Ecological Virtue Ethics: Towards Conversion and Environmental Action

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ECOLOGICAL VIRTUE ETHICS
Towards Conversion and Environmental Action

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Introduction

The ecological crisis is one of the prime concerns of our age. Yet, most people, while concerned, seem unwilling or unable to do enough to seriously address it. Governments, though making some efforts, are doing little in comparison to the enormity of the problem and the implications for future generations. The United Nations *Paris Agreement*[1] on environmental change (2015), while a good start, is in its early stages of implementation by the signatory countries and it remains to be seen whether it would be sufficient to address the scope of the problems. Within the Catholic Church, Pope Francis promulgated the encyclical *Laudato si'* in 2015, as a call to conversion and action in the Church. Yet, like much of the wider society, little seems to be done at the level of local communities and dioceses.

Scientific research does tell us that a major cause of the problem is the unsustainable rate of human consumption of natural resources, and the related problems of carbon emissions and ecological destruction, all of which need to decrease drastically. At the same time, real efforts are needed to protect what remains of the natural environment. It is evident that the scale of the problem requires global action at the level of national governments. Yet, in most countries, especially in democracies, governments respond to the will of their people. Serious environmental action would, therefore, only be possible if the majority of citizens desire it, and are willing to make the lifestyle and economic sacrifices associated, possibly, with the higher prices, reduced consumption and slower economic growth that this would imply. Ecological action, therefore, needs to start with individual conversion, community action and the lobbying of national governments.

[1] United Nations Framework Convention on Climate Change, *Paris Agreement (2015).* [accessed on January 9, 2016] http://unfccc.int/paris_agreement/items/9485.php

This thesis argues that, in order to address adequately the ecological crisis, humanity needs to change drastically soon from ecologically harmful to ecologically friendly attitudes and practices. In our Christian understanding, this change requires a conversion from ecological vices to ecological virtues. To do so, humanity needs to move away from its overtly anthropocentric concerns to a more genuine respect for creation. Drawing from Church tradition, this thesis establishes that creation has rights, endowed by the Creator, that need to be protected, if ecological integrity is to be preserved. This thesis suggests what these rights should be and the means that would allow their protection. I then argue that, for the necessary changes in human behaviour to take places, ecological conversion needs to begin with individual conversion before social transformation is possible. This thesis, therefore, proposes the ecological virtues needed for individual conversion, and then ecological social action and advocacy. Thus, this thesis charts a course forward from principles, to motivations, and finally, to action.

Why Ecological Virtue Ethics?

Christian virtue ethics has its roots in Greek philosophy, notably in Aristotle and his *Nicomachean Ethics*, which were Christianised by St. Thomas Aquinas as well as other medieval scholars. Rather than analyse the rightness or wrongness of acts, virtue ethics asks what it means to be a good human being and how one should live so as to move towards that goodness. Aristotle considered the aim of human life *eudaimonia*, variously translated as "happiness" or "flourishing."[2] The virtues, what we today might call 'positive character traits,' are ingrained dispositions in a

[2] Rosalind Hursthouse and Glen Pettigrove, "Virtue Ethics," in *Stanford Encyclopedia of Philosophy*. [accessed on January 12, 2017] https://plato.stanford.edu/entries/ethics-virtue/

person which help the person to live as a good human being.[3] What it means to be a good human being, in the Christian understanding, requires us to reflect theologically on the purpose for which the human person was created, our *telos*. In understanding the human *telos*, we can then consider the virtues that would help the human person towards that end.

Aristotle considered a virtue as a mean between two extremes, one of 'defect' and the other of 'excess'. For example, courage would be a mean between the vices of timidity on one end and recklessness on the other. This mean is arrived at, depending on the circumstances that one is in, through the guidance of "practical wisdom," and one's rightly order "passions."[4] Thus, virtue is dependent on both intellectual and affective formation. Becoming virtuous is not a once-off decision, but a process of growth in character as the virtues become increasing a part of one's life.

In the case of ecological ethics, empirical science has already pointed us to the causes of the problems and the measures that need to be taken to address them by human societies. However, the only way that societies, and entire nations, can change is if their people, beginning with the individual, are willing to change, and are willing to push and support their governments to make those changes. The virtues proposed in this thesis are meant to help Christians to recognise the ecological needs, match them with the values of the faith, and identify the virtues that would help individuals make the necessary changes in their lives.

This thesis also explores some of the human vices, both individual and structural, that are contributing to the state of environmental destruction and climate change, and the ecological virtues that are needed to address them. At the same time, virtues without concrete actions are useless. Thus, this thesis also proposes how ecological virtues can help us towards affirmative ecological

[3] Ibid.

[4] Aristotle, *The Nicomachean Ethics*, Translated by David Ross, (Oxford: Oxford University Press, 2009), Book II.

action. It is hoped that this thesis will give useful suggestions to pastors on how they could preach about ecological issues and promote ecological virtues in their communities, as well as encourage these communities to advocate for the environment with their governments.

In line with *Laudato si'*, this thesis will begin by grounding the discussion in the Church's natural law tradition and the intrinsic value of all creation, as well as the human place in it. Christian anthropology points us to humanity's dependence on the rest of the environment. Therefore, the human *telos* is embedded in the flourishing of the whole of creation. In understanding that context we can ask the questions, "Who are we, what should we become, and how do we get there?" The approach from Christian virtue ethics hopes to address these questions, reflected on in the light of faith and divine revelation.

Chapter 1

Where the World Stands:
The Current State of the Earth and of Christian Ecological Ethics

Scientific Findings on Environmental Destruction and Climate Change

According to statistics on the National Aeronautics and Space Administration (NASA) *Global Climate Change* website, global carbon dioxide emissions have increased from 314.62 parts per million (ppm) in 1958 (the first year that statistics were available) to 405.25ppm in 2016,[5] an increase of 28.8 percent in 58 years. Scientists believe that, to prevent the temperature of the Earth from continuing to rise, the carbon dioxide content in the atmosphere needs to be reduced and kept below 350 ppm.[6] The last time carbon dioxide levels were at 350ppm was in 1987. Global temperatures have already increased by 1.4 degrees Celsius since 1880, and the ten warmest years since humans started keeping records have occurred since the year 2000. The Arctic ice cover has been decreasing by 13.3 percent per decade, and the rate of ice lost on Greenland has doubled between 1996 and 2005. The sea level is rising 3.24 millimeters per year, a result of the melting polar ice and the expansion of seawater as it warms.[7]

Eighty percent of natural rainforest has already been destroyed by logging and land clearing for commercial agriculture,[8] and "some 46-58 thousand square miles of forest are lost each year."[9]

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[5] *National Aeronautics and Space Administration* (*NASA*), "Global Climate Change: Vital Signs of the Planet," on the *NASA Website*. [accessed on January 22, 2017] http://climate.nasa.gov/. See also ftp://aftp.cmdl.noaa.gov/products/trends/co2/co2_mm_mlo.txt

[6] 350.org website. [accessed on January 22, 2017] http://350.org/about/what-we-do/

[7] *NASA website*, "Global Climate Change."

[8] National Geographic, "Human Impact: Deforestation and Desertification," *National Geographic Website*. [accessed on November 30, 2015] http://www.nationalgeographic.com/eye/deforestation/effect.html

[9] World Wildlife Fund (WWF), "Threats: Deforestation," on the *WWF website*. [accessed on November 30, 2015] http://www.worldwildlife.org/threats/deforestation.

Since rainforests act as 'carbon sinks' by absorbing carbon dioxide and converting it into oxygen, the loss of rainforest compounds the effects of greenhouse gas emissions, since more of it remains in the atmosphere. More frequent forest fires around the world, caused by hotter and dryer summers as well as indiscriminate forest clearing techniques, not only destroy massive tracks of greenery and wildlife, but also pumps vast amounts of carbon dioxide and smoke into the atmosphere, causing pollution and acid rain. The loss of rainforests also means the loss of habitat for many plant and animal species, leading to an increasing rate of extinction,[10] affecting also the indigenous peoples dependent on them. Estimates place extinction rates at a hundred to a thousand times higher than normal, presenting a real threat to biodiversity and the ability of some ecosystems to continue to sustain themselves.[11]

NASA's projections are that the global temperatures will continue to rise. The question is, by how much, depending on how willing the people and governments of the world are to take the necessary actions to mitigate the problem. Global warming will lead to further changes in precipitation patterns as well as more extreme weather events, including more droughts and heat waves, as well as storms and floods. The sea level will rise between 1-4 feet by 2100, and it is quite possible that the Arctic will become ice-free by the end of the century.[12]

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[10] According to a Time Magazine article, "up to a third of all species of vertebrates are now considered threatened, as are 45% of most species of invertebrates." See Jeffery Kluger, "The Sixth Great Extinction Is Underway—and We're to Blame", *Time Magazine*, July 25, 2014. [accessed December 5, 2015] http://time.com/3035872/sixth-great-extinction/

[11] Kevin O'Brien, *An Ethics of Biodiversity: Christianity, Ecology, and the Variety of Life*, (Washington DC: Georgetown University Press, 2010), 33.

[12] *NASA website*, "Global Climate Change".

All the above would have massive, at times catastrophic, impacts on humanity as well. As always, it is the poor who would feel the effects the most.[13] Rising sea levels will affect coastal cities and low-lying areas, including several small island countries which are in danger of submersion.[14] Coupled with heavier rainfall, rising sea levels have caused widespread flooding in low-lying countries like Bangladesh ruining the crops and homes of millions of subsistence farmers and low wage urban laborers alike.[15] Large amounts of stagnant and contaminated water sources, as well as decomposing matter, also lead to the spreading of diseases.

At the same time, droughts from Africa to North America to Australia have affected vast tracks of farmland. In poorer countries, this had led to food shortages and the threat of famine for millions.[16] This is a trend that will affect the whole world if the vast majority of agricultural land worldwide is affected with increased global warming. Small scale and subsistence farmers will be the most adversely affected, especially in poor countries where irrigation or government aid is close to non-existent. The poor also suffer disproportionately from the effects of hurricanes and typhoons since their homes tend to be flimsy and easily destroyed, especially if they live in squatter areas.[17] Global warming leads to warmer ocean waters, which generate more frequent and severe storms.[18] Clearly, there is a moral imperative to act, given the scale of human suffering that global warming

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[13] Francis, *Laudato si'*, The Holy See Website. [Accessed on October 15, 2015] http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html, 48.

[14] National Geographic, "Will Pacific Island Nations Disappear as Seas Rise? Maybe Not", *National Geographic website*. [accessed on November 30, 2015] http://news.nationalgeographic.com/2015/02/150213-tuvalu-sopoaga-kench-kiribati-maldives-cyclone-marshall-islands/

[15] Syed Zain Al-Mahmood, "Flooding in Bangladesh Leaves Nearly Half a Million People Homeless," *The Wall Street Journal*, August 25, 2014.

[16] Chris Arsenault, "Climate change, food shortages, and conflict in Mali," *Aljazeera*, April 27, 2015.

[17] CNN Reporter, 'Typhoon Haiyan death toll tops 6,000 in the Philippines'. *Cable News Network (CNN)*. December 13, 2013.

[18] Peter Hannam, "Super Typhoons to Increase in Strength with Climate Change, Researchers Find," *The Sydney Morning Herald*. May 30, 2015.

will cause, as well as the destruction of creation in terms of large scale habitat loss and the extinction of numerous species, above and beyond what has been lost already.

Scientists are clear as to what needs to be done. Carbon emissions have to decrease significantly. Greater effort needs to be put into developing and implementing clean solar and wind power, and more efficient means of storing excess energy generated need to be developed, because it is not always sunny or windy. Less polluting and environmentally harmful substances and practices needs to be developed and used industrially. The remaining natural environments and biodiversity need to be protected with immediate effect, and when possible, devastated areas need to be reforested. Unrestraint logging needs to stop and recycling needs to be stepped up. In all these areas, technological advances can contribute by developing more efficient methods. However, these would increase the financial costs, since environmentally responsible industrial practices are more expensive, and scientific research needs funding. The average person, therefore, needs to be willing to pay more per product. Also, science has its limits. The more environmentally friendly alternatives developed may be more efficient, but there would still be industrial byproducts and wastes, even if reduced. Therefore, the most important and effective environmental action is still to significantly reduce individual consumption and live more simply.

A simpler lifestyle, however, is in direct contradiction to the current global economic paradigm of economic growth, because lower consumption and the higher cost of products would mean less demand for goods and services, which could mean fewer factory jobs, though this could be mitigated, to some extent, if green business becomes more viable and hires more people. Nonetheless, the focus would have to be to provide sufficient employment, rather than the profit motive and free market competition. The world would, therefore, have to adjust to a different ecological-economic paradigm, and move away from the paradigm of international economic and geopolitical competition. It would also mean that humanity would need to redistribute wealth both

locally and globally, where the wealthier regions allow for the redistribution of resources and jobs to economically depressed areas, and also help to finance ecological initiatives such as reforestation and cleaning up polluted waterways. All of these can only be effectively implemented and coordinated at national levels and through international cooperation.

Christians, if we take environmental concerns seriously, need to contribute to ecological action in several key ways. Firstly, significantly reduce individual and family consumption. Secondly, build communities where resources can be shared, and mutual support given, for ecological initiatives. Thirdly, advocate, as a community, for more environmentally friendly policies at local, state and national levels. Fourthly, contribute to educate and convince others of the importance of environmental action and global solidarity. In other words, Christians need to witness to universal charity and solidary, and make some significant sacrifices. The entire Church need to mobilize for this, in our liturgy, preaching and community practices. We need ecumenical and inter-religious dialogue and cooperation in the many areas that we agree on the issue of environmental protection, so that environmental protection can truly be a worldwide effort uniting all people of goodwill in a common cause.

The above goals may seem like a long shot, but we need to start somewhere – by first changing mindsets, attitudes (including our affective sensibilities) and individual practices. It is here that virtue ethics provides its main contribution. Ronald Sandler defines environmental virtues as "the proper dispositions or character traits for human beings to have regarding their interaction and relationship with the environment."[19] Only when citizens desire real change would governments face the social pressure, and have the political will, to act.[20]

[19] Ronald Sandler & Philip Cafaro (editors), *Environmental Virtue Ethics* (Lanham: Rowman & Littlefield, 2005), 3.
[20] Ibid., 5.

Global Initiatives and Limitations

The United Nations *Paris Agreement* (2015) committed the majority of countries to addressing climate change. The Agreement recognised the need for "sustainable lifestyles and sustainable patterns of consumption and production"[21] in addressing climate change, and that the efforts towards that end needed to be in line with human rights, including, "the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity."[22]

In the Agreement, the governments of countries committed to "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels."[23] Recognising that there will be negative consequence with a 1.5°C increase in average temperature, countries also committed to "increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production."[24]

To achieve the above objectives, countries would try to "reach global peaking of greenhouse gas emissions as soon as possible," and work towards "rapid reductions thereafter in accordance with best available science."[25] Wealthier developed countries were to providing financial and technical assistance to developing countries,[26] and they were to work together to build

[21] United Nations, *Paris Agreement*, Introduction.
[22] Ibid.
[23] Ibid., Article 2.1.a
[24] Ibid., Article 2.1.b
[25] Ibid., Article 4.1
[26] Ibid., Article 4.5

"trust and confidence," and improve transparency.[27] A five yearly reporting period was agreed upon during which countries would update their contributions.[28]

It must be noted, however, that while the *Paris Agreement* is a hopeful beginning, the points of the agreement remain vague. Individual countries are to determine their own contributions,[29] and most have yet to translate the Agreement into concrete plans and policies. Whether governments have the political will to make the difficult decisions, thus, remains to be seen. At the same time, the *Paris Agreement* places significant emphasis on looking to technology to "improve resilience to climate change and to reduce greenhouse gas emissions."[30] It is perhaps too enthusiastic to expect that technology can be the panacea to all our ecological problems. Thus, individual responsibility and the reduction in consumption and environmental stress remain the most significant factor in determining the future efficacy of the *Paris Agreement*.

It must also be noted that, while the *Paris Agreement* focuses on reducing carbon emissions and climate change, the issues need to be placed in the wider context of ecological protection, including habitat destruction, mass extinctions and the loss of biodiversity. The core issue is, therefore, the human being's place in creation itself. What is the purpose of human life – the human *telos* – and how should we live so as to nurture holistic human wellbeing and flourishing? It is in this context that this thesis turns to Catholic tradition, in particular the natural law tradition of St. Thomas Aquinas, and the virtues that would help the human person to live authentic Christian lives in harmony with the rest of creation.

[27] Ibid., Article 13.1
[28] Ibid., Article 4.9
[29] Ibid., Article 3
[30] Ibid., Article 10.1

The Evolution of Ecological Consciousness in Catholic Teaching

John Hart, in his survey of Catholic ecological consciousness, acknowledged the generally anthropocentric focus of the Catholic worldview up till recent times. At the Second Vatican Council, teachings that touched on issues related to the environment considered it from the perspective of the just distribution of natural resources, concern for one's neighbours and "inter-generational responsibility,"[31] thus, reflecting the traditional attitude of the *hierarchy of being*, with humanity at the top and the world created for human use.[32] As the nature and severity of environmental degradation became increasing pronounced and evident over the following decades, subsequent popes made statements regarding ecological care and justice and Christian theologians and ethicists turned their attention to the issue.

