://www.cha.uga.edu/bjc/Odum-Intro.htm#N_17_
- ---. "The Strategy of the Ecosystem Concept," *Science* 164 (18 April 1969).

- Pakaluk, Catherine. "Leonine Foundations of Human Ecology." In *Human Ecology*, Conference Proceedings. Washington D.C.: The Catholic University of America, (2016): 47-56.
- Park, Robert Ezra. "Human ecology." *American Journal of Sociology* 42, No. 1 The University of Chicago Press. (Jul., 1936): 1-15. Accessed Oct. 12, 2012 http://www.jstor.org/stable/2768859
- Patz et al., University of Washington, Urban Ecology Research Laboratory. (2005).
- Pielke, Roger Jr. *The Climate Fix: What Scientists and Politicians Won't Tell You About Global Warming.* New York: Basic Books, 2010.
- Pieper, Josef. *Divine Madness: Plato's Case Against Secular Humanism*. San Francisco: Ignatius Press, 1995.
- Piff, Paul K., Daniel M. Stancato, Stéphane Côté, Rodolfo Mendoza-Denton, and Dacher Keltner. *Higher social class predicts increased unethical behavior.*Department of Psychology, University of California, Berkeley, and Rotman School of Management, University of Toronto. Edited* by Richard E. Nisbett, University of Michigan, Ann Arbor, MI, and approved January 26, 2012. All accessed Sept. 19. 2018, http://www.pnas.org/content/109/11/4086 https://www.youtube.com/watch?feature=player_embedded&v=IuqGrz-Y_Lc https://www.ted.com/talks/paul_piff_does_money_make_you_mean
- Piketty, Thomas. *Capital in the Twenty-First Century*. Cambridge: The Belknap Press of Harvard University Press, 2014.
- Pontifical Council for Justice and Peace. *Compendium of the Social Doctrine of the Church*. Washington D.C.: Libreria Editrice Vaticana, 2005.
- ---. The Fight Against Corruption, Sept 21, 2006. §s 5,7. Accessed Oct. 11, 2018, http://www.vatican.va/roman_curia/pontifical_councils/justpeace/doc uments/rc_pc_justpeace_doc_20060921_lotta-corruzione_en.html
- ---. Social And Ethical Aspects Of Economics. 2nd Edition. Vatican City: Pontifical Council For Justice And Peace, 2011. Follow up to the November 5, 1990 Seminar convened by John Paul II.
- Pontifical Council for the Family Preparation for the Sacrament of Marriage.
 May 13, 1996. Accessed Oct. 11, 2018,
 http://www.vatican.va/roman_curia/pontifical_councils/family/docum
 ents/rc_pc_family_doc_13051996_preparation-for-marriage_en.html
- Pope Benedict XVI. Homily at his Inaugural Mass. Rome, April 24, 2005.
 Accessed Oct. 11, 2018, http://w2.vatican.va/content/benedict-xvi/en/homilies/2005/documents/hf_ben-xvi_hom_20050424_inizio-pontificato.html

