

## Article

# Evolution and Decline: Making Wholeness in a Time of Ecological Decline

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**Abstract:** Drawing on three key elements in Lonergan’s thought—emergent probability, the triad of progress/decline/redemption, and the law of the cross—this paper explores the struggle to remake some sense of wholeness in an era of serve ecological decline and the cost to be paid to turn it around. It identifies political action as the most urgent arena for those seeking to redeem our present situation, while also acknowledging the important of personal and cultural resistance to the forces of decline.

**Keywords:** evolution; ecological decline; Lonergan; *Laudato Si’*; law of the cross

We live in a world of great brokenness: inequalities of wealth and opportunity; racial and gender discrimination; mistrust in democratic governance leading to a resurgence of authoritarian political movements; decaying urban centers choking on their own automobile exhausts; ever onward we could go, identifying the unmistakable signs of a global civilization in decline. Perhaps the most pressing, widespread, and potentially disastrous of these signs is the global failure in our collective ability to deal with environmental destruction, and in particular, global warming. As climate change activists regularly remind us, we are in a climate emergency, and unless there are concerted and effective actions taken in the coming decade, we could be trapped in an era of unprecedented heating of the planet. As Pope Francis grimly states in his ground-breaking encyclical, *Laudato Si’*, “Doomsday predictions can no longer be met with irony or disdain” (Francis 2015, p. 161) (Henceforth *LS*).

Anthropologists date the emergence of the human species, homo sapiens, to approximately 200,000 years ago, and the evolution of modern humans, homo sapiens sapiens, closer to 100,000 years ago. It was less than 200 years ago that Darwin posited a theory of evolution that helped us grasp the significance of such statements, of the evolution of species and of humanity in particular. Since that time, less than 200 years later, we must now face the question of whether the human race can survive, whether we are “fit” enough to outlive a crisis of our own making. That fitness will no longer be measurable by the physical determinants of speed, strength, and agility, but largely measured in terms of our moral and spiritual development as a species, our willingness to take responsibility, to repent, to step back from the onward march of unceasing consumption, particularly from the fossil fuels, that is making our planet uninhabitable.

How, then, can we make wholeness out of this brokenness? Additionally, to what type of wholeness do we want to restore or redeem our world? Drawing on the work of Bernard Lonergan, this article will move through four stages. First, I consider the general structure of evolution, or, more precisely, what Lonergan calls emergent probability. Second, I turn attention to the specific arena of human history with its dynamics of progress, decline, and the possibility of redemption. Third, I address the specific issue of climate change and ecological decline, before finally examining what it might take to redeem our world from terminal decline.

## 1. Evolution and Extinction

In his two major works, *On the Origin of Species* (Darwin 2006) and *The Descent of Man* (Darwin 1871), Charles Darwin rewrote our understanding of the origins and development



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of species on our planet. He posited a mechanism driving the process of evolution in terms of natural selection, based on a scarcity of resources and survival of the fittest, influenced by the pessimistic proposals of Thomas Malthus about population growth in a context of limited resources. In this, he also drew an analogy with the type of selective breeding common among farmers selecting and reinforcing desirable characteristics in their farm animals. Modern Darwinian theory added to this outline an understanding of genetic inheritance, an insight derived from the experimental work on inherited traits by Augustinian monk, Gregor Mendel (1822–1884), and confirmed with the discovery of the DNA structure of our chromosomes. We now have a much richer collection of fossils and a far deeper understanding of the mechanisms of evolution than Darwin could have ever dreamed. While some resist the insights of this remarkable synthesis, largely for fundamentalist religious reasons, it is now the largely unquestioned framework for understanding the development of life on our planet—keeping in mind that it does not so much explain the emergence of life itself, but the diversity of species that developed from its primordial beginning.