Pope John Paul II's "World Day of Peace" statement in 1990, for example, was titled, *"The Ecological Crisis: A Common Responsibility."*[33] Still, the approach regarded the earth as a resource that humanity was called to use responsibly. Ecology was, therefore, more often considered as a facet of Catholic social teaching and social justice, rather than an area of theology and ethics in its own right. The *Catechism of the Catholic Church* (1994) also placed "man" at the pinnacle of creation, although it recognized that "each creature had its particular goodness" and that there was an interdependence of all creation.[34] Still, the *Catechism* stated that everything was created for humanity and humans were, in turn, to care for and offer everything back to God. Humans were the "stewards of God" entrusted with responsibility for creation.[35] Various bishops' conferences would take on the theme of ecology and human responsibility in the 1990s and 2000s, and the

[31] John Hart, *What Are They Saying About Environmental Theology?* (New York: Paulist, 2004), 7.
[32] Ibid., 7-11. Hart cites *Lumen Gentium* #36, & *Gaudium et Spes* #9, 12, 34.
[33] Ibid., 12-17.
[34] Ibid., 20-22. Hart quotes the *Catechism of the Catholic Church*, #300, 339-340.
[35] *Catechism of the Catholic Church*, #373.

recognition of the intrinsic value of creation increasingly emerged. Notably, the awareness of ecological care as a concern of the common good became increasingly prominent.[36]

Christian theologians and ethicists also took up the ecological challenge. There was a conscious attempt to shift away from anthropocentrism towards a deeper appreciation of the human place within, and dependence on, the wellbeing of the rest of creation. The approach centered on several key questions. Firstly, what are the roots of Christian anthropocentricism and how do we remedy it? Secondly, what is the intrinsic dignity of creation, and following from that, what is the human relationship with creation, and hence, the human duty towards it? Thirdly, what are the things that need to be done in order to live rightly to fulfil the human duty towards creation?

Anthropocentrism and the Dignity of Creation

Lynn White was one of the first to establish a link between Christian theological anthropocentrism and ecological destruction. White argued that Christianity, in upholding the divine sovereignty of God and the dignity of the *imago Dei* in human beings, created a dualistic attitude of body versus soul, and humanity versus the rest of creation. Christian theology placed all living beings on a hierarchy, with humanity at the top. Everything else was regarded as created for human use and to help humanity towards salvation. But, whereas Eastern Christianity retained a more allegorical and sacramental understanding of creation as symbolically pointing to deeper truths about the divine-human relationship, Western Christianity increasingly regarded the rest of creation as objects to be studied in order to understand their nature, and in so doing, the mind of the divine creator. White saw this approach as the root of the Western scientific and technological revolution. He noted that, aside from the Abrahamic religions, all other religions tended to see more

[36] Hart, *WATSA Environmental Theology,* 33-58.

of the sacred in living things. White argued that Christianity needed to recover a sense of the sacredness of creation, if Christian attitudes were to have any hope of changing.[37] White's thesis has been widely debated for decades. One would agree that it is perhaps too deterministic if the blame for anthropocentricism was laid solely on Christianity. Rather, the increasingly exploitative attitude towards creation was a confluence of factors of which the Christian effect was only one contributing factor.

Larry Rasmussen traced the rise of Western anthropocentricism to the development of modern capitalism and the commodification of everything through the process of European colonization, global 'resource' extraction for the sake of profit, and the rise of the business 'corporation.'[38] Thus, whereas in an earlier time, the world 'economy' *(oikonomia)* was understood more widely as the organization of the household, and by analogy the community, for the purpose of order and survival, it came to refer exclusively to the capitalist financial economy. Whereas there was a time in Europe when land and much of nature was thought of as a common good, it became commoditized as private property, resources, raw materials and products. Rasmussen advocates returning to the understanding of the Earth as *oikos*, a household which humanity needs to take care of rather than abuse. Thus, an anthropocentric view of the world facilitated the rise of global corporate capitalism, and the language and values of corporate capitalism has, in turn, become internalized into modern culture as a norm. The global reach of capitalist resource extraction today endangers not only the ecosystem, it also endangers local communities which have lived for centuries close to the land in networks of mutually sustaining relationships with the land and other surrounding communities, since it now shatters these relationships by stripping the

[37] Lynn White Jr, "The Historical Roots of our Ecological Crisis," in *Western Man and the Environmental Ethics: Attitudes towards Nature and Technology*, (edited by Ian G. Barbour. Reading), (MA: Addison-Wesley, 1973).

[38] Larry L. Rasmussen, *Earth Community Earth Ethics,* (Maryknoll: Orbis, 1996), 63-68.

surrounding environment of what had sustained their livelihood.[39] Thus, whether it is the hunter-gatherer, small scale-farmer or urban poor around whom are built polluting factories or toxic waste dumps, it is the poor and powerless, human or other, who suffer the most. Justice for humans and the rest of the living environment is thus inseparable. For both Rasmussen and White, human worldview (including religious beliefs) and behavior are mutually intertwined. To change human activity, we need to change the way people look at the world. In the Christian context, this must shape our theology, ethics, and practices.

The effort to recover the dignity of creation in God's plan has approached the ecological question from several main directions – scriptural, sacramental-symbolic and the natural law tradition. The scriptural approached begins, most importantly, with recovering the meaning of "dominion" (Gen 1: 26) as the conferring of "stewardship" on humanity – a role of service with the responsibility as care-giver of the rest of creation – and not the power of indiscriminate exploitation. Created in the image of God, humanity shares in the work of the creator to sustain the wellbeing of creation.[40] God created everything "very good" and commanded all creatures to "be fruitful and multiply" (Gen 1:28). Thus, if all creation is included in God's original blessing, then all creation has a right to life, enjoyment and fulfillment of that blessing. The Hebrew Scriptures also include the blighting of creation as a consequence of human sin, thus highlighting the consequence of human sinfulness on the rest of the world around us.[41]

The sacramental-symbolic approach presents the Earth as a sacramental sign of God's presence, its beauty and majesty echoing and revealing the majesty of the creator, and its providence and fruitfulness reflecting the goodness of God. The human person is invited to

[39] Ibid., 90-7.
[40] Ibid., 231-3.
[41] Ibid., 250-2.

contemplate God's presence and encounter the divine in nature. Advocates of the approach favour investing the Eucharistic liturgy and other forms of communal worship with more nature imagery and references to emphasise the importance of the natural world and awareness of God's presence in it. They also favour recovering forms of spirituality, such as those of St. Francis and St. Benedict, which stress experiential contact with nature and finding God through these experiences.[42]

The natural law approach, most notably represented by the works of St. Thomas Aquinas, brings together divine revelation, Church tradition and human reason in reflecting on the place and purpose of creation and the human being in the world – their *telos* – and from that, the right choices of human action. Pope Francis' encyclical *Laudato si'* draws substantially on the natural law, as does this thesis which focuses on virtue ethics. The following chapters of this thesis will further reflect on current Church teaching on ecology, focusing especially on *Laudato si'*, its implication for human action, and how the Church can lead and motivate the Catholic faithful into action by nurturing the necessary Christian virtues, through its ministry and preaching.

Overview of this Thesis

Following from the above, chapter two will set this thesis within the wider teaching of the Catholic Church on ecology, in particular, the latest magisterial teaching in *Laudato si'* and its appeal to the findings of environmental science, as well as the Church's natural law and common good traditions. It will further discuss the question of anthropocentricism in Christianity and seek to move away from that by locating the human *telos* within the wider context of God's plan for creation.

[42] Richard Fragomeni and John T. Pawlikowski (Editors), *The Ecological Challenge: Ethical, Liturgical, and Spiritual Responses* (Collegeville: Liturgical Press, 1994).

Chapter three will further elaborate that, if the creator's plan is written into creation, then humanity has an existential and moral imperative to live by the divine plan. To do this, humanity needs to recognize that creation has rights derived from the divine plan. This chapter will consider what a *Bill of Biotic Rights* would look like, and why these rights are necessarily as a charter for human action if we are to protect the environment.

Chapter four will elaborate on the value of virtue ethics in ecological action. It will discuss the vices that have contributed to ecological destruction, and propose the virtues that would help Christian to move towards more ecologically friendly ways of living. It would also consider how these virtues could be promoted in Christian communities.

Ultimately, individual ecological conversion must also lead to national and global action if an ecological catastrophe is to be averted, or at least moderated. Chapter five will discuss various forms of affirmative ecological action on the part of Christians, be they individual, communal or national, and the relevant virtues needed in these endeavors.

Chapter six will draw the thesis together and look towards the future, as well as outside the Church. It will consider the necessity, benefits and means for Christians to work together with the rest of humanity through global, ecumenical, inter-religious and inter-cultural cooperation on a crisis that affects us all. It will explore how ecological virtues, which are shared to varying extents by many cultures and religions, can be a force of unity for all people of goodwill in promoting ecological preservation.

Chapter 2

Laudato si'
Grounding the Discussion in Natural Law

Virtue ethics is part of the natural law tradition of the Church. We first have to ask what are some aspects of the human *telos*, discernible in the light of human reason, before we can reflect on the relationship of the human person with the rest of creation. This chapter, thus, seeks to reflect on the facets of the human *telos*, in the context of the natural law, and the moral obligation that the *telos* imposes on the human person with regards to creation. It will then examine the attempt in *Laudato si'* to draw on modern scientific knowledge to construct a more holistic anthropology that recognises humanity's place within, rather than over, creation.

The Natural Law and Christian Ecological Ethics

In many ways, the natural law is particularly suited as the starting point for a Christian ecological ethics. One might argue that, more than questions of human sexuality or reproduction, the ethical implications of the natural law are more discernably obvious to human reason when it comes to looking at environmental problems. Put starkly, in the current ecological crisis, regardless of cultural differences, humanity should find ethical ways to respect the natural environment, or, all life, whether human or non-human, will suffer and perhaps even perish. One might even suggest that the natural law finds its place best when reflecting on the bigger picture and interconnections of the ecological balance in the natural world, and how that calls on humans to act ethically in order to protect that balance on which all life depends. It is when we look into the specific and contingent situation, that exceptions and weighing the pros and cons become increasingly necessary. There is,

therefore, no contradiction in saying that environmental protection is necessary, but that it must be done in culturally sensitive ways in different locations and contexts.

This thesis understands the natural law from the classic Christian Thomistic perspective as the '"participation (by the rational being) in eternal reason, whereby the being possesses a natural inclination to the actions and the objective which are appropriate to his existence (STh. I. II., q. 91, a. 2.)".'[43] While the Law of Moses and the Gospels do not belong to the natural law "since they contain many things that are above nature," yet, "whatever belongs to the natural law is fully contained in" the Law and the Gospels.[44] Thus, both divine revelation and natural law working together help us to understand the human place in the world and our relationship with God and with the other creatures.

God has created the universe and endowed it with physical rules that, when they are in balance, give us an environment conducive for life as we know it. On Earth, this is the material location in which human life is lived, and human salvation journeyed towards. Human reason, in the form of modern empirical science, has helped us to better understand the physical universe and the balance of life on Earth. Since the wellbeing of the environment is integral to the wellbeing of all life, it is a moral imperative for humanity to care for the environment.

It must be clarified that natural law does not refer to the physical laws that govern the universe but the "orientation of the practical reason which indicates to the moral subject what kind of action is in accord with the basic and necessary dynamism of his being that tends to its full realization."[45] It is human reason that uncovers the causality, impact and consequences of physical

[43] Franz Bockle, "Nature as the Basis of Morality" in *Readings in Moral Theology No. 7: Natural Law and Theology*, Edited by Charles E. Curran and Richard A. McCormick SJ. (New York: Paulist Press, 1991), 394.
[44] ST II. II. Q94. A4.
[45] International Theological Commission (ITC), "In Search of a Universal Ethic: A New Look at the Natural Law" (2009), 43.

laws interacting with human action, and that experiences the internal impetus, a "moral obligation," towards an ethical response to choose the good, guided by that knowledge.[46]

It is perhaps also prudent to begin by clarifying the meaning of the word 'nature.' This thesis will use 'nature' in its metaphysical sense as the "principle of the specific ontological identity of a subject, i.e., its essence which is defined by an ensemble of stable, intelligible characteristics. This essence takes the name of nature above all when it is envisaged as the internal principle of movement that orients the subject towards its fulfillment."[47]

To avoid confusion, this thesis will refer to the world around us, untouched by human interference, as the 'ecology' or the 'environment'. Each living being and species has its own nature, which interact in complex webs of relationships forming an "order". The ecological environment is therefore characterized by its natural order.[48] Within the ecological balance, each living being seeks to fulfill the potential which its nature has endowed it – to live, thrive, grow and reproduce. That is the 'good', which each being seeks.[49]

Human beings, created in the image and likeness of God and endowed with reason, have the added dimension of union with the divine as our final fulfillment and goal, our *telos*. Humans, as rational creatures, are able to discern the positive or negative consequences of actions, whether it facilitates or impedes the good, and thus have the moral responsibility to choose the good.[50] The first principle of the natural law is hence stated as: "good is to be done and pursued, and evil to be avoided."[51] Flowing from the first principle, St. Thomas Aquinas explains the precepts of the natural law and the unique aspects pertaining to human beings:

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[46] Ibid.
[47] Ibid., 64.
[48] Ibid., 65.
[49] ST II. II. Q94. A2.
[50] ITC, "In Search of a Universal Ethic," 42.
[51] ST II. II. Q94. A2.

> … [Firstly] every substance seeks the preservation of its own being, according to its nature: and by reason of this inclination, whatever is a means of preserving human life, and of warding off its obstacles, belongs to the natural law. Secondly, there is in man an inclination to things that pertain to him more specifically, according to that nature which he has in common with other animals: and in virtue of this inclination, those things are said to belong to the natural law, which nature has taught to all animals… such as sexual intercourse, education of offspring and so forth. Thirdly, there is in man an inclination to good, according to the nature of his reason, which nature is proper to him: thus man has a natural inclination to know the truth about God, and to live in society: and in this respect, whatever pertains to this inclination belongs to the natural law; for instance, to shun ignorance, so avoid offending those among whom one has to live, and other such things regarding the above inclination.[52]

All living beings have inclinations, which direct them to fulfill their natures. Aquinas' first precept, the inclination to the preservation of life, includes the material conditions which facilitate the sustenance of life, including "bodily integrity," the access to living space, food and a clean environment. For humans, this would, in addition, include clothes, housing, the means of making a living, etc. "Taking his bearings from these inclinations, the human being formulates for himself goals to be realized that contribute to the harmonious and responsible development of his own being and which, as such, appear to him as moral goods, values to pursue, duties to accomplish and indeed as rights to assert."[53] At one level then, we realize that the preservation of human life, and the means to fulfill the human potential, require an environment where life can thrive.

At a more fundamental level, this also points us to protecting the right to life, and the opportunity to thrive, of other living creatures as well. However, it must also be noted that, in the natural world, the death of one creature is often the necessary condition for the life of another, as in the cases of the predator-prey relationship. Thus, the right to life is best understood at the level

[52] Ibid.
[53] ITC, "In Search of a Universal Ethic," 48.

of species and ecosystems, rather than at the level of the individual. In other words, it should be understood at the level of the natural order rather than individual lives.

The second precept of the natural law is the inclination to reproduce, thus ensuring progeny and the continuation of the species. For humans, this would include the care and education of children as well as a conducive environment for their growth. It thus leads also to intergenerational responsibility in human action, in that humanity has a moral duty to pass on to future generations a world where life can flourish. The long-term sustainability of the ecosystem is, thus, a question of intergenerational justice as well as justice for other species.

The third precept recognises the uniqueness of humans as rational beings desiring truth and relationships.[54] Humans are social creatures that work together for survival thus forming communities and nations. As social beings, we recognise the importance of the *golden rule*[55] and the *common good*[56] in maintaining mutual care and respect for the good of all in community. The search for truth also leads humanity towards transcendence and the desire for communion with the divine. The recognition of the common good places an ethical demand on humanity to care, especially, for those who are poor and most vulnerable to the effects of climate change and ecological destruction. The search for truth and transcendence has led us to understand that humanity, too, is intimately enmeshed in the web of relationships that forms the whole of creation, and in creation, humanity finds the signs of the creator's presence and goodness. Indeed, the "health" of the Earth is a fundamental good if the rest of the other basic goods that promote human

[54] Ibid., 50.
[55] Ibid., 51.
[56] Ibid., 85.

flourishing are to be pursued or met. Prudence would require us to protect and promote the quality of life on Earth.[57]

With the above in mind, we look next at the Church's latest magisterial teaching on ecology and climate change in *Laudato si'*, Pope Francis' encyclical that draws very much on the natural law tradition and the principle of the *common good*. What is noteworthy is that Pope Francis argues not only from the perspective of human suffering as a result of climate change, but by stressing that the natural environment has intrinsic rights given by the Creator.

Laudato si' and the Human Telos – Towards a Holistic Christian Anthropology

Beginning in the 1970s, there had been quite some discussion on the role of Christianity in the over-exploitation of the environment. The argument of Lynn White, and of some who came after him, was that Christianity had so over-emphasized human salvation and the linear progression of history from Christ to the *eschaton.* Salvation was understood to be otherworldly, and the natural environment was seen as just a staging place to prepare for the world to come, rather than God's creation that also needs to be cared for. Thus, Christianity came to understand God's commission to Adam for "dominion" over the Earth (Genesis 1:28) to mean that humanity had the right to do whatever it desired to the Earth and its natural goods.[58] In addition, under the influence of the Greek Platonic and Stoic philosophies, Christians came to prioritize the spiritual over the physical such that the physical world was considered inferior, and thus, neglected.