- ---. Speech to the Roman Curia for the Traditional Exchange of Christmas Greetings. 2005. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/speeches/2005/december/documents/hf_ben_xvi_spe_20051222_roman-curia_en.html
- ---. *Deus Caritas Est*. December 25, 2005. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/encyclicals/document s/hf_ben-xvi_enc_20051225_deus-caritas-est_en.html
- ---. Homily in the feast of the Baptism of the Lord. 2006. Accessed Oct. 11, 2018, http://w2.vatican.va/content/benedictxvi/en/homilies/2006/documents/hf_benxvi_hom_20060108_battesimo.html
- ---. Address to the 12th Plenary Assembly of the Pontifical Academy of Social Sciences. April 27, 2006. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/letters/2006/docume nts/hf_ben-xvi_let_20060427_social-sciences_en.html
- ---. Faith, Reason and the University, Regensburg, September 12, 2006.
 Accessed Oct. 11, 2018,
 http://www.vatican.va/holy_father/benedict_xvi/speeches/2006/septe
 mber/documents/hf_ben-xvi_spe_20060912_universityregensburg_en.html
- ---. Peace Message. The "ecology of peace". 2007. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/messages/peace/doc uments/hf_ben-xvi_mes_20061208_xl-world-day-peace_en.html
- ---. Letter to the 13th Plenary Assembly of the Pontifical Academy of Social Sciences. April 28, 2007. Accessed Oct. 11, 2018, http://w2.vatican.va/content/benedict-xvi/en/letters/2007/documents/hf_ben-xvi_let_20070428_scienze-sociali.html
- ---. Letter to the Ecumenical Patriarch of Constantinople on the occasion of the 7th Symposium of the Religion, Science and the Environment Movement. September 1, 2007, Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/letters/2007/docume nts/hf_ben-xvi_let_20070901_symposium-environment_en.html
- ---. Address intended for University of Rome "La Sapienza", 17 January, 2008.

 Accessed Oct. 11, 2018,

 http://www.vatican.va/holy_father/benedict_xvi/speeches/2008/january/documents/hf_ben-xvi_spe_20080117_la-sapienza_en.html
- ---. Address to the Interacademic Conference on "The Changing Identity of the Individual", 28 January, 2008. Accessed Oct. 11, 2018, http://w2.vatican.va/content/benedict-xvi/en/speeches/2008/january/documents/hf_ben-xvi_spe_20080128_convegno-individuo.html

- ---. Interview during the Flight to Australia Saturday, 12 July 2008. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/speeches/2008/july/documents/hf_ben-xvi_spe_20080712_interview_en.html
- ---. World Youth Day, Government House, 17 July 2008. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/speeches/2008/july/documents/hf_ben-xvi_spe_20080717_welcome_en.html
- ---. World Youth Day, Barangaroo, 17 July 2008. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/speeches/2008/july/documents/hf_ben-xvi_spe_20080717_barangaroo_en.html
- ---. Speech to the Roman Curia for the Traditional Exchange of Christmas Greetings. December 22, 2008. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/speeches/2008/december/documents/hf_ben-xvi_spe_20081222_curia-romana_en.html
- ---. Homily Mount of Precipice Nazareth, 14 May 2009. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/homilies/2009/docu ments/hf_ben-xvi_hom_20090514_precipizio_en.html
- ---. *Caritas in Veritate*. 2009. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/encyclicals/document s/hf_ben-xvi_enc_20090629_caritas-in-veritate_en.html
- ---. John of Salisbury: Natural Law must inspire Positive Law, Catech. Dec 16, 2009, Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/audiences/2009/doc uments/hf_ben-xvi_aud_20091216_en.html
- ---. Peace Message. 2010. If You want to Cultivate Peace, Protect Creation.

 Accessed Oct. 11, 2018,

 http://www.vatican.va/holy_father/benedict_xvi/messages/peace/doc
 uments/hf_ben-xvi_mes_20091208_xliii-world-day-peace_en.html
- ---. Homily at the 43rd World Day Of Peace. Vatican Basilica, Friday, 1st January 2010. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/homilies/2010/documents/hf_ben-xvi_hom_20100101_world-day-peace_en.html
- ---. Message for Lent. 2010. Accessed Oct. 19, 2018, http://w2.vatican.va/content/benedictxvi/en/messages/lent/documents/hf_ben-xvi_mes_20091030_lent-2010.html
- ---. Peace Message 2011. Religious Freedom, the Path to Peace. Accessed Oct. 11, 2018, http://w2.vatican.va/content/benedict-xvi/en/messages/peace/documents/hf_ben-xvi_mes_20101208_xliv-world-day-peace.html