Moving beyond this strictly biological context, the heuristic notion of evolution has become an explanatory framework of a whole range of phenomena, from the cosmic level—the evolution of the universe from the Big Bang—to the anthropological—the evolution of human societies and cultures—and everything else that begins with simple origins to develop more complex and diverse forms, to such an extent that the notion of evolution has displaced that of development in our common discourse. Nonetheless, the ubiquitous utility of Darwin’s insight has provided us with a suitable tool to understand a universal truth of the universe of being. Far from being a static, unchanging sphere of fixed things, the universe is replete with dynamism—interaction, creation, and destruction—leading to increased complexification, from top to bottom, from the tiniest subatomic particles to galaxies and clusters of galaxies spanning our night sky. The biological evolution that Darwin so meticulously observed is just the tiniest fraction of this larger reality.

In his major work, *Insight: A Study of Human Understanding* (Lonergan 1992), Lonergan speaks of this larger reality as emergent probability. Drawing on the properties of different types of insight, he distinguishes between classical scientific laws such as Newtonian mechanics (arising from direct insights), statistical laws such as quantum mechanics (arising from inverse insights), and their complex interaction in schemes of recurrence (Ormerod and Crysedale 2013). These schemes—basically a cyclical series of events occurring with certain probabilities—are present throughout the natural world: for example, the interactions of quarks within subatomic particles, the Krebs cycle in living cells, the cyclical currents of the oceans, the oxygen and nitrogen cycles of the atmosphere, the orbits of the planets, etc. Each such scheme has a probability of emergence and a distinct probability of survival. Stable schemes, those with a high probability of survival, can then become occurrences within ever larger schemes, leading to schemes within schemes within schemes, etc. Therefore, there is an increasing complexity from the subatomic and atomic levels to the chemical, to the biological to the sensitive psyche, to the fully human living of intellectual and moral self-transcendence. This growth in complexity does not happen in a deterministic way, as a fixed teleology with a known endpoint, and while there can be the type of process Darwin speaks of as evolution, there can also be dead ends, schemes so dependent on a particular series of occurrences that an external event may disrupt the scheme, leading to its demise. A change in climate or habitat may lead to the extinction of a species, unable to adapt to the new conditions it finds itself in. Therefore, a random meteor strike can end the reign of the dinosaurs after hundreds of millions of years of dominance, creating the needed space for the emergence of mammalian species, leading, eventually, but not inevitably, to humanity.

While this metaphysical framework may seem abstruse and complex, it is a reminder that, when we talk about the catholicity or wholeness of the universe, it is not the imagined wholeness of a fixed, static, unchanging set of things; it is the wholeness or unity of an insight that grasps a totality within the data of the universe, a dynamic, interactive, emergent reality, heading towards greater complexity, but equally encompassing the reality of possible collapse and extinction. The relatively open-ended and heuristic nature of Lonergan's notion of emergent probability provides an explanatory framework for the phenomena we observe, while requiring reference to both concrete data and the relevant scientific regularities for its actual specification. It endows the universe with a finality that is not deterministic in nature, not statically achieved in some final endpoint, and not without the possibility of collapse and failures (Ormerod and Crysdale 2013). Additionally, because the unity it captures is an intelligible unity, its embracing of statistical probabilities does not eliminate either a creator God or a provident God, who acts with equal efficacy through both classical and statistical lawfulness to execute divine governance (Lonergan 2000, pp. 66–93; Ormerod 2005).

These notions carry over as much to human society and culture as to the natural world. Our daily lives are replete with schemes of recurrence: in our economies (cycles of production, distribution, and consumption), our political structures (democratic elections, the rise and fall of political leaders and parties), our cultural interchanges (journals, books, art), and in our personal lives (the habits of our daily routines, employment, personal interactions). However, there is a different issue that arises in the human order of existence that is not present in the non-human world. The myth of Genesis 3 highlights the disruption of not only human society, but of the greater order within which we exist, which arises as a consequence of human sin. The very earth itself loses its fecundity as humans now toil to survive: "cursed is the ground because of you; in toil you shall eat of it all the days of your life; thorns and thistles it shall bring forth for you; and you shall eat the plants of the field" (Gen 3:17–18). Paul, too, speaks of the whole of creation being subject to "futility" and in "bondage to decay" (Rom 8:20–21). This futility and decay is not just a breakdown that occurs as a result of the statistical give and take of emergent probability; it is something far more insidious, a cancer of the unintelligible, the meaningless, that actively seeks to undo the intelligible ordering of the created order. It tears apart our human relationships with selfishness and violence, distorts our culture with ideologies of domination, militarism, racism, and sexism, turns our political processes into self-serving instruments of power and corruption, and increasingly is undermining the very schemes of recurrence that support the biological existence of our planet. The very earth itself cries out as life struggles under the weight of our pollution.