Others, however, argued that Christianity does, in fact, have a tradition of respecting creation, for example in the lives and writings of Francis of Assisi, Benedict of Nursia, Meister

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[57] Terence Kennedy CSsR, "The Originality of John Finnis' Concept of the Natural Law," in *Readings in Moral Theology No. 7: Natural Law and Theology*, Edited by Charles E. Curran and Richard A. McCormick SJ. (New York: Paulist Press, 1991), 129-131.

[58] White, "Historical Roots of our Ecological Crisis."

Eckhart, Hildergard of Bingen, Julian of Norwich, Teilhard de Chardin and Thomas Merton.[59] What is evident is that the Christian tradition has been rich and multifaceted. Still, a certain anthropocentricism is perhaps understandable since, up until recently, humanity did not have the technological capacity to adversely affect the global environment to the extent that we now do. Morality was largely needed for human transactions and to regulate human relationships. It is because of the scale of human environmental destruction that we now need to reflect ethically on the human place in the rest of creation, and our duty of care.

Modern science has taught us how utterly dependent human life is on the natural environment. The Earth is habitable because it has evolved a balance that is conducive for human life (e.g., the carbon, water and oxygen cycles; climatic and ocean current patterns, etc.). Thus, human beings and society exist within the ecosystem. For a long time, we tended to think of the human world as existing parallel to the natural world, although overlapping in some respects. But, just because we have surrounded ourselves with concrete walls and skyscrapers, it does not mean that we are not utterly dependent on the natural environment and its health for our very survival. Humanity exists within nature and human flourishing (physical, psychological and spiritual) cannot be understood apart from it. The Scriptures recognize this. Both creation accounts in the book of Genesis place the human being within creation and among the rest of God's creatures.

In summarising the Catholic perspectives on the respect for creation, *Laudato si'* links the human *telos* to the *telos* of the rest of creation. *Laudato si'* points out that, at the dawn of creation, "God saw everything that he had made, and behold it was very good" (Gen 1:31). The whole of creation is therefore sacred. The human person is created in God's image and likeness (Gen 1:26)

[59] John E. Carroll, "Catholicism and Deep Ecology," in *Deep Ecology and World Religions: New Essays on Sacred Ground*, edited by David Barnhill and Roger S. Gottlieb (Albany: State University of New York Press, 2001), 169-191.

out of God's love. The human person is "capable of self-knowledge, of self-possession and of freely giving himself and entering into communion with other persons."[60] The human person, therefore, has intrinsic value that must be respected. At the same time, the gift of reason and freedom also places on humanity the responsibility of caring for the rest of creation, which though not endowed with the same gifts of reason and freedom, are nonetheless good and intrinsically precious to God.

Laudato si' sees the Fall (Gen 3:17-19) as the breaking of relationships, both between human beings, and between humans and the rest of creation:

> The harmony between the Creator, humanity and creation as a whole was disrupted by our presuming to take the place of God and refusing to acknowledge our creaturely limitations. This in turn distorted our mandate to "have dominion" over the earth (cf. Gen 1:28), to "till it and keep it" (Gen 2:15). As a result, the originally harmonious relationship between human beings and nature became conflictual (cf. Gen 3:17-19).[61]

Laudato si' argues against any anthropocentric imbalance in Christian theology. Referring to the biblical injunction for humans to "till and keep" the garden (Gen 2:15), *Laudato si'* explains that, "*tilling* refers to cultivating, ploughing or working, while *keeping* means caring, protecting, overseeing and preserving."[62] *Laudato si'* further states that the duty of care for the Earth that has been given to humans, "means that human beings, endowed with intelligence, must respect the laws of nature and the delicate equilibria existing between the creatures of this world."[63] It goes on to acknowledge the intrinsic value of all living beings:

> Together with our obligation to use the earth's goods responsibly, we are called to recognize that other living beings have a value of their own in God's eyes…: "by their

[60] *Laudato si'*, 65.
[61] Ibid., 66.
[62] Ibid., 67.
[63] Ibid., 68.

> mere existence they bless him and give him glory", and indeed, "the Lord rejoices in all his works" (Ps 104:31). By virtue of our *unique dignity and our gift of intelligence*, we are called to *respect creation and its inherent laws*, for "the Lord by wisdom founded the earth" (Prov 3:19). In our time, the Church does not simply state that other creatures are completely subordinated to the good of human beings… The *Catechism* clearly and forcefully criticizes a distorted anthropocentrism: "Each creature possesses its own particular goodness and perfection… Each of the various creatures, in its own being, reflects in its own way a ray of God's infinite wisdom and goodness. Man must therefore respect the particular goodness of every creature, to avoid any disordered use of things."[64]

Laudato si', thus, grounds its argument for environmental care on the *telos* of all creation, including that of humanity as part of creation. Each creature has a purpose in God's plan, and each is a manifestation of God's goodness.[65] Against the modern materialistic and anthropocentric worldview which considers the world as "mere space"[66] which humans can manipulate as desired, *Laudato si'* argues that there is a natural order that is ordained by God which has to be respected. *Laudato si'* warns that, "when human beings fail to find their true place in this world, they misunderstand themselves and end up acting against themselves."[67] The recognition of the *telos* of every living being (i.e., their intrinsic value), including the *telos* of human beings living in intimate connection with all other life, is needed to restore an ecologically sustainable relationship between humanity and the rest of creation. Each human being, "must therefore respect the natural and moral structure with which he has been endowed."[68] The human person is a social being that finds one's fulfillment in communion with others. *Laudato si'* expands this communion to include "universal

[64] Ibid., 69.
[65] Ibid., 86.
[66] Ibid., 115.
[67] Ibid.
[68] Ibid.

communion" with the whole of creation and states that "every act of cruelty towards any creature is 'contrary to human dignity.'"[69]

Laudato si' thus calls on humanity to seek the common good, not only of humans, but of the whole of creation, by working together to reduce consumption, protect the environment as well as the people most vulnerable to environmental degradation and climate change. Since God is the creator, and thus absolute owner of the world, human ownership of private property is considered a "social mortgage" which must be used for the common good, as God intended.[70] In the same light, we may speak of an *ecological mortgage* as well – that the human right to use natural goods is subordinate to the wellbeing of creation and of the ecosystem.

What comes across from reading *Laudato si'* is that, without aiming at protecting and achieving the *telos* of creation, human actions can lead to a destructive path for humanity. For example, when the predominant culture is one that values the profit motive above all else, and which seizes on the 'survival of the fittest' as a virtue, then the conclusion is that unlimited exploitation is justifiable. Divine revelation, in turn, informs conscience and refines our understanding of the natural law. The natural law is the application of human reason as it observes the world around and infers the right path of human action. Today, empirical science gives humanity the tools to observe the natural world at a far more detailed and complex level than previously possible. The finding of empirical science regarding humanity's dependence on the ecology should, therefore, help us better understand the human *telos,* and the ethical course of human action under the specter of ecological destruction and climate change. At the same time, ethics needs to be guided by divine revelation, which allows us to affirm that:

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[69] Ibid., 92.

[70] John Paul II, *Laborem Exercens*, (1981), 14. [Accessed on October 24, 2015] http://w2.vatican.va/content/john-paul-ii/en/encyclicals/ documents/hf_jp-ii_enc_14091981_laborem-exercens.html

1. creation is sacred and a manifestation of God's blessing;
2. human greed and unchecked desires are detrimental to humanity and the world;
3. human excesses have consequences for the environment (e.g., climate change) and for human life on Earth;
4. there is a natural order and balance that we are a part of and that we should respect.

Scripture, in turn, teaches that the balance of nature and all creatures which are a part of it, were created good by God and endowed with their own purpose (Gen 1: 31). In fulfilling their *telos*, every creature plays its part in the tapestry of the ecological world that God intended, and is therefore, good. There is, of course, the predator-prey relationship that creatures are a part of, and humans too participate in this relationship in such practices as hunting, faming and animal husbandry. Still, even if individual animals are killed or eaten as a part of the food chain, as entire species, God's creatures have a right to continued existence and participation in the ecosystem. Indeed, removing a species from the ecosystem could have harmful consequences. Humans, therefore, have a moral duty to make sure that human activity are ecologically sustainable and do not upset the balance of nature.

In reflecting on moral order and the natural order, Kevin O'Brien explains that, "creation itself is good and moral, and that when human beings live as fully committed participants in this world, we will live rightly."[71] In other words, the human person is a relational being whose fulfilment is not in consumption or domination, but in relationality, both in the human community as well as the wider community of creation. Thus, environmental health is crucial for human

[71] O'Brien, *An Ethics of Biodiversity*, 26.

happiness and the growth in virtue,[72] and human excellence is "that which enable a person to attain the furthest potential of his nature."[73]

Christianity's great gift is the knowledge that we are all loved by God and called to love one another by the God who created us. Thus, each human person's good is part of the common good. Conversion then, is the invitation to leave behind destructive competition and move towards universal human flourishing, trusting in the love and wisdom of God who unites us. Today, humanity's treatment of the environment is an area desperately in need of human conversion. This conversion can be understood in terms of avoiding vices (harmful or destructive attitudes, practices, habits or way of life) and growing in virtues (life-giving and love affirming ways of life).

At this point, having established that all creation has intrinsic dignity, and therefore, the right to survival derived from the creator, we next need to consider what these rights are, before we can identify the virtues that would help protect these rights in the age of ecological crisis. The next chapter, thus, proposes a *Bill of Biotic Rights* that could be used as guidelines for human actions.

[72] Louke van Wensveen, *Dirty Virtues: The Emergence of Ecological Virtue Ethics*, (New York: Humanity Books, 2000), 26-29.
[73] Ibid., 29.

Chapter 3

Concrete Areas of Action:
Proposing the *Bill of Biotic Rights* and *The Earth Charter*

There is a difference between looking at the problem of climate change from an anthropocentric perspective that focuses on the functional utility of the natural environment to the human species, and a holistic perspective that recognises the intrinsic dignity of all creation. An anthropocentric and functional approach would see things solely from the perspective of benefits to humans. Thus, climate change would be addressed for the danger and harm it poses to human beings alone. The measures decided upon to address the problem would be solely to reduce carbon emissions and the effects of climate change. Biodiversity, and the effects of climate change on other species, would therefore, not be a concern. Rather, the measure might be to quickly develop technology to scrub carbon from the atmosphere, cut back energy consumption and plant more trees in urban and agricultural areas, without any concern for the extinction of other species.[74] The cutting down of primary forest would not be considered a problem as long as commercially profitable trees are planted to replace them, since all trees convert carbon dioxide into oxygen regardless of species.

On the other hand, a more holistic creation-centred approach, which recognises humanity as a part of creation, would seek to protect the integrity of all life and living environments as much as possible, and see the preservation of biodiversity as a prime objective. As has been demonstrated in the previous chapter, from a Christian perspective, creation has intrinsic dignity which has been given by the creator, and humanity has a duty of care for its wellbeing. With intrinsic dignity,

[74] Ronald L. Sandler, *The Ethics of Species*, (Cambridge: Cambridge University Press, 2012), 117-129.

therefore, humanity needs to recognise that creation also has inalienable rights to survival that need to be protected.

Aquinas defined justice as a "voluntary" act of the will to "rendering to each one his right" or his "due."[75] What this implies is that, in order to render to the natural environment its dues, we need to first acknowledge what these rights are. A more specific list of these rights would, however, help give clearer guidelines on how individuals and institutions should respect them. The virtues, in turn, can help us to live and make decisions in our daily lives that respect these rights. This chapter will present the *Bill of Biotic Rights* proposed by James Nash which was inspired by the United Nations Declaration of Human Rights.[76] It will also, look briefly at the *Earth Charter*, which helps to flesh out how these *Biotic Rights* can be applied in human action.

The Bill of Biotic Rights

The *Bill of Biotic Rights* was proposed by James A. Nash, an American eco-theologian, as a means of providing guidelines for humans to protect the environment and its biodiversity. Unlike animal rights, which focus on the rights of individual animals, biotic rights focus on the rights of species and ecosystems to continued and healthy existence. Nash defines biotic rights as "morally justified claims or demands on behalf of nonhuman organisms, either individuals or aggregates (populations and species), against all moral agents for the vital interests or imperative conditions of well-being for nonhumankind."[77]

[75] ST II. II. Q58. A1.
[76] James A. Nash, *Loving Nature: Ecological Integrity and Christian Responsibility*, (Nashville: Abingdon Press, 1991), 186-9.
[77] James A. Nash, "The Case for Biotic Rights," in *Yale Journal of International Law*, Vol. 18, Issue 1, Article 7 (1993), 238.

The Bill of Biotic Rights is a reasonable progression from this thesis' argument, thus far, that all of God's creation has intrinsic value and dignity, and therefore, all creatures have the fundamental right to survival. To recognise these rights, is therefore, to render the justice due to all living creatures. Nash explains:

> … distributive justice – not only benevolence – is an essential means of ordering relationships and defining responsibilities in both social and ecological contexts. Under the mandate of giving every being its fair share in the distribution of goods, justice is generally and properly associated with moral rights. Rights are essential instruments or standards of justice. *Rights are a way of conceptualizing the basic demands of distributive justice and of giving substance to its abstract and formal principles about who should get what and why*. Rights are specifications of the content of what is due and what is to be distributed in both social and ecological contexts. Justice, then, is rendering to all their rights out of respect for their intrinsic value as ends and goods in themselves.[78] (Italics mine)

This thesis supports Nash's *Bill of Biotic Rights* because of its comprehensiveness as well as succinctness. It covers the essential areas for ecological protection, without being bogged down in details, and yet leaves room for local interpretation and application, depending on the particular needs and context. The *Bill of Biotic Rights* includes: [79]

1. The right to participate in the natural competition for existence.

This right recognizes that the dynamics of evolution have been shaping species and ecosystems for hundreds of millions of years, long before humans arrived on the scene. Inter-species competition, between species competing for the same food sources as well as between predator and prey, eventually settled into ecosystemic equilibrium. Major environmental changes do happen from time to time, caused by such things as natural climate change as a result of the

[78] Nash, "The Case for Biotic Rights," 238.
[79] Ibid.

Earth's own cycles, ice ages, volcanic activity, and even extra-terrestrial calamities such as the meteoroid that wiped out the dinosaurs. However, the current ecological balance is what is conducive to current species, including humans, and humanity damages that balance at our peril.

2. *The right to satisfaction of their basic needs and the opportunity to perform their individual and/or ecosystemic function.*

This is, in some ways, an elaboration of the first biotic right. There is a cycle of life, and species exist in a web of interconnected relationships of plants and plant eaters, predators and preys, death and recycled nutrients that allow plants to grow and flourish. This biotic right safeguards against the bias that humans often have towards some species that are considered to be more attractive (e.g., they are 'cute') or more beneficial (e.g., bees pollinate plants) to human beings, or even more economically lucrative (e.g., tourist pay to see Giant Pandas, but not insects). Thus, while we have no hesitation to protect bees because they pollinate plants, do we recognize that mosquitos, as a species, also have a right to exist in the eco-system even though it could be a nuisance or even a health threat to us? After all, mosquitos provide food for amphibians, reptiles and other insects whose place in the food chain could be threatened if they lose their food source, which might trigger chain reactions causing the population of other species to collapse. The point is that, even though we have learned a great deal about ecology, we cannot claim to know everything and all the intricately inter-connected factors that sustain life and the ecological balance. It would therefore be far more prudent to protect what currently exist, rather than act in haste, ignorance, or partial knowledge, on the mistaken assumption that we can increase human benefit.[80]

[80] Ralph McInerny, "The Principles of Natural Law," in *Readings in Moral Theology No. 7: Natural Law and Theology*, Edited by Charles E. Curran and Richard A. McCormick SJ. (New York: Paulist Press, 1991), 142-3.

3. The right to healthy and whole habitats

Habitats are also interconnected and form the wider global ecosystem. For example, melting glaciers threaten the water supply thousands of miles down river, while dams can prevent migratory fish, such as salmon, from accessing their breeding grounds, depriving other species of a seasonal food source that can in turn cause their populations to collapse. Thus, there is a need to reserve large enough spaces for habitat viability, not small national parks that leave no room for migration or other aspects of the ecosystem to function effectively.

4. The right to reproduce their own kind

Plant and animals need to be protected from human activity that, while not killing them directly, harm their ability to reproduce. For example, in the first half of the twentieth century, pesticides containing DDT thinned the eggshells of birds to the extent that few chicks could survive to hatching. It was the banning of DDT that allowed such species as the bald eagles to recover from near extinction. Genetically modified food crops could also go wild and out-compete natural species leading to their extinction, thus harming biodiversity.

5. The right to fulfill their evolutionary potential with freedom from human-induced extinctions

While extinction is part of the process of evolution, it tends to work with the complementary process of adaptation and speciation. Given time, some branches of a species adapt by changing into forms more suited to changes in environmental conditions. The pace of extinction caused by human activity has been so fast in evolutionary terms, however, that species have not had the time to adapt. Humanity, therefore, needs to drastically reduce these harmful activities.

6. The right to freedom from human cruelty, fragrant abuse, or frivolous use

This, in a sense, is an extension of the *Golden Rule* to include other forms of sentient life. Human beings should not cause suffering which we do not wish on ourselves. While a Christian understanding of this right, shared by the majority of humanity, is that humans have the right to animal husbandry and to eat meat – an extension of the naturally occurring predatory relationship – there is also the human responsibility to avoid causing unnecessary and undue suffering and pain, psychological or physical, to other creatures. The profit motive should not be the paramount consideration in human behavior. Animals kept for food should be given living environments conducive to their nature. Hunting for sport, or to satisfy frivolous human demand for luxury or novelty, such as ivory or fur, should be prohibited.