- ---. Papal Address to Ghanaian Envoy to Holy See. Rome, June 9, 2011. Accessed Oct. 11, 2018, http://w2.vatican.va/content/benedict-xvi/en/speeches/2011/june/documents/hf_ben-xvi_spe_20110609_ambassador-ghana.html
- ---. Speech at the Bundestag, 2011. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/speeches/2011/septe mber/documents/hf_ben-xvi_spe_20110922_reichstag-berlin_en.html
- ---. Address to the Bishops of the United States of America, Ad Limina Visit, January 19, 2012. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/benedict_xvi/speeches/2012/january/documents/hf_ben-xvi_spe_20120119_bishops-usa_en.html
- Pope Francis, Evangelii Gaudium. 2013. Accessed Oct. 11, 2018, http://w2.vatican.va/content/francesco/en/apost_exhortations/documents/papa-francesco_esortazione-ap_20131124_evangelii-gaudium.html
- ---. General Audience, Paul VI Audience Hall, 28 November 2012. Accessed Oct. 11, 2018, http://w2.vatican.va/content/benedict-xvi/en/audiences/2012/documents/hf_ben-xvi_aud_20121128.html
- ---. Laudato Si': On Care For Our Common Home. 2015. Accessed Oct. 11, 2018, http://w2.vatican.va/content/francesco/en/encyclicals/documents/pa pa-francesco_20150524_enciclica-laudato-si.html
- ---. Address of Pope Francis to the International Union of Superiors General (I.U.S.G.), May 8, 2013. Accessed Oct. 11, 2018, http://w2.vatican.va/content/francesco/en/speeches/2013/may/documents/papa-francesco_20130508_uisg.html
- Pope John Paul II. Inaugural speech at Puebla. Puebla: Libreria Editrice Vaticana, 1979. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/john_paul_ii/speeches/1979/january/documents/hf_jp-ii_spe_19790128_messico-puebla-episc-latam_en.html
- ---. Redemptor Hominis. March 4, 1979. Accessed Oct. 11, 2018, http://w2.vatican.va/content/john-paulii/en/encyclicals/documents/hf_jp-ii_enc_04031979_redemptorhominis.html
- ---. Reconciliatio et Penitentiae. 1984. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/john_paul_ii/apost_exhortations/documents/hf_jp-ii_exh_02121984_reconciliatio-et-paenitentia_en.html
- ---. Sollicitude Rei Socialis. 1987. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/john_paul_ii/encyclicals/document s/hf_jp-ii_enc_30121987_sollicitudo-rei-socialis_en.html
- ---. Christifideles Laici. 1988. Accessed Oct. 11, 2018, http://w2.vatican.va/content/john-paul-

- ii/en/apost_exhortations/documents/hf_jp-ii_exh_30121988_christifideles-laici.html
- ---. Message for World Day of Peace. 1990. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/john_paul_ii/messages/peace/documents/hf_jp-ii_mes_19891208_xxiii-world-day-for-peace_en.html
- ---. Redemptoris Missio. 1990. Accessed Oct. 11, 2018, http://w2.vatican.va/content/john-paulii/en/encyclicals/documents/hf_jp-ii_enc_07121990_redemptorismissio.html
- ---. Centesimus Annus. 1991. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/john_paul_ii/encyclicals/document s/hf_jp-ii_enc_01051991_centesimus-annus_en.html
- ---. Discurso inaugural de la IV Conferencia General del Episcopado
 Latinoamericano, Santo Domingo. 1992. Accessed Oct. 11, 2018,
 http://www.vatican.va/holy_father/john_paul_ii/speeches/1992/octob
 er/documents/hf_jp-ii_spe_19921012_iv-conferencialatinoamerica sp.html
- ---. Veritatis Splendor. 1993. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/john_paul_ii/encyclicals/document s/hf_jp-ii_enc_06081993_veritatis-splendor_en.html
- ---. Evangelium Vitae. 1995. Accessed Oct. 11, 2018, http://w2.vatican.va/content/john-paulii/en/encyclicals/documents/hf_jp-ii_enc_25031995_evangeliumvitae.html
- ---. Fides et Ratio. 1998. Accessed Oct. 11, 2018, http://w2.vatican.va/content/john-paulii/en/encyclicals/documents/hf_jp-ii_enc_14091998_fides-et-ratio.html
- ---. Ecclesia in America, 71, January 22, in the year 1999. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/john_paul_ii/apost_exhortations/documents/hf_jp-ii_exh_22011999_ecclesia-in-america_en.html
- ---. Message of the Holy Father for the World Day of the Sick, Year 2000. Castel Gandolfo, August 6, 1999. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/john_paul_ii/messages/sick/documents/hf_jp-ii_mes_19990806_world-day-of-the-sick-2000_en.html
- ---. *God made man the steward of creation*. General Audience, Wednesday 17 January 2001. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/john_paul_ii/audiences/2001/documents/hf_jp-ii_aud_20010117_en.html
- ---. Post-Synodal Apostolic Exhortation Pastores Gregis. Oct 2003. Accessed Oct. 11, 2018.