## 2. Progress, Decline, and Redemption

To deal with the reality of human sinfulness, Lonergan developed a different heuristic structure to supplement the notion of emergent probability. From his earliest writings to his most mature works, he makes repeated reference to the triad of progress, decline, and redemption/restoration (Lonergan 2017a, 2017b, 2019). Just as progress spirals up in increasingly intelligent and reasonable schemes of recurrence that lead to more just societies, more creative cultures, more wholesome human relationships, so decline spirals down into increasingly enclosed cycles of violence, destruction, neglect, and chaos. Lonergan is pessimistic about the cumulative impact of decline in human history: "A civilization in decline digs its own grave with relentless consistency" (Lonergan 2017b, p. 53). Indeed, writing prior to World War II, prior to the invention of nuclear weapons, and well prior to our current ecological crises, he could write about the real possibility of the extinction of humanity: "A philosopher cannot be content to ask of history, Who holds the power? He must ask whether this incidence of power is for human progress or for human extinction. There is much in the present world situation to confirm the view that liberalism in power is for the destruction of civilization" (Lonergan 2019, p. 5).

Lonergan conceives of two cycles or spirals of decline (Lonergan 1992). The first, shorter cycle, is the cycling and recycling of dominance, success, and eventual failure evident in much of our politics, where a creative grouping begins to shape our common life, to dominate our politics; but as creativity dries up it simply falls back on dominance and power to effect its plans, which are increasingly self-serving and corrupt. Eventually, they will be replaced by a new creative grouping, and the cycle will repeat. Such a political cycle is a common occurrence in many Western democratic states. More destructive is the longer cycle of decline, the long-term accumulation of problems that arise through multiple shorter cycles, problems which resist practical assault because that context has normalized the abnormal, validated the invalid, praised the unpraiseworthy. People lose hope in an increasingly chaotic world, looking for more and more desperate solutions, often authoritarian in nature, to the problem that beset them, but such solutions only seem to generate more problems because the solutions suffer from the same biases that caused the problem in the first place. This is moral impotence writ large in history, a collective non posse non peccare, an inability not to sin. The resulting collapse can take on apocalyptic proportions, and it may take generations to restore some semblance of a return to the progressive line of history.

What then can we say of redemption? In this context, Lonergan is no longer talking about the redemption of the individual, but the redemptive turn of history itself, the needed element to turn around the cycles of decline and restore humanity to the path of authentic progress and creativity. In his work on redemption, Lonergan develops the notion of the “just and mysterious law of the cross” manifest in the redemptive work of Jesus: “This is why the Son of God became [human], suffered, died and was raised again: because divine wisdom has ordained and divine goodness has willed, not to do away with the evils of the human race through power, but to convert those same evils into a supreme good according to the just and mysterious law of the cross” (Lonergan 2018, p. 197; Ormerod 2021; Rylis̆kytė 2020). The metaphysical basis for Lonergan’s position is the Augustinian account of evil as privation, a privation primarily in the will of the sinner, to do what reason dictates, to do the intelligent, reasonable, and responsible good. This moral evil gives rise to an unintelligibility in the outer world, of interpersonal, cultural, and social realities, what Lonergan refers to as an evil of punishment, whose consequences affect not just the sinner, but the whole human community through our mutual metaphysical solidarity of sharing a common nature and a common life. The law of the cross states that such evil can be converted into a good through our willingness to endure this suffering, following the example of Jesus on the cross. In *Insight*, Lonergan refers to this stance as a “dialectical attitude”: “The corresponding dialectical attitude of will is to return good for evil. For it is only inasmuch as men are willing to meet evil with good, to love their enemies, to pray for those that persecute and calumniate them, that the social surd is a potential good. It follows that love of God above all and in all so embraces the order of the universe as to love all men with a self-sacrificing love” (Lonergan 1992, pp. 721–22).