7. The right to redress through human intervention, to restore a semblance of the natural conditions disrupted by human actions

Humans have the responsibility for restorative justice for wrongs committed in the past to the environment as a result of the lack of human knowledge. This would include the cleaning up of polluted rivers and waterways, the reforestation of cleared land, the reintroduction of species previously hunted to extinction in a particular area, and when viable, the culling or even removal of invasive species threatening local flora and fauna.

8. The right to a fair share of the goods necessary for the sustainability of one's species

This right brings together the other biotic rights, but emphasizes the "*perpetual* sustainability of a viable population" of existing species.[81] The ecological space and resources set

[81] Ibid., 188.

aside should be sufficient to support the ecosystem indefinitely, without the threat of human disruption in the future. Current planning to address climate change should not be in terms of fifty or a hundred years, but in terms of keeping a viable ecology for a hundred generations and beyond. This would be true intergenerational justice.

Pointing out the possible extreme positions, Nash makes the case that a balance needs to be struck between over-emphasizing the rights of individual non-human life forms, and the right of entire species. To over-emphasize the rights of individual creatures could lead us to absurd extremes. Clearly it makes no sense for humans to protect the life of gazelles by preventing lions from hunting them. The predator-prey relationship is essential to the balance of nature and a crucial driving force for evolution. As earlier discussed, what matters is that an animal fulfills its purpose, including in many cases, providing food for other animals. Nash does however make the point that the rights of entire species cannot be completely divorced from the rights of individuals, since the individuals make up the species.[82] Thus, the basic rights of individual creatures should include protection against abuse and cruelty, in the case of agriculture, as well as unnecessary deaths, such as poaching and even hunting for sport, unless a case can be made for culling to remove invasive species or to sustain the population balance in areas where natural predators have been removed as result of past human actions.

What is more important are the rights accorded to entire species and ecosystems. Of these, the rights to sustainable population numbers and habitat are of central importance. Nash also proposes the principles of "Proportionality" and "Discrimination" to weigh human intervention in cases when a conflict arises between biotic rights and the needs of humans, or human rights.[83] The

[82] Ibid., 179-185.
[83] Ibid., 190-1.

decision should be proportional to the urgency of human needs (e.g., whether human lives are threatened), and be discriminating in targeting the problem with as little 'collateral damage' to surrounding species as possible. For example, solutions should be found to control a particular agricultural pest, rather than using general insecticides that kill everything in their paths, including beneficial species, and at the same time poisoning water sources. Humans need to maximize the use of the space we currently have and apply scientific efforts to improved ecologically sound agricultural methods (e.g., through the use of natural fertilizers in moderation, water management, crop rotation methods, etc.). The clearing of additional wilderness areas needs to be stopped, drastic limits to logging should be put in place and laws requiring mandatory reforestation of areas cleared by commercial interests should be enforced.

A *Bill of Biotic Rights* could, hopefully, lead to guidelines and even norms that communities and nations could use to guide their plans and actions that have ecological impact. From a family building a home, to a community hall or park, to planning a city or highway, the *Bill of Biotic Rights* could serve as an ethical checklist for ecological sustainability and protection. Obviously, there would be times when the rights of the ecosystem may come into contest, or even conflict, with human rights. At such times the principles of *proportionalism*[84] and the *common good* would have to come into play to weigh the needs, options and consequences. What is becoming obvious is that human beings are going to have to make sacrifices to protect the long term good of humanity itself, if future generations are going to have a decent home-world to live in.

As the changing environmental conditions and ecological research add to our understanding of the complexity of the situation, the *Bill of Biotic Rights* may have to be modified or added to. Aquinas acknowledged that the natural law may, on occasions, have to be added to or subtracted

[84] Josef Fuchs SJ, "Natural Law or Naturalistic Fallacy?", in *Moral Demands and Personal Obligations*, Translated by Brian McNeil. (Washington, D.C.: Georgetown University Press, 1993), 40.

from, depending on changes in circumstances. While the first principles of the natural law are unchangeable, the secondary principles may be modified with increased knowledge, or when new needs arise.[85] Particular geographic locations, ecosystems and even the human cultures interacting with a habitat may also present exceptions that have to be addressed with creativity and sensitivity.[86] Evolution itself is not static and some species may already be in the process of adapting to the human impact.[87] These adaptations may also have to be take into account and exceptions made. For example, as a result of the overhunting of wolves in North America, the scarcity of mates led some wolves to mate with coyotes instead, producing a hybrid 'coywolf' species. Should humans regard this as the evolutionary resilience of life trying to hold on in the face of difficult circumstances, or should we try to eradicate a hybrid species in order to protect the 'pure' form?[88]

Indeed, some ecosystems are already changing as a result of changes in the weather patterns that have already occurred, caused by the greenhouse gases already in the atmosphere. Temperatures and sea levels have risen, and precipitation has decreased or increased significantly, causing droughts or floods, depending on the location.[89] Local flora and fauna have been affected in various ways. For example, longer warm weather in the arctic has accelerated arctic ice melt in the summers and reduced the amount of ocean pack ice cover so that polar bears have suffered significant reductions in their hunting ranges. If the ice melt continues to accelerate over the next

[85] See ST II. II. Q94. A5.
[86] See ITC, "In Search of a Universal Ethic," 53.
[87] John Macquarrie, "Rethinking Natural Law", in *Readings in Moral Theology No. 7: Natural Law and Theology*, Edited by Charles E. Curran and Richard A. McCormick SJ. (New York: Paulist Press, 1991), 241.
[88] See "Evolution: Greater than the Sum of its Parts," *The Economist*, October 31, 2015. http://www.economist.com/news/science-and-technology/21677188-it-rare-new-animal-species-emerge-front-scientists-eyes
[89] Sandler, *The Ethics of Species*, 51-52.

decade, polar bears face the real danger of starvation and extinction. Warming ocean temperatures have devastated large areas of coral reefs in tropic waters. The population of the North American pine beetle has exploded as a result of longer and warmer summers, which has killed large numbers of native tree species on which they feed. As the weather warms in many places, warm weather species tend to move with the changing climate, while cold weather species find their ranges disappearing.[90]

The ecological changes described above raises other ethical questions of how much humans should intervene in the preservation of species if their habitat disappears, and how much humans can, or should do, given the finite resources available. Should humans put species that no longer have a viable habitat in zoos and reservations, for example, the polar bear or some species of corals and fishes? Or should they be transferred to other areas, which have a similar climate, but which would then risk affecting species native to these areas, such that the species that humans are trying to save become invasive species and decimate others?[91] At the same time, such projects are costly, and the resources allocated to them would need be to weighted against helping humans adversely affected by climate change. Some climate change strategies also have local ecological cost. For example, building hydroelectric dams can help provide green energy, but they tend to flood large tracks of surrounding lands and also alter the physical flow of rivers and destroying local habitats or blocking the migration routes of some fish species.

Clearly, a great deal of prudence would be needed in weighing the pro-and-cons of human actions and resource allocation, and in deciding which measures meet the greater good of ecological action. The *Bill of Biotic Rights* is a start, but in the face of rapid changes, its principles

[90] Ibid., 51-64.
[91] Ibid., 75-77.

are likely to be put to the test and, at times, some rights might come into conflict with others. It seems inevitable that we are likely to be faced with many situations in which we would have to accept the fact of extinction of some species if other more crucial areas require the limited resources.

The Earth Charter

While the *Bill of Biotic Rights* spells out the rights of species, another noteworthy document – *The Earth Charter* – helps us to focus on human actions that can help safeguard these rights. *The Earth Charter* is an "ethical framework for building a just, sustainable, and peaceful global society in the 21st century," which was drafted over a five-year process of international consultation between 1995 and 2000.[92] *The Earth Charter* started as a United Nations initiative, in the lead up to the Earth Summit in Rio de Janeiro in 1992, but was never adopted formally by the United Nations.[93] Instead, it was "carried forward and completed by a global civil society initiative."[94] The full text of *The Earth Charter* is included as *Appendix 1*.

The Earth Charter contains four main principles. Firstly, respect and care for the community of life. Secondly, ecological integrity. Thirdly, social and economic justice. And, fourthly, democracy, non-violence and peace. The *Charter* tries to strike a balance between human and ecological needs, recognising that justice has both a human and ecological dimension, and that poverty and human injustice often go hand in hand with local environmental degradation. Alleviating poverty and empowering local communities, thus, plays a crucial role in protecting the local ecology and habitats. In particular, indigenous communities and cultures have evolved to live

[92] Earth Charter Initiative, 'What is the Earth Charter?' *Earth Charter Initiative Website*, [accessed February 6, 2017] http://earthcharter.org/discover/what-is-the-earth-charter/
[93] Ibid., 'History of the Earth Charter,' http://earthcharter.org/discover/history-of-the-earth-charter/
[94] Ibid., 'What is the Earth Charter?'

sustainably within their surrounding environments. Protecting these cultures, therefore, would contribute to protecting the local ecology. Even in urban areas, empowering local communities would help them to reclaim their blighted neighbourhood and, with proper support and education, help them find ecologically friendly alternatives to local energy and resource needs. Some of the points in *The Earth Charter* will be considered in chapter five when discussing community activism and virtues needed in environmental action by Catholic parochial communities.

Some might argue that *The Earth Charter* is too comprehensive, contains to many dimensions, and tries to accomplish too much. Others might disagree with some of its principles or the way they should interpreted. Some countries, for example, might disagree with the stipulations on strengthening democracy,[95] and the Catholic Church would require that the stipulation on "reproductive health and responsible reproduction"[96] be understood strictly in accordance with Church teachings. Nevertheless, whether governments are willing to accept all the recommendations of *The Earth Charter*, even if we can just agree on how to prioritise and implement half of the measures suggested, we would already be on track to improving the situation. This thesis, therefore, recommends *The Earth Charter* as a guiding document that Catholic local communities could use as a guideline for action, along with the *Bill of Biotic Rights*. For the proposed measures to be possible, though, serious change would be needed in all nations. This change needs to begin with individuals, before these individuals can work for social change. The next chapter, thus, explores ecological vices, conversion and virtues at the individual level, before chapter 5 looks at ecological virtues needed for advocacy and action at the community and church levels.

[95] Ibid., *The Earth Charter*, IV. http://earthcharter.org/discover/the-earth-charter/
[96] Ibid., II. 7. e.

Chapter 4

Ecological Virtues:
A Call to Ecological Conversion

Thus far, we have explored some ways to protect the environment. The question remains, how do we get communities and societies to adopt these principles and practices? The answer must begin with changing individual attitudes, concerns and behaviours before these individuals can facilitate changes in their communities and societies. This chapter, thus, explores the ecological vices contributing to the environmental crisis, ways to change individual attitudes and the virtues needed to promote changes in individual lifestyles. To begin, it might be good to define virtues and vices. James Bretzke explains:

> **Habit and virtue** (*habitus* "to have"; *virtus* "excellence courage") in moral theology draws on Aristotle's metaphysics as developed by Thomas Aquinas (see *ST I-II*, Q. 49-54) and must be distinguished from the common use of "habit" as a behavior routine repeated so often that it can become subconscious. While repetition and routine are important aspects of moral habits, at its core a habit is a quality that disposes us to exercise our free will and reason to choose and act in conscience according to goodness and righteousness (virtue) or badly and wrongly (vice). Bad actions that become habitual can lessen our moral freedom and culpability while habitual good actions strengthen our will and develop our character so that difficult moral challenges are met more easily over time. Natural or acquired human virtues such as the cardinal virtues help direct our reason and order passions and inclinations so that with repetition we might more readily attain the end of the particular virtue…[97]

[97] James T. Bretzke, SJ, *Handbook of Roman Catholic Moral Terms*, (Washington, DC: Georgetown University Press, 2013), 103.

Ecological Vices – The Causes of Environmental Destruction

Human beings are endowed with gifts, attributes, inclinations and desires that have been beneficial for our survival as a species throughout evolutionary history. Human intellect, rationality and creativity allowed humans to adapt to different environments around the world by developing cultures and ways of life that suited the local environments. For millennia, cultures that successfully adapted lived in balance with their local environments, whether as hunter gatherers or as settled farmers. These communities realized that what they extracted from the living environment as food, clothing or building materials needed to be done with moderation for these resources to be self-renewing over time. Most cultures, therefore, evolved a sustainable equilibrium with their environments. With the development of modern capitalism and technology, the scale and pace of resource extraction has, clearly, become unsustainable. What, then, are the vices that are sustaining this state of affairs?

As discussed earlier, Aquinas identifies in all living beings the desire for self-preservation and reproduction.[98] Other attributes more specific to humans include the gift of reason and creativity, the ability to plan ahead and accumulate resources for times of scarcity, the desire for a better and more comfortable life, and love and loyalty for one's family and community, etc. Whether these lead to virtues or vices depends on how they are manifested by the human person – whether they aim at a mean or display an excess. Thus, human beings have been capable of much self-giving and sacrifice for the sake of loved ones and community, as well as great selfishness and cruelty in the competition for resources, whether in wars and conquests, or the subjugation or enslavement of one's competitors. The modern world system continues to display these vices in new ways, but they are exponentially accelerated by the advances in technology.

[98] ST II. II. Q94. A2.

Louke van Wensveen suggests using the *seven deadly sins*,[99] also called the *capital sins*, as a framework to analyze ecological vices. Such a framework has the advantage of tapping into an older Christian tradition and discourse, bearing in mind that a useful virtue ethics that can actually make a difference in changing human behavior, should be "preachable" in an average parish and understandable to the members of the congregation. The *capital sins* "are considered to be the 'head' (*caput* in Latin) and especially injurious or deadly to the life of virtue as present in the Bible."[100]

Looking at the seven deadly sins, Van Wensveen sees ***pride***, or ***hubris***, at the center of anthropocentrism.[101] Human beings consider themselves self-sufficient and refuse to recognize their dependence on others and on the rest of creation. Human beings believe that they are in control, when in fact the consequences of environmental destruction would be way beyond what humans could possibly control. It is therefore an inflated sense of self-importance inconsistent with reality.

Envy drives a person to desire what another has, or to be better than another.[102] The person pursues prestige and power heedless of the consequences to others. Envy spurs resentment and competition at the individual and institutional levels, whether it is for bigger cars and houses or other forms of conspicuous consumption as status symbols, or corporations competing for more businesses and market shares. Envy refuses to be satisfied with enough to meet one's needs.

Anger, or ***wrath***, is seen in the over-assertiveness and the unjust aggression of human beings towards each other and towards the natural world. It is seen in wars that devastate human communities and natural environments but also in other activities that human beings participate in

[99] Wensveen, *Dirty Virtues*, 98-102.
[100] Bretzke, *Handbook of Roman Catholic Moral Terms,* 28.
[101] Ibid., 98.
[102] Ibid., 99.

with the desire to dominate and control other people and forms of life, whether in violent sports like hunting, or acts of animal cruelty, or the thoughtless leveling of natural habitats for profit, which in the process, displaces poor local communities.

Sloth is reflected in pessimism, refusing to believe that the world can be a better place such that one no longer cares to try, as well as in apathy such that one does not care either way. It can also be seen in the lazy over-attachment to gadgets and labor-saving devices, for example, driving when one could walk or using dryers and dishwashers when it is possible to dry clothes on a line on a good day, or hand wash the dishes.

Greed is seen in the obsession with the accumulation of wealth and possessions and the refusal to be content with what one has. It lies behind the attitude of maximizing profit with as little social or ecological responsibility as possible, resulting in unscrupulous and ecologically destructive practices that harm the environment, such as strip-logging, the use of dirty fuel and toxic discharges into the atmosphere and waterways. It is seen in the concentration of vast wealth among a very few and the refusal to share with the poor or even to pay a just wage.

Gluttony, more broadly defined, is seen in over-consumption beyond what is needed for healthy living and, along with greed, fuels consumerism and "consumption for the sake of consumption,"[103] as well as the wastefulness of our throwaway culture. Its accompanying form is the vice of *luxury*[104] where copious and conspicuous consumption is seen as worthy status symbols as well as a justified reward for hard work and success. The global advertising industry excels at linking a person's sense of self-worth and success to consumption. We are told daily that consumption makes us happy, from food to cars, to luxury products, to travel.

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[103] Ibid., 101.

[104] David Cloutier, "The Problem of Luxury in the Christian Life," in *Journal of the Society of Christian Ethics* 32, no. 1 (2012).

Lust can be more broadly defined as the misuse of human sexuality. The hyper-sexualisation of modern culture is exploited by the advertising and fashion industries to sell everything from clothes and cosmetics to beverages and cars. Sexuality has been coopted by consumerism. To be socially liked is to be sexually attractive by consuming a whole range of products and keeping up with fashion. In turn, sex is presented as something to be consumed for pleasure, akin to other forms of entertainment, rather than as an expression of loving intimacy and union.

Each of the above vices is an excessive manifestation of good human qualities needed for our survival. The human need for healthy self-esteem, in excess, becomes pride, while the drive for self-improvement and healthy competition, in excess, becomes envy. The capacity for passion and righteous-indignation becomes wrath, while the need for rest and a balanced lifestyle becomes sloth. The desire to plan for the future and provide for one's family becomes greed and hording, while the legitimate need for food, clothing and shelter becomes gluttony. Healthy sexual urges and the desire for acceptance, as well as love and intimacy could become lust.