- http://www.vatican.va/holy_father/john_paul_ii/apost_exhortations/documents/hf_ip-ii_exh_20031016_pastores-gregis_en.html
- Pope Leo XIII, Libertas, 1888. Accessed Oct. 11, 2018, http://w2.vatican.va/content/leo-xiii/en/encyclicals/documents/hf_l-xiii_enc_20061888_libertas.html
- ---. Rerum Novarum. 1891. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/leo_xiii/encyclicals/documents/hf_l -xiii_enc_15051891_rerum-novarum_en.html
- Pope Paul VI. Speech at the United Nations. New York: Libreria Editrice Vaticana, 1965. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/paul_vi/speeches/1965/documents/hf_p-vi_spe_19651004_sacra-famiglia-new-york_en.html
- ---. Gaudium et Spes. Dec. 7, 1965. Accessed Oct. 11, 2018, http://www.vatican.va/archive/hist_councils/ii_vatican_council/documents/vat-ii_const_19651207_gaudium-et-spes_en.html
- ---. Populorum Progressio. March 26, 1967. Accessed Oct. 11, 2018, http://w2.vatican.va/content/paul-vi/en/encyclicals/documents/hf_p-vi_enc_26031967_populorum.html
- ---. Octogesima Adveniens. 1971. Accessed Oct. 11, 2018, http://www.vatican.va/holy_father/paul_vi/apost_letters/documents/hf_p-vi_apl_19710514_octogesima-adveniens_en.html
- ---. Regina Coeli. Sunday, April 18, 1971. Accessed Oct. 11, 2018, http://w2.vatican.va/content/paul-vi/it/angelus/1971/documents/hf_p-vi_reg_19710418.html
- ---. General Audience. Wednesday, November 7, 1973. Accessed Oct. 11, 2018, https://w2.vatican.va/content/paul-vi/it/audiences/1973/documents/hf_p-vi_aud_19731107.html
- Poupard, Card. Paul. *Felicidad y Fe Cristiana*, Estudio del Consejo Pontificio para el Diálogo con los no creyentes, Barcelona: Editorial Herder, 1992.
- Prins, Gwyn, Isabel Galiana, Christopher Green, Reiner Grundmann, Mike Hulme, Atte Korhola, Frank Laird, et al. "The Hartwell Paper. A new direction for climate policy after the crash of 2009." University of Oxford. LSE. May 2010.
- Putnam, Hilary. *The Collapse of the Fact / Value Dichotomy and other Essays*. Cambridge MA: Harvard University Press, 2002.
- Quinn, James A. "The Nature of Human Ecology-Reëxamination and Redefinition," *Social Forces*, Vol. 18, No. 2 Oxford University Press (Dec., 1939): 161-168. Accessed Oct. 11, 2018, http://www.jstor.org/stable/2570768.