A powerful contemporary example of such a “law of the cross” operative in society is the #metoo movement of (mainly) women who have suffered through their fears and feelings of shame to name their sexual abuse and harassment for what it is, to speak truth to power, and face the inevitable recriminations of the powerful and their enablers. Such a movement is not necessarily about seeking individual revenge, let alone the remote possibility of some justice, but of shifting the collective culture away from one that is dismissive of women’s voices and destructive of their dignity. In exposing the continued effects of the dominant patriarchal culture on the lives of women, wrought through sexual, physical, and psychological violence, their willingness to make themselves vulnerable by exposing their own story has the potential to shift the probabilities towards a more just and equitable society in the future. Such suffering is a creative response that draws good out of the evil of patriarchy by exposing it to the light and pointing to alternatives. Similar examples can be found in the fight against racial inequality (Martin Luther King) and colonial exploitation (Gandhi).

These examples project a path towards making our broken world whole again. Social change away from the trajectory of decline and destruction comes at a cost. That cost involves a confrontation with the vested interests whose short-term vision blinds them to the destruction that is wrought in human history. Vested interests have almost unlimited financial resources to bring to bear against those who threaten their power. They corrupt the political process away from placing power in the hands of the populace and keeping it within their own powerful elites. They base their decisions not on the common good, but on what will maintain and even increase their hold on power. They sow dissension and division, in some instances pretending to “represent” those who feel disenfranchised in the face of “educated liberal elites”, while themselves being members of the elite of the elite, billionaires who use their corporate power to influence political outcomes. Their first instinct is to destroy any opposition with whatever means they have—legal or illegal, from ridicule and slander to threats of violence and even death—to protect their hold on power. Opposition comes at a cost, as many have come to experience.

### 3. Ecological Decline

The impacts of global ecological decline, largely driven by climate change, are becoming commonplace in our media in recent years. From media reports, we are given an impressionistic picture of increasing weather instability, the shrinkage of icecaps in the Arctic, Greenland, and Antarctica, species threatened to the point of extinction, and the largescale movement of peoples facing droughts and/or flooding. Such impressions are just the surface of the depths of the problems of ecological decline we currently face. These forces intersect and interact leading to a complex and unnerving account of problems that threaten to overwhelm our sensibilities and desires for some sense of stability and normality. Still, we must learn to face these issues and confront the level of response needed to address them. I will begin with a recent study based on my own context of Australia before expanding to a more global perspective.

In a recent paper entitled “Combating ecosystem collapse from the tropics to the Antarctic” written by thirty-eight climate scientists from twenty-nine of Australia’s leading universities and research institutes (Bergstrom et al. 2021), the authors present their findings on the current state and trajectories of decline of nineteen ecosystems, many of which are World Heritage listed, from Australian bases in Antarctica to the northern tip of the Australian continent. These areas include the Great Barrier Reef, mangrove forests, rainforest, subalpine forests, and underwater seagrass beds and kelp forests. The authors conclude that “the 19 ecosystems presented have collapsed or are collapsing” according to the metrics developed by the team of researchers, though they add “none has collapsed across the entire distribution, but for all there is evidence of local collapse”. The key, but not sole, driver of these changes has been global climate change, leading to higher temperatures (on land and sea), changed patterns of rainfall, extended heatwaves, and fire activity. Another major driver is direct human impact through habitat modification (land clearing) and run-off from agricultural use of insecticides and fertilizers, and urban pollution into waterways and the ocean.

These pressures have “become more severe, widespread and more frequent” over time. They cite an example of a heatwave in western Australia (2010/11), which affected over 300,000 Km<sup>2</sup> of land and sea areas, delivering temperatures 2–2.5 °C above average, leading to the “death of 90% of the dominant seagrass” in one area. This affects both the local ecological balance and the economically important fisheries in the area. Similar conditions off the coast of western Australia in 2019/20 led to an “unprecedented continental-wide heatwave”, resulting in one of the worst bush fire seasons in Australian history (18.6 million ha or 63,000 sq miles). Many of these fires were caused by “dry lightning” strikes, a consequence of the heat and dry conditions. Sydney had fires ringing its boundaries, leading to smoke and haze throughout its suburbs, with many people wearing masks to protect themselves from inhaling the substandard air.