Van Wensveen suggests that a vice is often a form of pain relief.[105] In a world of rapid social change and increasingly social fragmentation, consumption helps in giving people a transient and shallow sense of fulfilment or achievement. Thus, Leonardo Boff suggests that ecological action needs to begin with attending to the interior ecology of the human person. Boff sees the transformation of one's worldview as the starting point for social change and liberation.[106]

[105] Wensveen, *Dirty Virtues*, 104.
[106] Leonardo Boff, *Ecology & Liberation: A New Paradigm*, translated by John Cumming, (Maryknoll: Orbis, 1995), 63.

Boff sees three levels of ecology in the human condition – *mental ecology*, *social ecology* and *environmental ecology* – and argues that there needs to be transformation in all three.[107] Mental ecology is the interiority that forms the worldview and attitude of the human person. This is the level of psycho-emotional human depth, where the human person finds meaning and wellbeing. A materialistic and consumeristic worldview finds pleasure and wellbeing predominantly in physical consumption – new things, gadgets, food, property, etc. One, therefore, sees consumption and accumulation of property as the signs and means of achievement, prestige and power. Consumption is the means by which the masses are persuaded by the wealthy to purchase their products and so increase their wealth.

A holistic human transformation would require, firstly, a restoration of the interior life of the human person. Human beings need the material means for survival, but to live human lives is more than working, eating, and reproducing. Human beings find fulfilment in beauty, creativity, natural wonder, relationships and human connection as well as connection with the divine. In the process of resisting structures of unjust and exploitative power, those who work for change need to avoid being seduced by the dominant discourse of consumption. To do this, a renovation of one's interior life is necessary, where the spiritual locus of human fulfilment needs to be strengthened in individuals and communities. People need to learn again to appreciate the beauty in nature, in art and creativity, as well as the capacity for solitude and contemplation to connect with the deeper self and with the transcendent.

[107] Ibid., 78.

Shaping an Ecological Consciousness and Conscience

Willis Jenkins points out that the human sense of morality simply did not evolve to deal with something at the magnitude of climate change.[108] For much of human history, ethics was needed for inter-personal human interaction and relationships within local communities, where the individual actor had some degree of independent choice in distinct situations and circumstances leading to specific consequences. In contrast, the Anthropocene, and the complexity and multiplicity of factors acting on societies over long time periods, are such that the individual feels overwhelmed.[109] The factors contributing to climate change accumulated over decades, involve the cumulative choices of billions of people, and influence political, economic, technological and industrial structures and practices that the individual feels powerless to change. Yet, one is supposed to feel responsible for their consequences. In addition, humans are attuned to perceiving and responding to causes and effects, but the factors affecting climate change occur out of sight in multiple distant locations, and slowly over years, such that individuals are not conscious of it most of the time. Add to that the fact that the factors involve mundane habits of consumption in our present lifestyle that we have become used to as part of our ordinary daily life, which on their own seem minute and harmless.

We, therefore, need to look at the attitudes and practices that, in light of their environmental consequences, should now be classified as vices. In other words, there is a need to 'recalibrate' the human perception of the world to take in a wider perspective that includes ecology as part of our daily reality. Only then can human desire be reformed so that it informs conscience and changes actions. Christian moral formation, consistent with a life of virtue, requires both the formation of

[108] Willis Jenkins, "The Turn to Virtue in Climate Ethics: Wickedness and Goodness in the Anthropocene," in *Environmental Ethics* 38, no. 1, (2016), 77-96, at 80-6.
[109] Ibid., 84.

informed reason as well as the formation of the passions. In this regard, religion has a significant role to play in so far as it shapes one's worldview. In fact, Jenkins points out that the contemporary faith in capitalism and the economic growth paradigm has become a belief system akin to a religion.[110]

To begin to reform attitudes, we need to recover and re-emphasise the aspects and traditions in Christianity that help us connect with, and respect, the natural environment. The Jewish Scriptures see in the majesty of nature the presence of God the creator (e.g., Gen 1-2; Ps 104 & 29; Job 38-41).[111] Jesus used examples from his listeners' daily experiences of the natural environment to illustrate the coming of the Kingdom of God, for example in the parables of the sower (Matt 13:1-9) and the of mustard seed (Matt 13:31-32). In Matthew 6: 26-34, Jesus pointed to the "birds of the air" and the "lilies of the field" to illustrate God's providential love for God's creatures. Jesus' words call on the human person to seek the Kingdom of God rather than earthly wealth or power. Jesus, therefore, warns against the vices of pride, greed and wonton consumption, which has not only created unjust inequalities and human suffering throughout much of human history, but which today also destroys the very environment on which we depend for wholesome living.

In our ecological efforts, we should, therefore, not forget the theological virtues of faith, hope and charity,[112] as well as divine grace and the spiritual resources of the Church to guide and sustain us. Too often people hoard their wealth out of a fear of future scarcity or deprivation. We, therefore, need *faith* to trust that God provides and that human generosity brings forth the generosity of God, so as to free us from the fear and insecurity that turns us towards self-

[110] Willis Jenkins, *The Future of Ethics: Sustainability, Social Justice, and Religious Creativity*, (Washington, DC: Georgetown University Press, 20113), 256-60.
[111] Daniel J. Harrington, SJ, and James F. Keenan, SJ. *Jesus and Virtue Ethics: Building Bridges Between New Testament Studies and Moral Theology*, (Lanham: Rowman & Littlefield, 2002), 184-6.
[112] See ST II. II. Q1.

centeredness. In the face of the scale of the problem, we need to maintain the *hope* that God works with us, and that change is possible with divine grace. And, we need the grace of *charity* to move the hearts of people towards conscience, compassion and empathy for the suffering of the poor and of other living things.

For the vast majority of history, human beings lived close to the land. Natural beauty still has the ability to move the human heart towards awe and wonder. The history of Christian spirituality is very much connected with that. The monks went into the countryside to find silence and solitude so as to contemplate and commune with the divine. Various forms of spirituality, including the Franciscan and Ignatian traditions, invite the faithful to see God in creation and to connect with God through the beauty of the natural environment. Christian spirituality's connection with creation needs to be made more prominent in the clergy's preaching and in the sacramental and liturgical life of the Church. Our liturgy and prayer should invite the faithful to reflect on God's presence in creation, and on the human responsibility for all of creation. Too often our conversations in Church are still focused on personal salvation and the afterlife, and we still talk about the poor as the recipients of charity rather than emphasizing the need for social and ecological justice, and the need for structural change.

Coming up with a list of ecological virtues is useless if we do not make a concerted effort to bring these virtues to the consciousness of the average Christian so that they would inform their conscience. In other words, ecological responsibility should become a part of our Christian life, perhaps incorporated as one of the corporate works of mercy. It needs to become a part of our Christian self-understanding and self-image. Just as we think that it is our Christian duty to give to charity, we should commit ourselves to acts of ecological responsibility. Our pro-life fight must be expanded to protect all the conditions necessary for a secure life, and our struggle against a culture of death should be understood in a wider context to include the life and death of the planet. In turn,

virtue builds on virtue. When we feel that things can change for the better, that we can live simpler lives or make an ecological difference, no matter how modest, then we are more encouraged to continue our efforts and even try harder. The analogy with taking up a sport, or picking up a skill, reminds us that virtue is a cumulative practice. Just as a person does not run a ten-mile race the first time that he starts exercising, so becoming an ecologically responsible Christian is a journey of growth, but one that we must first get on our feet to begin.[113]

In turn, Christian communities, whether schools, parishes or organisations (e.g., the Legion of Mary, the Christian Life Community, the Knights of Columbus, etc.) need to be places where ecological responsibility is talked about and acted on. These engagements could take the form of conscious efforts to reduce consumption and energy use, clean up local green spaces, or advocate with local and national governments for more environmental policies. In such communities, virtues are nurtured and one finds likeminded people for mutual support. Here, the young can grow up, and learn from, the example of their community. They are the ones who, after all, have the most at stake as a result of environmental destruction.

Ecological Virtues

In naming the ecological virtues, it is better to have a few virtues that we can practice well rather than list a plethora of them, as some writers do, which few people can actually remember. Under each of the cardinal virtues, I will name several virtues closely related to, or predominantly guided by, that particular cardinal virtue.

[113] James Keenan, "Virtue Ethics," Bernarnd Hoose, ed., *Christian Ethics: An Introduction* (London: Cassell, 1998), 84-94.

- Prudence

Under prudence, I include what could be called, the virtues of *awareness*. Prudential decisions first require sufficient understanding of the issues involved. This would include "ecological attentiveness"[114] – the appreciation of nature, as well as attentiveness to its workings, intricacies, strength and fragility. It also includes the awareness of the effects of environmental destruction on human beings in parts of the world where the negative effects are already being felt by the people there. Ecological attentiveness requires individuals to have an intellectual curiosity about what is happening around the world, and an active sense of being a part of a universal communion, especially as Christians. In this sense, it is related to the virtue of solidarity.

Awareness also includes *attentiveness* to our immediate and daily actions and their ecological implications, whether it is our use of electrical appliances and motor vehicles, or the necessity of the things we consider purchasing, or the way we use and dispose of things. It requires us to question our actions – why we want something new and whether we need it. This, in turn, requires both *self-awareness*, *honesty* and *humility*. Self-awareness and honesty help us to understand our motivations, for example, whether we truly need a new clothing item, or if the motivation for the purchase is out of a desire to keep up with fashion so as to be socially liked or admired, or to sate a deeper hunger for meaning, connection or fulfilment.

Rather than an attitude of self-effacement, *humility* should be seen as the virtue of seeing critically one's reality, as well as situations and circumstances, given the available information one has.[115] Humility invites openness to learning about the unfolding science on environmental issues,

[114] Steven Bouma-Prediger, "What kind of person would do something like that?: a Christian ecological virtue ethic," in *International Journal of Christianity* 20, no. 1 (2016), 27-8.

[115] Lisa Fullam, "Humility and its Moral Epistemological Implications," in *Virtue: Readings in Moral Theology No. 16*, Edited by Charles E. Curran and Lisa A. Fullam, (New York: Paulist Press), 250-274, at 251-6.

and to admitting one's own responsibility for the environment, thus reinforcing ecological attentiveness. A humble person is also one who is aware of one's strengths and weaknesses. As Christians, humility should keep us aware that we are sinners, in need of grace, yet loved by God. As sinners, we have an inclination to vice as well as to virtue, and we need to guard against one and nurture the other. Thus, we are called to reflect on the consequences of our actions on others, rather than assume an individualistic autonomy. At the same time, to know one's strengths is to acknowledge that one is a moral agent capable of contributing a small share in making a difference, and not just a helpless victim. To know that we are loved is to hold on to grace and to the theological virtues. In humility, we also need to realise that the rest of the natural world would carry on fine without humanity, whereas we are totally dependent on the rest of the natural environment for our own wellbeing and survival.

Finally, under prudence, I include the virtue of "ecological patience."[116] Patience mitigates against hasty reactions and wanting instant results, or gratifications, in a throwaway society. It gives space for thought before acting and it encourage people to choose effective long term solutions rather than quick fixes, even if it requires more effort and takes longer for benefits to become obvious. Affirmative ecological actions, such as reforestation, may take decades to show results. Patience, encourages us to take a twenty-minute walk rather than drive to the drugstore, or put cloths on a clothesline to dry naturally on a sunny day, rather than use a dryer, or use real glasses and crockery, which we wash after use, rather than disposable ones.

- Justice

In the context of the ecological crisis, we need to consider two dimensions of justice – social justice and ecological justice. Social justice regulates human relationships and recognizes that the

[116] Bouma-Prediger, "What kind of person," 29.

environment is a common good that needs to be protected for the good of all peoples. A safe and healthy environment is, therefore, a fundamental human right. Social justice recognizes that the poor and vulnerable suffer the most from environmental destruction, and that the current ecological crisis has socio-structural causes that need to be rectified if solutions to the problem are to be effective. Social justice further recognizes that empowering local communities, including indigenous communities, to protect their traditional environment and way of life would help to safeguard these places from predation by big businesses.

Justice is essential to ensuring the common good. The common good can be defined as "the interconnected set of social values that are shared by all of a community's members to at least the degree required by their common humanity." Thus, "it is a good that simultaneously benefits the community and each of its members."[117] Aquinas recognized two types of justice – "general justice" and "distributive justice."[118] General justice refers to an individual's obligation to contribute to the common good of the community and the wider society, and can also be described as "contributive justice."[119]

> "Contributive justice" requires individuals to build up and sustain the shared good of their society. Thus, it calls citizens to be active participants in the life of their community, working not only for their own good but also to help meet the basic needs of poor fellow citizens, to generate jobs for the unemployed, to overcome patterns of discrimination and exclusion, to protect environmental quality, and to build up other goods that can help make a good society.[120]

[117] Patxi Alvarez, SJ, "Justice in the Global Economy: Building Sustainable and Inclusive Communities," *Promotio Iustitiae* 121, no. 1 (2016), 23.
[118] Ibid. See also ST II. II. Q58, A6.
[119] Alvarez, "Justice in the Global Economy," 23.
[120] Ibid.

Distributive justice, on the other hand, demands that the common good of the wider society be equitably distributed to its members, taking into account the varying degrees of contributions made by different members to the common good. In today's world, where technological advances have enabled the generation of vast wealth while at the same time sustaining widespread injustice and poverty, distributive justice "calls for distribution of the world's wealth and resources so that the basic needs of every person are met at least to the level required by their human dignity."[121]

With regards to ecological justice, since we have established that the living environment has intrinsic value and dignity as God's creation, we have to recognize that it, therefore, has the intrinsic right to exist as God created it. The *Bill of Biotic Rights*, discussed in chapter three, is an example of the protection that can be offered. The protection of these rights of the living environment constitutes ecological justice. We need to expand the common good to ensure that the environment, also, benefits from human decisions and actions. As individuals, we need to first recognize that both human rights and biotic rights have claims on us.

What is becoming increasingly obvious, though, is that human beings are going to have to make sacrifices to protect the long term good of humanity itself, if future generations are going to have a decent world to live in. *Laudato si',* therefore, points to the need for *inter-generational justice* and responsibility.[122] As the changing environmental conditions and ecological research add to our understanding of the complexity of the situation, the *Bill of Biotic Rights* may have to be modified or supplemented.

To promote justice, one needs to feel a sense of solidarity with all life, human and non-human.[123] This emphasis would lead to the expansion of the social teaching of the church, and its

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[121] Ibid.

[122] *Laudato si',* 159.

[123] Meghan Clark, "Anatomy of a Social Virtue: Solidarity and Corresponding Vices," in *Political Theology* 15 (2014), 26–39.

call for solidarity with the poor. We need to realise that any form of needless suffering caused by human callousness diminishes every one of us, inasmuch as we are all interconnected as creatures of God. Created in the image of the creator and gifted with a share of the creator's power over nature, humanity has the duty of care for the rest of creation. As Christians, the supreme law of God – the love of God and neighbor – should always be on our minds and inspire our actions. Solidary encourages sharing of resources, whether it is with our immediate neighbors or across countries. At times, righteous anger[124] is the appropriate response to injustice and should impel Christians to social and ecological action.

- Temperance

Temperance allows for reason to guide our natural human desires and passions towards love for God, as well as healthy love of self and of others, so as to be able to discern, and act, for the common good. Under temperance, I include the virtues of *contentment* and *simplicity*. *Contentment* invites a person to savor and appreciate the simple things in life, and the things that really matter, which invite a person into greater spiritual depth. It includes finding fulfilment in relationships and spending time with people, and enjoying the beauty of creation, rather than spending time mostly in consumption and entertainment. Contentment begins with gratitude for the gifts that one has, and invites one to mindfulness and honest discernment between what one needs and what one wants.

Simplicity is closely related to contentment and invites a person to do more with what one has, and to recognize that we need fewer things than what the modern advertising industry tells us we do. It encourages us to buy things that last rather than follow fashion and trends, and to fix and

[124] Michael Jaycox, "The Civic Virtues of Social Anger," in *Journal of the Society of Christian Ethics* 36 (2016).

repair things rather than buy new items each time an old one breaks down. Simplicity, therefore, encourages us to extend the useful life of the things we need. Along with generosity, simplicity encourages us to share rather than hoard.

The ascetic tradition can help Christians grow in temperance and spiritual depth. Jesus was emphatic about the need for a simple life in order to focus on the Kingdom of God (e.g., Matt 6: 25-34; Matt 16: 26). Many spiritual traditions (e.g., Benedictine, Franciscan or Ignatian) help people to slowly let go of their inordinate attachments and to find greater freedom and deeper connection with God. This spiritual depth helps to fill in the spaces in the human heart that otherwise looks for fulfilment elsewhere, including in desiring to own and control things and other people.[125] These spiritual traditions often also encourage the contemplation of God in the natural world, and therefore, help us to be more appreciative of, and attentive to, creation.