- Ratzinger, Joseph. Fe y el Desafío de las Culturas. Cristo, fe y el desafío de las culturas (conferencia dirigida a los Presidentes de las Conferencias Episcopales de Asia), Hong Kong, 2/3/1993.
- Rawls, John. A Theory of Justice. Cambridge: Belknap Press, 1999.
- ---. "Kantian Constructivism in Moral Theory", 77 J. PHIL., 519 (1980) quoted in Michael J. Sandel, *Liberalism And The Limits Of Justice*, Cambridge: Cambridge University Press, 1998, 194.
- ---. *Political Liberalism*, quoted in Michael J. Sandel, *Liberalism and the Limits of Justice*. Cambridge: Cambridge University Press, 1998.
- ---. *The Idea of Public Reason Revisited*. Cambridge: Harvard University Press, 2001.
- ---. The Law of Peoples. Cambridge: Harvard University Press, 2001.
- Roemer, John. "Economic Development As Opportunity Equalization". Policy Research working paper; no. WPS 6530. Partnerships, Capacity Building Unit, Development Economics Vice Presidency. World Bank. 2013. Washington, DC: World Bank Group. doi/pdf/10.1596/1813-94506530.
- Rorty, Richard. The Priority of Democracy to Philosophy, in *The Virginia Statute* for Religious Freedom 262. Merrill D. Peterson & Robert C. Vaughan eds., 1988, quoted in Michael J. Sandel, *Liberalism And The Limits Of Justice*. Cambridge: Cambridge University Press, 1998, 194.
- Rottle, N. and M. Alberti. 2008. Climate change and place. Places 20 (2): 4-7.
- Rowlingson, Karen. "Does income inequality cause health and social problems?" 22 September 2011. Joseph Rowntree Foundation. Accessed June 21, 2015. http://www.jrf.org.uk/publications/income-inequality-health-social-problems.
- Sachs, Jeffrey D. *The Age of Sustainable Development*. New York: Columbia University Press, 2015.
- Sandel, Michael J. *Liberalism and the Limits of Justice*. Cambridge: Cambridge University Press, 1998.
- Sarkar, Sahotra, "Ecology", The Stanford Encyclopedia of Philosophy (Winter 2016 Edition), Edward N. Zalta (ed.), Last modified Oct 10, 2016.

 Accessed March 20, 2017.

 https://plato.stanford.edu/archives/win2016/entries/ecology/.
- Schlag, Martin. "What is the impact of faith in capitalism?" In *Human Ecology*, Conference Proceedings. Washington D.C.: The Catholic University of America (2016): 35-39.
- Schwarz, Astrid. "Ecology Revisited: Reflecting on Concepts." *Advancing Science* (2011): 196-199.

- Scoones, Ian. "Sustainable Rural Livelihoods: A Framework for Analysis." IDS Working Paper 72, IDS, University of Sussex, Brighton, UK. 1998. https://www.staff.ncl.ac.uk/david.harvey/AEF806/Sconnes1998.pdf
- Sears, Paul B., "Some notes on the ecology of ecologists." *Scientific Monthly* 83:22-27, 1956.
- Seljak, article in Spiritual Heritage, http://www.spiritualeducation.org/library/seljak_envethics_article.htm
- Shakya, Holly B. and Nicholas A. Christakis. *A New, More Rigorous Study Confirms: The More You Use Facebook, the Worse You Feel*. Harvard Business Review April 10, 2017. Accessed Oct. 11, 2018, https://hbr.org/2017/04/a-new-more-rigorous-study-confirms-the-more-you-use-facebook-the-worse-you-feel, also at https://www.ncbi.nlm.nih.gov/pubmed/28093386
- Shostak, Frank. "What is up with the GDP?" Mises Institute, August 23, 2001. Accessed on June 21, 2015, https://mises.org/library/what-gdp
- Simmonds, Ricardo. "Reconciliation Environmentalism". Honors Thesis University of Colorado at Boulder. 2008.
- Simmonds, Ricardo. *Truth and Climate Change*. Saarbrucken: LAP Lambert Academic Publishing, 2013.
- Smith, Randall. "Ideology and the Corruption of Language", *Public Discourse*, March 3rd, 2017. Accessed March 21, 2017, http://www.thepublicdiscourse.com/2017/03/18571/
- Solzhenitsyn, Alexander. Address at Harvard Class Day Afternoon Exercises, Thursday, June 8, 1978. Accessed Oct. 11, 2018, http://www.orthodoxytoday.org/articles/SolzhenitsynHarvard.php
- Spaemann, Robert. *Essays in Anthropology*. Translated by Guido de Graaff and James Mumford. Eugene, OR: Cascade Books, 2010.
- Spitzer, Robert. In "Panel Discussion III." In *Human Ecology*, Conference Proceedings. Washington D.C.: The Catholic University of America, (2016): 16-19.
- Steiner, Frederick. *Human Ecology: Following Nature's Lead*. Washington, DC: Island Press, 2002.
- Stern, David I. The Environmental Kuznets Curve, June 2003. P 1. Department of Economics, Rensselaer, Polytechnic Institute, Troy, NY 12180, USA. International Society for Ecological Economics. Internet Encyclopaedia of Ecological Economics. Accessed Oct. 11, 2018, http://isecoeco.org/pdf/stern.pdf
- Stern, David I. The Rise and Fall of the Environmental Kuznets Curve. P. 1426. World Development Vol. 32, No. 8, pp. 1419–1439, 2004. Elsevier Ltd.

- Great Britain. Accessed Aug. 31, 2015, http://steadystate.org/wp-content/uploads/Stern_KuznetsCurve.pdf
- Taylor, Jameson. "Beyond Nature: Karol Wojtyla's Development of the Traditional Definition of Personhood." *The Review of Metaphysics* 250, 63, no. 2. S.C. Policy Council, 2009: 415-454.
- Taylor, Mary. "Environmental Ethics and the Philosophical, Theological, and Literary Foundations for a Metaphysics of Nature". PhD diss., Universidad Rey Juan Carlos, 2012.
- Thanh Nien News, Vietnam rethinks two-child policy amid declining birth rate, Ho Chi Minh City Tuesday, June 09, 2015. Accessed Oct. 11, 2018, http://www.thanhniennews.com/society/vietnam-rethinks-twochild-policy-amid-declining-birth-rate-46409.html
- The Holy Bible RSV, Second Catholic Edition, Ignatius Press, San Francisco 2006.
- Turkson, Peter. "Is Business to care for our common home?" In *Human Ecology*, Conference Proceedings. Washington D.C.: The Catholic University of America, (2016): 121-126.
- Union of Concerned Scientists UCS. New Evidence Reveals Fossil Fuel Industry Funded Cutting-Edge Climate Science Research Dating Back to 1950s. April 13, 2016. Accessed Oct. 11, 2018, http://www.ucsusa.org/press/2016/new-evidence-reveals-fossil-fuel-industry-funded-cutting-edge-climate-science-research#.W05Cfo61tBw
- United Nations. *Universal Declaration of Human Rights*, G.A. Res. 217A, art. 18, U.N. GAOR, 3d session, 1st plen. mtg. U.N. Doc A/810 (Dec. 10, 1948), Accessed Oct. 11, 2018, http://www.un.org/en/documents/udhr/
- ---. Conference on the Human Environment. Declaration of the United Nations Conference on the Human Environment. Stockholm June 1972. Accessed Oct. 11, 2018, http://www.un-documents.net/unchedec.htm
- ---. The World Commission on Environment and Development. Report of the World Commission on Environment and Development: Our Common Future. 1987. (Brundtland Report) Accessed Oct. 11, 2018, http://www.un-documents.net/our-common-future.pdf
- ---. Conference on Environment and Development, Rio Declaration on Environment and Development. Rio de Janeiro, June 1992. Accessed Oct. 11, 2018, http://www.un-documents.net/rio-dec.htm
- ---. Conference on Environment & Development, AGENDA 21, Rio de Janeiro, Brazil, June 1992. United Nations Division for Sustainable Development. Accessed April 30, 2015, http://www.un.org/esa/sustdev/agenda21.htm.
- ---. UNGA Resolution 47/92. December 1992. Accessed June 28, 2015, http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/47/92.