- Fortitude

Under fortitude I include the virtues of *courage, perseverance* and *sacrifice.* Van Wensveen points out the need to rehabilitate the meaning of courage. There was a time when masculine courage and strength were defined in terms of domination over the natural world and 'uncivilized' peoples. Just think of the image of the explorer or heroic pioneer who goes forth to explore and to new lands, or the safari hunter going after big game trophies. Instead, the Christian understanding of courage, as doing what is right in the face of adversity and motivated by love, needs to be emphasized.[126] Courage does not mean the absence of fear, but instead, self-control in the presence of fear. Courage and perseverance are needed to shake off our ecologically harmful habits and to challenge the harmful behavior of others. Courage is needed to go against the trend, to be laughed

[125] Wensveen, *Dirty Virtues*, 134.
[126] Ibid., 131-42.

at for being unfashionable or weird, whether it is in one's clothing, or ideas, or lifestyle. It takes courage to call for ecological conversion in other people's lifestyles, or to be the frequent reminder of bad news, or to speak out against harmful industrial practices when doing so could jeopardize one's job or acceptance in a community dependent on that industry. Christians need to be prophetic, even if it is unpopular to do so. *Perseverance* is needed precisely because the effort to change would be hard and would be for the long haul.

Finally, under fortitude, I include the virtue of *sacrifice*, which goes to the heart of the Christian faith. Christians are called to follow Christ as our exemplar, including carrying our crosses. Sacrifice can be defined as the act of self-giving, or giving up something precious, for the love of others or for the common good. Parents are used to making sacrifices for their children, and this should now include making ecological sacrifice, such as being willing to put in more effort for environmentally friendly practices, knowing that what they do now would have consequences on the kind of world they leave behind for their children and grandchildren. Sacrifice is one of the most important virtues, because solving the environmental problems requires us to die to ourselves, our bad habits and self-serving desires, so that others may simply live.

This chapter has looked at the need for ecological conversion among individual Christians, and the virtues that conversion would entail. The next chapter will explore the forms of ecological action and activism that Christian communities can undertake, and also the virtues relevant to sustain these ecological commitments.

Chapter 5

The Christian Community and Virtues of Ecological Action

Ecological protection and climate change action need to take place at all levels of society, from the individual to the national. Having looked at individual ecological conversion and the virtues needed for personal change in attitudes and behaviours, this chapter explores the ecological action that the Church, as a community of believers, can engage in, first as parochial communities, and then as a universal communion across dioceses and nations. The chapter will then consider some of the virtues necessary to sustain these ecological endeavours, given that they would have to be sustained over the long term.

Ecological Protection Strategies

Scientists classify ecological protection strategies related to addressing climate change into two main categories – adaptation and mitigation.[127]

> Adaptation and mitigation are two complementary strategies for responding to climate change. Adaptation is the process of adjustment to actual or expected climate and its effects in order to either lessen or avoid harm or exploit beneficial opportunities. Mitigation is the process of reducing emissions or enhancing sinks of greenhouse gases (GHGs), so as to limit future climate change.[128]

Both adaptation and mitigation recognise that the greenhouse gases emitted into the atmosphere by humans since the industrial revolution have already raised the average global temperatures and caused changes to the climate. In addition, greenhouse gases will continue to be

[127] Sandler, *The Ethics of Species*, 120-122.

[128] Intergovernmental Panel on Climate Change, *Climate Change 2014 Synthesis Report, 76.* [Accessed on Feb 22, 2017] http://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_All_Topics.pdf

pumped into the atmosphere given the continued global dependence on fossil fuels in the foreseeable future. Adaptation and mitigation work together to manage the current state of the problem and try, as much as possible, to prevent it from becoming far worse.

Adaptation aims to help human communities and, if possible, ecosystems and wildlife, to adjust to the current and anticipated future living situations as a result of climatic changes. Given that we have experienced globally, and are expecting, increasingly severe storms, droughts, flooding, and sea level rise, formulating adequate adaptation strategies and measures will be no small feat. To name just a few examples, rising sea levels are likely to displace populations on low lying islands and coastal areas, while severe droughts could turn current croplands into deserts. People living in these areas could become the first climate change refugees in the not too distant future, adding to the refugee crisis that has already been developing in the last few years. New homes would have to be found for them. Countries prone to severe storms, such as those in typhoon or hurricane prone areas, would have to spend more to build stronger buildings, formulate evacuation strategies and to rebuild after storms have past. Changing precipitation and temperature patterns may require farmers to change their crops, find drought resistant alternatives or change their farming methods altogether, all while trying not to worsen the ecological situation by using stronger but more harmful chemical fertilizers or pesticides or depleting already strained water sources, such as rivers or aquifers, through over-irrigation. At the same time, some colder regions may experience longer periods of warm weather and become more agriculturally productive.

Thus, depending on how the situation plays out over the coming decades, there may be a need for a concerted global effort to redistribute wealth and resources as well as living space. Sadly, given the walls that nation-states seem intent on erecting against migrants and refugees, an ethical and humane redistribution of resources may be easier said than done, and we cannot rule out the possibility of resource wars and conflicts erupting around the world.

Mitigation, the second climate change strategy, aims to minimise the extent of climate change and environmental destruction. This would include, firstly, efforts to stop any increase in the output of greenhouse gases and to aim for significant reductions in the output of greenhouse gas as quickly as possible. Secondly, there is an urgent need to protect existing wilderness areas, habitats and ecosystems, both to safeguard biodiversity, as well as to preserve natural carbon sinks that lock away carbon dioxide from the atmosphere. Again, given the economic and political interests that this would affect, mitigation would not be an easy task.

The Role of Christian Voices

Christians, as part of a global community, need to be part of the global ecological protection effort. An important aspect to note, as reflected in *The Earth Charter*, is the link between social justice and ecological justice and the benefits of promoting healthy and strong democratic institutions in communities and countries.[129] In many countries, local rural and indigenous communities are at times at the mercy of government bureaucracies and powerful business interests who think only of financial gain when exploiting the land for logging, plantation mono-culture or mining. Even in urban areas, economically depressed neighbourhoods are often neglected, resulting in poor sanitation, pollution and environmental degradation. At times, toxic industries are located near or in these neighbourhoods without proper protection for the residents. In line with the principle of *subsidiarity* in Catholic Social Teaching, the environment is best protected by local peoples whose lives are directly affected by the health of their surrounding habitat. Strong democratic institutions, in turn, ensure that their concerns and voices are heard. Empowering and educating local communities, therefore, is a priority and a key dimension of ecological protection.

[129] *The Earth Charter*, III and IV.

The Church is a universal communion made up of local communities. These communities are immersed in a diverse number of geographical and socio-cultural contexts. I begin the discussion of Christian ecological action, therefore, by focusing on the local faith community, and I include in this the parish community as well as institutions such as religious communities, schools, hospitals and charitable organisations. These communities need to set positive examples of ecological action, and act as role models for members of the faithful as well as the surrounding wider society. The following suggestions for ecological action may be applicable to some communities and not to others, depending on their locations and individual circumstances.

Christian Community Action

It would be useful for parishes, and Church institutions and organisations to set up ecology protection committees or ministries, which could coordinate the ecological efforts of the community. The committee could oversee such efforts as recycling, and encourage practices that reduce the carbon footprint, such as using energy saving lighting and appliances. In places where the expertise is available, parishes and church organisations should conduct energy audits for recommendations on ways to maximise the efficiency in energy use, especially for heating, air-conditioning, and lighting, as well as building insulation. If feasible, parishes could switch to solar power, or even wind generated electricity. Thrift shops and swop shops, already available in some parishes, could be set up where used items could be picked up by others who might have a use for it, instead of buying new ones.

In suburban or rural communities, parish or community leaders could encourage members to start local produce gardens on parish grounds or in their own backyards. The crops could be shared among the community, especially with the poor. This could help to reduce the community's carbon footprint, since supermarket produce often have to be transported considerable distances,

which means more fuel used for refrigeration trucks. Large scale farming also often use fertilizers and pesticides that become run-offs that harm the environment. In addition, communities could work with local supermarkets to buy over the goods reaching expiration dates, at a discounted price, for food pantry or soup kitchens, thus reducing food wastage.

One level above the parishes, dioceses should set up ecological and climate change secretariats, which could serve to coordinate efforts within and across dioceses. They could compile useful resources and coordinate diocese-wide projects and cooperation with other Non-Governmental Organisations (NGOs) with similar ecological concerns, especially in advocacy work. Procurement at the level of the diocese would likely also enjoy economies of scale. For example, installing solar panels in a large number of church buildings across a diocese would be cheaper than individual parishes or institutions negotiating with solar companies on their own. The mutual support by the wider faith community across parishes would also be a source of encouragement to the morale of members involved in the ecological effort.

Christian communities should also find creative ways to cooperate more across community, institutional and national boundaries. Diocese and parishes with more financial resources could explore twinning options with their poorer counterparts, either within their countries or internationally, so that they could share their resources. More affluent urban parishes could collect funds to help poor rural parishes to educate their people, including ecological issues and efforts. Poor communities sometimes do not know how best to protect their environment, or they have no choice but to carry out environmentally harmful practices, for example, cutting down too many trees for firewood because they have no other fuel source. Financial contributions from wealthier communities could help them find alternatives, for example, solar cells for cooking and lighting, or provide funds to buy seeds or samplings to reforest their depleted woodland. Financial contributions could also be used to help rural communities adopt more ecologically friendly

farming practices that more effectively and efficiently use smaller land areas, and at the same time reducing fertilizer and water use. This reduces pressure on wild areas and water sources, as well as reduces the amounts of polluting run-offs.[130] It also helps communities to feed themselves, reducing dependence on imports and big businesses, at the same time, cutting down on pollution from vehicles transporting the imported produce. Contributions from wealthier communities could also finance legal action to protect the tradition land rights of local communities and preserve the existing habitat from being overrun by business interests.

The direct contact between twinned communities could help build friendship, solidarity and mutual understanding. Often, fundraising in urban parishes are one-off events. The beneficiaries tend to be nameless, and the problem to be addressed a distant concept. Twinning efforts, done well, would allow urban peoples (whose lifestyle, by the way, tend to consume more energy and resources, and therefore contribute more to climate change) to build more personal and sustained relationships with the real people and faces who are struggling with the effects of poverty, environmental degradation, and climate change in their daily lives. This would contribute to strengthening the awareness and to forming the conscience of the faithful.

Christian Ecological Advocacy

The Christian community has also a responsibility to speak out in the larger social forum against climate change and environmental destruction, and advocate for stronger environmental protection measures from local and national governments. Christians form an important civil component and voting-block in some countries. Christian communities, especially within the Catholic Church, have huge advantages in mobilizing the faithful to protest environmentally

[130] *Ecology Action* Website, [accessed 24 Feb 2017]. http://www.growbiointensive.org/index.html

harmful legislations, or to accept environmentally friendly legislations, which might be painful and require the people to make some sacrifices in their lifestyles. Some ecologically necessary legislations, which would be likely to increase the cost of goods and services for the average person or increase taxation and public spending, include:

- Carbon pricing, which places a tax on every tonne of carbon dioxide produced by a business.

- Stricter regulations on industrial waste and pollution, including requirements to treat waste water or exhaust, before releasing it back into the environment.

- Stricter regulations on harmful agricultural practices, including the use of pesticides and chemical fertilizers, uncontrolled land clearing, or land clearing by burning, which releases huge amounts of carbon dioxide and pollutants into the atmosphere.

- Measures to improve public transport systems and encourage public transport use, as well as reduce driving and car ownership, especially in urban areas.

- Stricter building regulations and incentives for ecologically friendly buildings, such as the use of environmentally friendly materials, energy saving technology, better insulation, and maximising the entry of sunlight, thus reducing the need for electric lighting.

- Banning or putting an ecological tax on harmful non-biodegradable plastic products such as disposable bottles, plastic bags or eating implements.

- Providing incentives for eco-friendly practices by households and industries, such as subsidies or tax rebates for installing solar panels or wind-powered generators.

- Promoting healthy lifestyles and diets that reduce meat intake to decrease the greenhouse gas output from meat farming.

- Begin planning and setting aside resources that would be needed for adapting to climate change related problems, such as shifting populations to higher ground, building stronger storm resistant buildings and sea walls to moderate the effect of storms and sea level rise.

- Commit to the financial aid promised to poorer countries to help them put in place ecological programs, as spelled out in the *Paris Agreement*.[131]

The Spiritual Role of the Church

As a faith community, the Church needs to be a source of spiritual support for the faithful. The clergy need to lead by example, by living simply and using resources judiciously, both in their personal lives and in administering the community. Church leaders need to help their members deepen their spiritual live and to find peace, direction and fulfilment in spiritual depth so that one does not need external validation or consumption as gratification for emotional fulfilment. Some members of the community should be better trained in spirituality and ecological knowledge so as to form and support the rest of the community in environmental activism. The community should be continually forming the ecological awareness and conscience of its members such that environmental activism becomes a community mission and one of its works of mercy. This commitment could be a way to channel the energy of the youth who are looking for a worthy cause and a meaningful purpose. In the long run, the Church needs to work with the rest of the world to find an economic model that is not based on constant economic growth and ever increasing consumption of resources, but an economic model that would meet the needs of all justly, including the needs of all of creation.

[131] United Nations, *Paris Agreement*, Article 4.5.

Communal Virtues for Ecological Action

The mission of ecological protection and reform will have to be a long and sustained effort, and one involving committed community action. To maintain the momentum, a number of organisational and community virtues would be necessary. These corporate virtues would build on the personal ecological virtues discussed in chapter four, but would be more directed towards community and organisational action. As in the previous chapter, these communal virtues would be explored under the cardinal virtues which they are most closely guided by.

- Justice

Insofar as the prime objective of ecological action is to protect the right to life of all of God's creation, including human beings, I place justice as the first of the cardinal virtues. We recall that Aquinas defined justice as rendering to each one's due.[132] In this case, it is rendering to each living species its rights to life, which I earlier discussed as the *Bill of Biotic Rights* in chapter three. In chapter four, I also discussed the two dimensions of justice relevant to ecological action – social justice and ecological justice. Justice is key to ensuring the common good, and to motivating members to action, to defend their own rights, and the rights of those with whom we are in solidarity.

Solidarity, which I include under justice, would in fact be a meta-virtue holding together the other virtues for communal ecological action, one that overarches and informs the rest of the virtues. There needs to be solidarity in the desire for universal justice, a shared desire by the majority of humanity for the common good. Solidarity also implies organised and united action to achieve that justice. Without universal solidarity, human individuals, communities and nations are unlikely to care about the needs of others, or to share their resources. The ecological movement

[132] ST II. II. Q58. A1.

also risks fragmentation into small groups, and even competition in their goals, approaches and need for resources.

Daniel Scheid identifies five facets of solidarity in Catholic social thought – "as a fact, an attitude, a duty, a principle, and finally culminating in the understanding of solidarity as a social virtue."[133] Firstly, as a fact, Christians recognise the reality of human interdependence. The human person is created to be a social being who finds fulfilment in relationships and human connection, and is dependent on others. This dependence has both a social and an ecological dimension in our utter reliance on the rest of creation for our survival and thriving. Secondly, as an attitude, solidarity has an affective component, and implies a "positive appreciation of one's relationship to the whole and the well-being of other human beings."[134] A person feels a sense of connection with others and empathy for their needs and sufferings, as well as a sense of gratitude to the society of which they are a part and which provides them a place of belonging. Thirdly, as a moral duty, solidarity recognises the obligation of individuals to contribute to the common good of the community to which they belong and on which they depend. Christian solidarity acknowledges the Gospel imperative to love one's neighbour and, therefore, the obligation of the rich and powerful to help the poor and powerless. Fourthly, as a moral principle, solidarity becomes enshrined in public policies and legislations of states and countries, and in codes of international conduct. Hence, solidarity becomes codified guidelines of action and obligations. Finally, as a virtue, solidarity draws together the other facets, moving solidarity from awareness to affective commitment and into action for the common good.

[133] Daniel P. Scheid, *The Cosmic Common Good: Religious Grounds for Ecological Ethics*, (New York: Oxford University Press, 2016), 84-86.
[134] Ibid., 85.

We can conceive of solidarity as concentric circles of action, from the connection of individuals within a local community to the connection among communities within a society, culture or nation, and finally, to international and universal solidarity among all peoples. Beyond human solidarity, there is solidarity with all of creation, where human beings recognise and feel the interconnection of humanity with the rest of creation, especially with the suffering of other living beings. This sense of connection is essential if the proposals for community action and advocacy, made earlier in this chapter, are to have any hope of success.

Since the virtues are motivated by both human reason and passions, becoming actualised in human action and their way of life, the faith community must sustain and nurture the human capacity for *compassion* and *empathy*, which are, in themselves, virtues. Flowing from compassion and empathy, there is the virtue of *righteous anger*,[135] when a community responds individually and collectively to injustice done to others. *Righteous anger* would be the mean between the vices of apathy and reckless rage. It implies that anger is channelled ethically and constructively, and calls on witnesses to rectify an unjust situation or condition, in solidarity with the victims of injustice or oppression. As a collective virtue, righteous anger unites the community affectively towards a social mission founded on justice and the common good.

Justice, based on solidarity, also implies the virtue of *equity*, which recognises that resources, as well as burdens, need to be fairly distributed and shared among the members of a community, depending on their ability and individual conditions. Everyone needs to carry a fair share of the necessary sacrifices, if we are to simplify our lives and reduce consumption. At the same time, those who are stronger, richer, or healthier, need to carry more of the burden and contribute more to the common good simply because they have the ability to give more.

[135] Jaycox, "The Civic Virtues of Social Anger."