- ---. Copenhagen Declaration on Social Development. March 1995. Accessed Oct. 11, 2018, http://www.un-documents.net/cope-dec.htm
- ---. General Assembly. Resolution adopted by the General Assembly 55/2. United Nations Millennium Declaration, 18 September 2000, Agenda item 60 (b), 00 55951, Fifty-fifth session
- ---. World Summit on Sustainable Development, Johannesburg Declaration on Sustainable Development. 4 September 2002. Accessed Oct. 11, 2018, http://www.un-documents.net/jburgdec.htm
- ---. Plan of Implementation of the World Summit on Sustainable Development. Johannesburg, 2002. Accessed Oct. 11, 2018, http://www.undocuments.net/jburgpln.htm
- ---. Investing in Development: A Practical Plan to Achieve the Millennium Development Goals. UN Millennium Project. New York, 2005. Accessed May 2, 2015, http://www.uncsd2012.org/about.html
- ---. Message of the Secretary-General of the UN on Human Rights Day,
 December 10th, 2008, Accessed October 9, 2012,
 http://www.un.org/events/humanrights/2008/statementssg.shtml
- ---. Rio + 20 Conference on Sustainable Development. *The Future We Want*. 2012. Accessed Oct. 11, 2018, https://sustainabledevelopment.un.org/futurewewant.html
- ---. World Economic and Social Survey 2013: Sustainable Development Challenges. Sales No. E.13.II.C.1. New York, 2013.
- ---. Transforming our world: the 2030 Agenda for Sustainable Development. 2015. Accessed Oct. 11, 2018, http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&La ng=E
- ---. Population Fund (UNFPA). Accessed Oct. 11, 2018, http://www.unfpa.org/about-us
- Urban, Tim. Why Gen Y Yuppies are unhappy. 11/15/13. *Huff Post College*. Accessed Oct. 11, 2018, http://www.huffingtonpost.com/wait-but-why/generation-y-unhappy_b_3930620.html
- USAID. LGBT Vision for Action. Accessed Oct. 11, 2018, https://www.usaid.gov/sites/default/files/documents/1874/LGBT%20 Vision.pdf
- Uzawa, Hirofumi. Institutions, Development, Environment, in *Social And Ethical Aspects Of Economics*. 2nd Edition. Vatican City: Pontifical Council For Justice And Peace, 2011. Follow up to the November 5, 1990 Seminar convened by John Paul II.