- Prudence

Given the multifaceted nature of the problem, the competing interests of multiple stakeholders and the political complexity of the problem of ecological destruction, ecological action would require a great deal of prudence on the part of community organisers and activists. Firstly, I include what I call the virtue of *judicious planning.* There needs to be honest assessments of the situation and the problems that the community should address, the measures to be implemented or the actions to be taken, as well as the availability of resources. The proper gathering of information, and the careful weighing of pros and cons based on available information, helps facilitate situational assessment and decision making. There should not be reckless or 'knee-jerk' reactions to new developments or problems. This is to ensure that actions take can be sustained in the long run and not fizzle out midway, which would be a waste of time and resources, and also likely to be demoralizing for members, and at the same time putting the reliability of the community into question. *Trustworthiness* would, therefore, be an important related virtue, especially when building solidarity requires trust between the individuals and communities involved. Partners need to know that a community is able to deliver what it promises to do. This is especially important in advocacy, when speaking up collectively against unjust or ecologically detrimental policies and practices by governments or big corporations.

To work together effectively, there also needs to be mutual respect and dialogue within and across communities. There needs to be the virtue of *collegiality*[136] – the practice of hearing others out and mutual consultation in decision making. This helps the organisation to practice some form of shared decision making and communal discernment. Different perspectives add to the

[136] M. Shawn Copeland, "Collegiality as a Moral and Ethical Practice," in *Practice What You Preach: Virtues, Ethics and Power in the Lives of Pastoral Ministers and Their Congregations*, edited by James Keenan and Joseph Kotva, (Franklin, WI: Sheed and Ward, 1999), 315-29.

understanding of a situation or problem and can generate creative ideas towards solutions. Collegiality stands as a mean between tyranny and authoritarianism on the one hand, and chaotic mob-rule on the other. There needs to be clear leadership for decisions to be carried out consistently and sustainably over time. At the same time, the leadership needs to be responsible and accountable to the community and its diversity of opinions and needs. Across organisations, collegiality facilitates working towards reasonable compromises and consensus.

The third virtue I include under prudence is *accountability*, which is the attitude and practice in an organisation for leaders to always keep in mind that they are answerable for their decisions to their members, community, and indeed the larger society of which they are a part. Accountability is supported by the previously discussed virtues of solidarity, trustworthiness and collegiality, as well as the healthy practice of democracy, which ensures, as much as possible, that communities and societies choose leaders that they trust to move the community in the right direction towards the common good.

- Temperance

Under temperance, I include the virtues of *dialogue* and *persuasion* in advancing ecological action, and the commitment to *non-violence* in advocacy. This would be in accordance to the life and example set by Christ himself, who came to call humanity to conversion rather than impose divine will by force. Ecological action requires the participation of everyone, in terms of changing our lifestyles. This can only be achieved through persuasion and education. Any form of activism that is too aggressive, or worse, that relies on violent tactics, would only generate revulsion and turn public opinion away. Violence breeds more violence. A good degree of *patience* on the part of activists would therefore be required to allow for the slow process of dialogue and persuasion.

Since ecological action can be conceived of analogously as working to heal the earth and the human relationship with creation, I borrow two principles from bioethics, which I consider guiding virtues to aid in ecological temperance – the virtues of *beneficence* and *non-maleficence*. *Beneficence* commits individuals and communities to act for the good of others, including those who do not agree with them. Tom Beauchamp and James Childress provide several dimensions of beneficence, including acting to "protect and defend the rights of others… prevent harm from occurring to others… remove conditions that will cause harm to others… [and] rescue persons in danger."[137] In the ecological context, these 'others' include both human and non-human life, as earlier discussed under the *Bill of Biotic Rights* in chapter three.

Non-maleficence states that a community's ecological action should not cause pain, suffering or hardship to others, especially physical harm.[138] Again, this should apply, as much as possible, to all of creation, but more specifically to human beings, including one's opponents in the ecological debate. Related to non-violence, non-maleficence disavows actions that would harm those who might be involved in ecologically destructive activities, such as illegal loggers or people working in polluting industries. It is true that stopping these activities might cause people to lose their jobs. However, this is a necessary measure for the greater long-term good of all humanity, including the people involved in ecologically harmful activities and their families. When beneficence and non-maleficence intersect, communities and governments need to work together to help the affected through their unemployment, and find alternative means of making a living that are ecologically sustainable. This illustrates that ecological action needs to be socio-structural and socio-systemic, because action to remedy one problem would often have side-effects affecting

[137] Tom Beauchamp & James Childress, *Principles of Biomedical Ethics*, 7th edition, (New York: Oxford University Press, 2013), 202-4.
[138] Ibid., 150-3.

other aspects of the lifestyle and economic system that humans beings have become used to. The virtues of beneficence and non-maleficence would help ensure that the side-effects are addressed justly and compassionately.

- Fortitude

The complexity of the problem of ecological protection, and the need to reform the human economy that it implies, means that ecological action needs to be a long-term commitment, involving a permanent change in attitude and behaviours, and constant vigilance and pressure on governments, businesses and organisations in ways that promote ethical and just solutions. Ecological action, therefore, requires *courage* to do the right thing, including speaking truth to power. It also demands *endurance* and *persistence* to see through the plans that a community agrees on. Leaders need to sustain their own passions and resolve, as well as those of their community members.

At the same time, I include *generosity of spirit* as a virtue under fortitude. It is easy to be generous occasionally and if the cost is relatively low, but it is much more difficult to be generous continually in the long term, or if the cost to oneself is significant. Generosity of spirit implies a certain selflessness in one's attitude, and concern for the good of others. It is the willingness to put effort and time into pursuing the common good, accepting sacrifices as part of the process. One's generosity tends to bring out the generosity in others, because people tend to feel motivated to reciprocate the generosity they experience. Thus, generosity of spirit encapsulates the virtues of benevolence and non-maleficence, and builds up community and solidarity.

Ecological Action and the Theological Virtues

Generosity of spirit and *solidarity* also lead us to the theological virtues and the role of grace in Christian ecological action. Christian ecological action needs to be motivated and directed by our Christian discipleship, and sustained by our spiritual life and connection with God and the graces God provides – i.e., faith, hope and charity – when we are open to the Holy Spirit. One common *faith* should unite the community, and it is through faith that we find solidarity as one People of God, children of the Father in God's family. Faith should reinforce our commitment to each other and to the common good, and motivate our actions towards *charity*, especially out of compassion for the suffering of humanity and all of creation. In drawing Christians together, faith and charity strengthen our ability to *hope*, trusting that what we do in the face of formidable odds would be completed by God in God's time. Faith, hope, and charity incline us towards the graces and virtues of *mercy* and *forgiveness* for the mistakes of the past, both our own and those of others, and they strengthen the resolve to change and look towards the future.

Having examined the ethics of ecological action within and among Christian communities, the question remains of what more could be done in relation to the wider world of which Christians are a part. The next chapter will explore how virtue ethics can help Christians to connect, dialogue and work with other faith traditions and religions in ecological action.

Chapter 6

Moving Forward:
Ecological Cooperation with All People of Goodwill

This thesis has, thus far, taken a Catholic natural law approach in discussing the ecological crisis and what Christians should do ethically, and how to do it in practical terms, both individually and as faith communities. The theological foundation, based in part on Scripture, should allow for ecumenical dialogue and cooperation with other Christian denominations. At the very least, the Gospel imperative for justice and compassion for the suffering of others, could be applied to the negative effects of climate change on people, to exhort Christians to ecological action. Christians, however, make up only some thirty percent of the global population. We, therefore, need to work with peoples of other cultures and religions in a global ecological effort. This concluding chapter will, thus, devoted some pages to consider how Christians can enter into dialogue and cooperation with other religions and cultural traditions on ecological action, in particular, the major world religions of Islam, Hinduism and Buddhism, as well as Confucianism and Daoism (Taoism), which have profoundly influenced the cultures of East Asia.

Obviously, a detailed discussion of inter-religious ecological dialogue would not be possible in the short space available. Rather, this discussion intends to point out the utility of a virtue approach as the starting point of cross-cultural and inter-religious ecological cooperation, insofar as most religions uphold similar virtues. This discussion would also, hopefully, provide some useful concepts for local Christian communities in multicultural locations to begin a conversation about ecology with people or communities of other cultures around them.

Islam

The Abrahamic religions, including Christianity and Islam, have similar creation traditions derived from the Hebrew scriptures. In the *Quran*, Adam and Eve, for instance, were created by God from clay, and made stewards *(khalifah)* responsible for the care of the earth.[139]

> Because the Earth is the essence of our being, it is our responsibility to protect it. When we die, we will be resurrected in both body and spirit and will be held to account for all that we've done for ourselves, others, and the planet. This is the essence of the *khalifah,* Arabic for "steward." We are all stewards of the Earth. We are perfectly created to be able to live and thrive here. The Prophet Muhammad (peace be upon him) declared: "The world is beautiful and verdant, and verily Allah, be He exalted, has made you His stewards in it, as He sees how you acquit yourselves." (Sahih Muslim, book 10: hadith 10)[140]

In Islam, the natural world is seen as a sign of God's presence,[141] and the "bounty of nature as an unfalsifiable expression of God's mercy."[142] S. Nomanul Haq points out that a *hadith* of the prophet Mohamad likened the whole earth to a mosque, a place when human beings encounter God, and is thus sacred.[143] Islam shares with Christianity the concern for justice and compassion, especially for the poor.[144] Islam also shares, with Christianity, the Hellenistic legacy of empirical scientific observation and inquiry, which informed Islamic philosophical and theological reflections. Finally, like Christianity, Islam also inherited the virtue tradition of the Greeks. In fact, Christian scholars of the middle ages drew on Muslim writings to advance Christian theological,

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[139] Ibrahim Abdul-Matin and Keith Ellison*, Green Deen: What Islam Teaches About Protecting the Planet*, (San Francisco: Berrett-Koehler Publishers, 2010), 8.
[140] Ibid.
[141] Ibid., 6-7.
[142] S. Nomanul Haq, "Islam and Ecology: Towards Retrieval and Reconstruction," in *Islam and Ecology: A Bestowed Trust*, Edited by Richard C. Foltz, Frederick M. Denny and Azizan Baharuddin, (Cambridge, MA: Harvard University Press, 2003), 160.
[143] Ibid., 162.
[144] Abdul-Matin and Ellison, *Green Deen*, 9.

philosophical and scientific thought.[145] Ibrahim Abdul-Matin and Keith Ellison summarise the main ecological ethical principles of Islam as follow:

1. Understanding the Oneness of God and His creation *(tawhid)*
2. Seeing signs of God *(ayat)* everywhere
3. Being a steward *(khalifah)* of the Earth
4. Honoring the covenant, or trust, we have with God *(amana)* to be protectors of the planet
5. Moving toward justice *(adl)*
6. Living in balance with nature *(mizan)*[146]

Hinduism

Hinduism, though broadly speaking one religion, is composed of a wide variety and diversity of theological and philosophical traditions, schools and approaches. These schools do, however, share some common concepts that would be useful starting points for dialogue and cooperation with the Catholic natural law and virtue tradition to ecological action. Hinduism has an ancient tradition of reverence for creation. One main reason is the Hindu believe in the Transmigration of Souls. Each living being has an *ātman*, a deeper, "changeless", self that is "an indifferent, untouched and unaffected observer, beneath and beyond the vicissitudes of pain and pleasure."[147] The *ātman* is often rendered the "soul" in English. The *ātman* is imperishable and immortal, and is reborn as a different *jīva* (incarnation) each time, depending on the moral quality of its previous life. From this believe that every living being has an *ātman*, and that, therefore, a

[145] Haq, "Islam and Ecology," 141-2.
[146] Abdul-Matin and Ellison, *Green Deen*, 5.
[147] Daniel P. Scheid, *The Cosmic Common Good: Religious Grounds for Ecological Ethics*, (New York: Oxford University Press, 2016), 134.

human being in one life can be reincarnated as another creature in another life, comes the believe in the principle of *ahimsā* (non-violence) and the practice of vegetarianism among many Hindus.

However, since Christianity does not believe in reincarnation, the transmigration of soul might be a problematic starting point for dialogue. Still, the shared believe in divine transcendence, and that morality and the virtuous life have consequences beyond this life, may prove useful for dialogue. Daniel Scheid proposes, instead, the concept of the *dharma,* the principle of cosmic order, as a more useful starting point for Hindu-Christian ecological dialogue and cooperation.

> Derived from the root *dhr*, "to sustain," "to support," or "to uphold," *dharma* can be conceived of as law, righteousness, religion, justice, proper action, merit, and more generally as the "fulfilment of social and religious duties." *Dharma* represents the origin of world order, the actions necessary to maintain and promote social wellbeing, and a path to personal flourishing, both now and in eternity.[148]

The Hindu vision of cosmic order, therefore, has both ecological and social dimensions. Drawing from the *Bhagavad Gita*, Scheid explains that the divine permeates the *dharma,* and the human being finds joy and liberation by living the *dharma*, by fulfilling one's duties in life to uphold the cosmic and social order. Protecting the ecological order is, therefore, a crucial part of living the *dharma*, and the virtues that allows a Hindu to live the dharma would find broad agreement with the virtues proposed in this thesis.

Buddhism

Buddhism, unlike the Abrahamic religions, does not have a doctrine of *creatio ex nihilo*, originating at a specific point in time. Rather, in Buddhist cosmology, all things exist as a combination of other factors, both material and temporal. A thing is what it is because of the parts

[148] Ibid., 128.

and the matter that make it up, as well as its history that has led it to where it is. A human person, for example, is made of parts and organs, cells and the substances that make up those cell, as well as the evolutionary history of the human species, as well as one's family and person history. This doctrine of "dependent origination" or "dependent co-arising" *(pratīyasamutpāda)* emphasise the "interdependence" of all existence.[149] Scheid identifies this interdependence of humans with the rest of the cosmos as a key concept for ecological action among Buddhists.

The Four Noble Truths of Buddhism teach that the cause of suffering is *dukkha* ("uneasiness, discontentment, unsatisfactoriness, or the absence of perfect peace"), which arises out of *tankā* ("self-centred craving"). Suffering ends when these cravings cease *(nirvana)*. The way to attain *nirvana* is laid out in the eightfold path of Buddhism, which comprise "right actions… meditative practice… and wisdom into the nature of reality."[150] The way to *nirvana* therefore begins with seeing the reality of the interconnectedness of all things, and realising that one suffers, and causes suffering, when human cravings rule the emotions and lead people to vices and harmful actions. The way to peace and wholeness is, instead, the reduction of human wants, and simplicity of life. The virtues of simplicity of life, and the surrender of one's inordinate desires, are very much in line with the virtues of personal conversion in chapter four. The Buddhist teaching of interdependence also manifests in an emphasis on compassion for all life, which is compatible with the virtues of ecological action in chapter five.

Confucianism

Confucianism and Taoism have profoundly influenced the cultures of East Asia. Regardless of whether a person is an active adherent of either, the Confucian and Daoist worldviews are very

[149] Ibid., 144-5.
[150] Ibid., 146.

much embedded in the cultures of the Chinese, Koreans, Japanese, Vietnamese, and their diaspora populations. Christian ecological dialogue and cooperation in much of East Asia would, therefore, benefit from finding common ground with the Confucian and Taoist perspectives.

Mary Evelyn Tucker describes Confucianism as *anthropocosmic*. Whereas anthropocentrism considers human beings the centre of existence and dominant over the natural world, the *anthropocosmic* worldview seeks to understand the human place in the cosmos by starting with the human person, but without considering the human person as superior or dominant over other living beings.

> This *[anthropocosmic]* view is centered on the cosmos, not on the human. The implications are that the human is seen as **embedded in nature, not dominant over nature**. The Confucian worldview might be described as a series of **concentric circles where the human resides in the center, not as an isolated individual, but as embedded in ever-expanding rings of family, society, government, and nature**. The moral cultivation of the individual influences the larger circles of society and politics, as is evident in the text of the *Great Learning*, and that influence extends to nature, as is clear in the *Doctrine of the Mean*. All of these interacting circles are contained within the vast cosmos itself. Thus, the ultimate context for human flourishing is the 10,000 things, nature in all its remarkable variety and abundance.[151] (emphasis in bold mine)

One of the key features of Confucianism is, therefore, its "relationality," which is "not only between and among humans but also between humans and the natural world."[152] Humans are primarily "communitarian beings," and social harmony is set, in turn, in the larger context of human harmony with heaven and earth. This harmony is possible because the natural world has its "inherent unity" and is thus "inherently valuable" and "morally good."[153] The natural world

[151] Mary Evelyn Tucker, "Ecology and Religion: Ecology and Confucianism," *Encyclopedia of Religion*, edited by Lindsay Jones, 2nd ed., vol. 4. (Detroit: Macmillan Reference USA, 2005), *2631.*
[152] Ibid., 2631.
[153] Ibid., 2632.

therefore must inform human morality, in particular, the natural cycles of nature – of life, growth, fruitfulness, decline and death.[154] Confucian writings often draw on nature analogies, and at times call for human restraint in the cutting down natural vegetation, and in the treatment of animals and livestock, reflecting an awareness of the importance of the ecology in a primarily agrarian society.[155]

Confucianism also has a strong virtue tradition, founded on the "concentric circles" of relationships highlighted in the quotation above. At each level of the concentric circles, a right hierarchy must be established, founded on a corresponding virtue. Hence, children owe *filial piety* to their parents, and subjects owe *loyalty* to their rulers. At the same time, parents and rulers have a duty of care for their charges. Analogously, humanity owes *filial piety* to the natural world which gives and sustains human life and wellbeing. According to *Mencius*, human nature is inherently good, and the role of moral cultivation is to bring out the virtuous in the person. For *Mencius*, the human heart contains "the seeds… of compassion, shame, courtesy and modesty, right and wrong. When cultivated, these will become the virtues of humaneness, righteousness, propriety, and wisdom."[156]

Since the foundational relationship in this social and cosmic order is the relationship between parents and children, the parental duty of care for their offspring implies the importance of intergenerational ecological justice. Parents have an obligation to leave to their children a world where they can live and thrive, and in turn bring forth future generations. It is also a parent's responsibility to educate and form the values of their children with regards to the ecology. Governments, in turn, have the same duty to their citizens.