- Voegelin, Eric. *The New Science of Politics*. (Univ. of Chi. Press 1952): 4, quoted in Emilio M. Garza. Thoughts on Conscience- and Ourselves. Conference at the Hispanic Leadership Conference, St Malo, Denver, August 2006.
- Waldinger,Robert. "What makes a good life lessons from the longest study on happiness." *TED Talks*. Accessed Sept 19, 2018, https://www.ted.com/talks/robert_waldinger_what_makes_a_good_life_lessons_from_the_longest_study_on_happiness
- Washington, George. Farewell Address, (September 19, 1796): 20, Accessed Oct. 11, 2018, http://gwpapers.virginia.edu/documents_gw/farewell/transcript.html
- Wasserman, Christopher."What is the role of gift and justice in economics and business?" In *Human Ecology*, Conference Proceedings. Washington D.C.: The Catholic University of America, (2016): 71-78.
- Webster's New World College Dictionary. http://www.yourdictionary.com
- Weigel, George. "Catholic Social Doctrine and 21st Century America." In *Human Ecology*, Conference Proceedings. Washington D.C.: The Catholic University of America, (2016): 57-61.
- White Jr., Lynn. "The historical roots of our ecological crisis," *Science* 155, No. 3767 (Mar. 10, 1967):1203-1207. American Association for the Advancement of Science. Accessed Feb. 22, 2014, 04:56http://www.jstor.org/stable/1720120
- Wilkinson, Richard, and Kate Pickett. *The Spirit Level: Why Equality is Better for Everyone*. New York: Bloomsbury Press, 2009.
- ---. "Why is equality better for everyone?" *The Equality Trust*, Accessed June 21, 2015, http://www.equalitytrust.org.uk/about-inequality/spirit-level.
- ---. "Beware False Rebuttals Our Response to Peter Saunders' Policy Exchange Report." *The Equality Trust*. Accessed June 21, 2015, http://www.equalitytrust.org.uk/beware-false-rebuttals-our-response-peter-saunders-policy-exchange-report.
- Will, George F. "Pope Francis' fact-free flamboyance." *Washington Post*. September 18, 2015. Accessed Oct. 11, 2018, https://www.washingtonpost.com/opinions/pope-franciss-fact-free-flamboyance/2015/09/18/7d711750-5d6a-11e5-8e9e-dce8a2a2a679_story.html?utm_term=.c40f364d971d
- Wilson, Paul. "Vietnam Poised to End Two-Child Policy." Jun 11. 2015. *Population Research Institute.* Accessed Oct. 11, 2018, http://pop.org/content/vietnam-poised-end-two-child-policy
- Wojtyla, Karol. *LR*, 229. Quoted in Jameson Taylor. "Beyond Nature: Karol Wojtyla's Development of the Traditional Definition of Personhood." *The Review of Metaphysics* 250 63, no. 2. S.C. Policy Council, 2009: 415-454.

- World Bank Development Indicators 2010. Accessed Oct. 11, 2018, http://siteresources.worldbank.org/DATASTATISTICS/Resources/GNIP C.pdf
- World Bank Group. "Remarkable Declines in Global Poverty, But Major Challenges Remain." Last modified April 17, 2013. Accessed November 2013. http://www.worldbank.org/en/news/press-release/2013/04/17/remarkable-declines-in-global-poverty-but-major-challenges-remain
- ---. "Africa Continues to Grow Strongly but Poverty and Inequality Remain Persistently High." Last modified October 7, 2013. Accessed November 2013. http://www.worldbank.org/en/news/press-release/2013/10/07/africa-continues-grow-strongly-poverty-inequality-persistently-high
- Wrong, Michela. "When Migrants Flee Progress, not War." April 22, 2015.

 Foreign Policy. Accessed Oct. 11, 2018,
 https://foreignpolicy.com/2015/04/22/end-poverty-stifle-happiness-mdgs-mediterranean-eritrea/
- Yandle, Bruce, Madhusudan Bhattarai, and Maya Vijayaraghavan.

 "Environmental Kuznets Curves: A Review of Findings, Methods, and Policy Implications." PERC. Research Study 02-1 UPDATE. (April 2004): 14. Accessed Oct. 11, 2018, http://www.perc.org/sites/default/files/rs02_1a.pdf
- Yergin, Daniel. *The Quest: Energy, Security, and the Remaking of the Modern World*. New York: Penguin Press, 2011.
- Young, Frank W., and Keiko Mina. "Community Ecology: A New Theory and an Illustrative Test," *Human Ecology Review*, Vol. 9, No. 2, 2002.
- Young, Gerald L. "Human ecology as an interdisciplinary concept: A critical inquiry" in *Advances in Ecological Research*, ed. By A. MacFadyen, London: Academic Press, 1974.
- Zubrin, Robert. The Truth About DDT and Silent Spring. Published online on Sep. 27, 2012. Accessed Oct. 11, 2018, http://www.thenewatlantis.com/publications/the-truth-about-ddt-and-silent-spring