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[154] Ibid.
[155] Ibid., 2632-3.
[156] Ibid., 2634.

Daoism (Taoism)

Daoism has often been regarded as even more oriented to the natural world than Confucianism.

> Daoist cosmology regards the *Dao* as the principle of vital creativity inherent within the diversity of phenomena within the universe. The *Dao* is transcendent in that it is regarded as the supreme wellspring of creativity for heaven, earth, and humanity. The *Dao* is also immanent within all life as the vital power (*de*) that informs the nature (*xing*) of each of the myriad beings (*wanwu*). Daoist religion can be regarded as ecological in its theoretical structure because it is based on the continuous negotiation between individuals and their cosmological environment or creative matrix (*dao*). Life is thus neither absolutely fated nor a matter of individual will but inscribed in a complex ecology of engagement with family, ancestors, deities, the seasons, the sun and moon, and even the *Dao* itself.[157]

The natural world is in harmony when *Yin* (the negative principle of passivity or absence) and *Yang* (the positive principle of activity or presence) are in balance. The natural cycles display this interaction between *Yin* and *Yang* – night and day, rest and activity, cold and hot, winter and summer, valleys and mountains, female and male, death and life, etc. The natural world, left to its own rhythm, therefore, displays the most authentic manifestation of the *Dao*. Unsurprisingly, Daoist sages often retreated to the mountains and places of natural beauty to cultivate the *Dao* through meditation. Human actions which incline too much towards the *Yin* or *Yang*, such that it causes an imbalance, often results in a reversion, such that the opposite reasserts itself. Thus, for example, the human attempt to impose humanity's own vision of economic and technological order, which is not aligned to the *Dao*, eventually causes ecosystemic collapse and chaos. The

[157] James Miller, "Ecology and Religion: Ecology and Daoism," *Encyclopedia of Religion*, edited by Lindsay Jones, 2nd ed., vol. 4, (Detroit: Macmillan Reference USA, 2005), 2635.

principle of *wuwei*, variously translated as "non-action," or "non-coercive actions"[158] in accordance with the *Dao*, thus, advocates that human actions should follow the course of nature. The Daoist vision of self-cultivation, thus, emphasises virtues that helps one to be in harmony and balance with the natural world.

What this short discussion in comparative religion has hopefully shown is that, despite the differences in worldviews, the major world religions each have an awareness of the importance and value of the natural world and ecology. Inter-cultural and inter-religious cooperation in ecological action would, therefore, benefit from starting with lived virtues, in which they share some commonalities, rather than abstract theology.

[158] Roger T. Ames and David L. Hall, *Daodejing "Making this Life Significant": A Philosophical Translation*, (New York: Random House, 2003), 38.

Conclusion

Ecological destruction and climate change is a global crisis which requires a global response. Humanity needs, urgently, to make significant changes in its use of resources and way of life if it is to adequately address the problem and chart a liveable future for the planet. Yet, societies cannot change unless individuals change, because societies are the cumulative actions and interactions of individual persons. This thesis, therefore, has argued that Christians need to be a part of the solution, beginning with the conversion of the individual, followed by working together for the conversion of others, because the divine command to love God and love one's neighbour have an ecological dimension. The love of God should lead us to the love of God's creation. The love for our neighbours, should include our fellow human beings, as well as all of God's creatures who are part of the global ecological neighbourhood on which all live depends.

Drawing from the Catholic natural law tradition and the most recent teachings of the magisterium, this thesis argues that the creator has endowed creation with intrinsic dignity and, therefore, creation has fundamental rights to survival which need to be protected. The same natural law tradition also provides us the principle of the *common good* and the framework of virtues and vices, which this thesis proposes as the guiding instruments for this conversion. Ecological conversion beings with the change in attitude and lifestyles of individual Christians from ecological vices to virtues. It must then move into action, where Christians motivate their communities to change their social and institutional behaviours, and then work for the necessary changes in their societies and governments, through education and advocacy. In a globalised world, this ecological action needs to be achieved in cooperation and solidarity with all people of goodwill, be they fellow Christians of differing traditions or peoples of other religions and beliefs, and across cultures and nations.

The Christian response must also be a faith response rooted in the spiritual life of the community. It is the connection with the Holy Spirit that provides the spiritual sustenance for a Christian community to persevere in the face of difficulty. The pastors and leaders of the communities should, therefore, be mindful of nurturing the spiritual life of the members, which helps them keep the theological virtues connected to the ecological virtues that Christians are trying to live out. Faith in the creator helps us to respect and cherish God's creation, and trust that God is with us in our ecological mission. Charity, which is both a virtue and a grace, moves the human heart to compassion and solidarity to bring about a more just and sustainable future. And, hope in God's power to bring to completion human efforts to do the right thing to protect creation.

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The Earth Charter

Preamble

We stand at a critical moment in Earth's history, a time when humanity must choose its future. As the world becomes increasingly interdependent and fragile, the future at once holds great peril and great promise. To move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms we are one human family and one Earth community with a common destiny. We must join together to bring forth a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace. Towards this end, it is imperative that we, the peoples of Earth, declare our responsibility to one another, to the greater community of life, and to future generations.

Earth, Our Home

Humanity is part of a vast evolving universe. Earth, our home, is alive with a unique community of life. The forces of nature make existence a demanding and uncertain adventure, but Earth has provided the conditions essential to life's evolution. The resilience of the community of life and the well-being of humanity depend upon preserving a healthy biosphere with all its ecological systems, a rich variety of plants and animals, fertile soils, pure waters, and clean air. The global environment with its finite resources is a common concern of all peoples. The protection of Earth's vitality, diversity, and beauty is a sacred trust.

The Global Situation

The dominant patterns of production and consumption are causing environmental devastation, the depletion of resources, and a massive extinction of species. Communities are being undermined. The benefits of development are not shared equitably and the gap between rich and poor is widening. Injustice, poverty, ignorance, and violent conflict are widespread and the cause of great suffering. An unprecedented rise in human population has overburdened ecological and social systems. The foundations of global security are threatened. These trends are perilous—but not inevitable.

The Challenges Ahead

The choice is ours: form a global partnership to care for Earth and one another or risk the destruction of ourselves and the diversity of life. Fundamental changes are needed in our values, institutions, and ways of living. We must realize that when basic needs have been met, human development is primarily about being more, not having more. We have the knowledge and technology to provide for all and to reduce our impacts on the environment. The emergence of a global civil society is creating new opportunities to build a democratic and humane world. Our environmental, economic, political, social, and spiritual challenges are interconnected, and together we can forge inclusive solutions.

Universal Responsibility

To realize these aspirations, we must decide to live with a sense of universal responsibility, identifying ourselves with the whole Earth community as well as our local communities. We are at once citizens

of different nations and of one world in which the local and global are linked. Everyone shares responsibility for the present and future well-being of the human family and the larger living world. The spirit of human solidarity and kinship with all life is strengthened when we live with reverence for the mystery of being, gratitude for the gift of life, and humility regarding the human place in nature.

We urgently need a shared vision of basic values to provide an ethical foundation for the emerging world community. Therefore, together in hope we affirm the following interdependent principles for a sustainable way of life as a common standard by which the conduct of all individuals, organizations, businesses, governments, and transnational institutions is to be guided and assessed.

Principles

I. Respect and Care for the Community of Life

1. Respect Earth and life in all its diversity.
    a. Recognize that all beings are interdependent and every form of life has value regardless of its worth to human beings.
    b. Affirm faith in the inherent dignity of all human beings and in the intellectual, artistic, ethical, and spiritual potential of humanity.
2. Care for the community of life with understanding, compassion, and love.
    a. Accept that with the right to own, manage, and use natural resources comes the duty to prevent environmental harm and to protect the rights of people.
    b. Affirm that with increased freedom, knowledge, and power comes increased responsibility to promote the common good.
3. Build democratic societies that are just, participatory, sustainable, and peaceful.
    a. Ensure that communities at all levels guarantee human rights and fundamental freedoms and provide everyone an opportunity to realize his or her full potential.
    b. Promote social and economic justice, enabling all to achieve a secure and meaningful livelihood that is ecologically responsible.
4. Secure Earth's bounty and beauty for present and future generations.
    a. Recognize that the freedom of action of each generation is qualified by the needs of future generations.
    b. Transmit to future generations values, traditions, and institutions that support the long-term flourishing of Earth's human and ecological communities.

In order to fulfill these four broad commitments, it is necessary to:

II. Ecological Integrity

5. Protect and restore the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life.

a. Adopt at all levels sustainable development plans and regulations that make environmental conservation and rehabilitation integral to all development initiatives.

b. Establish and safeguard viable nature and biosphere reserves, including wild lands and marine areas, to protect Earth's life support systems, maintain biodiversity, and preserve our natural heritage.

c. Promote the recovery of endangered species and ecosystems.

d. Control and eradicate non-native or genetically modified organisms harmful to native species and the environment, and prevent introduction of such harmful organisms.

e. Manage the use of renewable resources such as water, soil, forest products, and marine life in ways that do not exceed rates of regeneration and that protect the health of ecosystems.

f. Manage the extraction and use of non-renewable resources such as minerals and fossil fuels in ways that minimize depletion and cause no serious environmental damage.

6. Prevent harm as the best method of environmental protection and, when knowledge is limited, apply a precautionary approach.

   a. Take action to avoid the possibility of serious or irreversible environmental harm even when scientific knowledge is incomplete or inconclusive.

   b. Place the burden of proof on those who argue that a proposed activity will not cause significant harm, and make the responsible parties liable for environmental harm.

   c. Ensure that decision making addresses the cumulative, long-term, indirect, long distance, and global consequences of human activities.

   d. Prevent pollution of any part of the environment and allow no build-up of radioactive, toxic, or other hazardous substances.

   e. Avoid military activities damaging to the environment.

7. Adopt patterns of production, consumption, and reproduction that safeguard Earth's regenerative capacities, human rights, and community well-being.

   a. Reduce, reuse, and recycle the materials used in production and consumption systems, and ensure that residual waste can be assimilated by ecological systems.

   b. Act with restraint and efficiency when using energy, and rely increasingly on renewable energy sources such as solar and wind.

   c. Promote the development, adoption, and equitable transfer of environmentally sound technologies.

   d. Internalize the full environmental and social costs of goods and services in the selling price, and enable consumers to identify products that meet the highest social and environmental standards.

   e. Ensure universal access to health care that fosters reproductive health and responsible reproduction.

   f. Adopt lifestyles that emphasize the quality of life and material sufficiency in a finite world.

8. Advance the study of ecological sustainability and promote the open exchange and wide application of the knowledge acquired.
    a. Support international scientific and technical cooperation on sustainability, with special attention to the needs of developing nations.
    b. Recognize and preserve the traditional knowledge and spiritual wisdom in all cultures that contribute to environmental protection and human well-being.
    c. Ensure that information of vital importance to human health and environmental protection, including genetic information, remains available in the public domain.

III. Social and Economic Justice

9. Eradicate poverty as an ethical, social, and environmental imperative.
    a. Guarantee the right to potable water, clean air, food security, uncontaminated soil, shelter, and safe sanitation, allocating the national and international resources required.
    b. Empower every human being with the education and resources to secure a sustainable livelihood, and provide social security and safety nets for those who are unable to support themselves.
    c. Recognize the ignored, protect the vulnerable, serve those who suffer, and enable them to develop their capacities and to pursue their aspirations.
10. Ensure that economic activities and institutions at all levels promote human development in an equitable and sustainable manner.
    a. Promote the equitable distribution of wealth within nations and among nations.
    b. Enhance the intellectual, financial, technical, and social resources of developing nations, and relieve them of onerous international debt.
    c. Ensure that all trade supports sustainable resource use, environmental protection, and progressive labor standards.
    d. Require multinational corporations and international financial organizations to act transparently in the public good, and hold them accountable for the consequences of their activities.
11. Affirm gender equality and equity as prerequisites to sustainable development and ensure universal access to education, health care, and economic opportunity.
    a. Secure the human rights of women and girls and end all violence against them.
    b. Promote the active participation of women in all aspects of economic, political, civil, social, and cultural life as full and equal partners, decision makers, leaders, and beneficiaries.
    c. Strengthen families and ensure the safety and loving nurture of all family members.
12. Uphold the right of all, without discrimination, to a natural and social environment supportive of human dignity, bodily health, and spiritual well-being, with special attention to the rights of indigenous peoples and minorities.
    a. Eliminate discrimination in all its forms, such as that based on race, color, sex, sexual orientation, religion, language, and national, ethnic or social origin.

b. Affirm the right of indigenous peoples to their spirituality, knowledge, lands and resources and to their related practice of sustainable livelihoods.

c. Honor and support the young people of our communities, enabling them to fulfill their essential role in creating sustainable societies.

d. Protect and restore outstanding places of cultural and spiritual significance.

IV. Democracy, Nonviolence, and Peace

13. Strengthen democratic institutions at all levels, and provide transparency and accountability in governance, inclusive participation in decision making, and access to justice.

    a. Uphold the right of everyone to receive clear and timely information on environmental matters and all development plans and activities which are likely to affect them or in which they have an interest.

    b. Support local, regional and global civil society, and promote the meaningful participation of all interested individuals and organizations in decision making.

    c. Protect the rights to freedom of opinion, expression, peaceful assembly, association, and dissent.

    d. Institute effective and efficient access to administrative and independent judicial procedures, including remedies and redress for environmental harm and the threat of such harm.

    e. Eliminate corruption in all public and private institutions.

    f. Strengthen local communities, enabling them to care for their environments, and assign environmental responsibilities to the levels of government where they can be carried out most effectively.

14. Integrate into formal education and life-long learning the knowledge, values, and skills needed for a sustainable way of life.

    a. Provide all, especially children and youth, with educational opportunities that empower them to contribute actively to sustainable development.

    b. Promote the contribution of the arts and humanities as well as the sciences in sustainability education.

    c. Enhance the role of the mass media in raising awareness of ecological and social challenges.

    d. Recognize the importance of moral and spiritual education for sustainable living.

15. Treat all living beings with respect and consideration.

    a. Prevent cruelty to animals kept in human societies and protect them from suffering.

    b. Protect wild animals from methods of hunting, trapping, and fishing that cause extreme, prolonged, or avoidable suffering.

    c. Avoid or eliminate to the full extent possible the taking or destruction of non-targeted species.

16. Promote a culture of tolerance, nonviolence, and peace.
    a. Encourage and support mutual understanding, solidarity, and cooperation among all peoples and within and among nations.
    b. Implement comprehensive strategies to prevent violent conflict and use collaborative problem solving to manage and resolve environmental conflicts and other disputes.
    c. Demilitarize national security systems to the level of a non-provocative defense posture, and convert military resources to peaceful purposes, including ecological restoration.
    d. Eliminate nuclear, biological, and toxic weapons and other weapons of mass destruction.
    e. Ensure that the use of orbital and outer space supports environmental protection and peace.
    f. Recognize that peace is the wholeness created by right relationships with oneself, other persons, other cultures, other life, Earth, and the larger whole of which all are a part.

The Way Forward

As never before in history, common destiny beckons us to seek a new beginning. Such renewal is the promise of these Earth Charter principles. To fulfill this promise, we must commit ourselves to adopt and promote the values and objectives of the Charter.

This requires a change of mind and heart. It requires a new sense of global interdependence and universal responsibility. We must imaginatively develop and apply the vision of a sustainable way of life locally, nationally, regionally, and globally. Our cultural diversity is a precious heritage and different cultures will find their own distinctive ways to realize the vision. We must deepen and expand the global dialogue that generated the Earth Charter, for we have much to learn from the ongoing collaborative search for truth and wisdom.

Life often involves tensions between important values. This can mean difficult choices. However, we must find ways to harmonize diversity with unity, the exercise of freedom with the common good, short-term objectives with long-term goals. Every individual, family, organization, and community has a vital role to play. The arts, sciences, religions, educational institutions, media, businesses, nongovernmental organizations, and governments are all called to offer creative leadership. The partnership of government, civil society, and business is essential for effective governance.

In order to build a sustainable global community, the nations of the world must renew their commitment to the United Nations, fulfill their obligations under existing international agreements, and support the implementation of Earth Charter principles with an international legally binding instrument on environment and development.

Let ours be a time remembered for the awakening of a new reverence for life, the firm resolve to achieve sustainability, the quickening of the struggle for justice and peace, and the joyful celebration of life.

ORIGIN OF THE EARTH CHARTER

The Earth Charter was created by the independent Earth Charter Commission, which was convened as a follow-up to the 1992 Earth Summit in order to produce a global consensus statement of values and principles for a sustainable future. The document was developed over nearly a decade through an extensive process of international consultation, to which over five thousand people contributed. The Charter has been formally endorsed by thousands of organizations, including UNESCO and the IUCN (World Conservation Union). For more information, please visit www.EarthCharter.org.