While these effects have been identified and highlighted by the authors of this paper, they argue that this is a sign of what we face globally. “Collapsing ecosystems are a dire warning that nations face urgent and enormous challenges in managing the natural capital that is manifest in each ecosystem’s biodiversity, and that sustains human health and well-being”. They mention the following issues:

*Global food production:* These shifting weather patterns have the potential to seriously disrupt global food production. Planting and harvesting seasons, the cycles of dry and wet seasons, heat extremes during the summer season, and prolonged droughts no longer fall within the expected patterns, disrupting the quality and quantity of crops. Fisheries are affected by warmer oceans, ocean acidification, and agricultural and urban run-off polluting the seas. Changed weather and the overuse of insecticides damage the insects needed to pollinate crops (Myers et al. 2017). While wealthy nations are able to use their wealth to shield themselves from the worst effects in the medium-term, the immediate effects fall on the poorest of the poor of the earth.

*Shortages of safe drinking water:* Prolonged droughts, encroaching salination of water supplies, industrial and agricultural pollutants, and increasing agricultural demands all put the supply of safe drinking water at risk (Arneeth et al. 2019)—for a theological analysis on the water issue see Peppard (2016). Drinking water shortages have been experienced in India, South Africa, and the west coast of the US in recent years, caused by failures in seasonal rainfall, such as monsoons. Paradoxically, massive rain events (cyclones, etc.) cause flooding, which, in turn, can cause pollution of fresh water. The world Water Scarcity Clock estimates that close to 2.4 billion people currently experience some level of water scarcity (<https://worldwater.io/> accessed on 19 August 2021) and this will only get worse as temperatures rise.

*Security implications:* While the paper does not elaborate of this, we note that the Intergovernmental Panel on Climate Change suggests “scenarios of socio-economic development with climate change project 100–380 million undernourished by 2080 to 740–1300 million under the most pessimistic scenario” (Butler and McFarlane 2018). There is the likelihood of massive displacements of people seeking available food and water wherever they can be found. Such movements will destabilize already unstable political situations, both internally and across national boundaries (Kelley et al. 2015).

In listing these disastrous effects, the authors make no significant mention of the problem of sea-level rises due to climate change—“The most recent special report from the Intergovernmental Panel on Climate Change says we can expect the oceans to rise between 10 and 30 inches (26 to 77 cm) by 2100 with temperatures warming 1.5 °C” (Nunez 2019)—which itself impacts on each of these pressures in significant ways: the loss of arable land through salination; the destruction of coastal infrastructure through storm damage and erosion; and the mass displacement of people—in Bangladesh alone “a three-foot rise in sea level would submerge almost 20 percent of the country and displace more than 30 million people—and the actual rise by 2100 could be significantly more” (Glennon 2017).

The Australian experience is simply a regional example of a global problem. We are witnessing widespread habitat loss, species extinction, and loss of biodiversity, leaving our world more impoverished and hostile to the needs of life. The wholeness of our present interconnected schemes of recurrence is breaking down beyond the point of rehabilitation. While evolution operates on the timeframe of millions of years, these enforced human-driven changes are occurring in the timescale of a century or so, far faster than the time necessary for evolution to make significant adjustments. The forces at work interact in ways we simply do not understand, leading to unpredictable outcomes (McNeill et al. 2011). To restate Pope Francis’ assessment, “Doomsday predictions can no longer be met with irony or disdain”.

#### 4. Can a Broken World Be Made Whole Again? The Law of the Cross

In the face of such massive decline, one may wonder whether anything can be done to heal the damage we have inflicted on ourselves and on the planet as a whole. Two

things that are clear: if we do nothing, we will be overtaken with a scenario of planetary biocide the likes of which have never occurred since humans have existed, an outcome that is nothing less than a blasphemy against God and God's creation; and working for change will involve suffering, giving up the ways of life that we have taken for granted, the comforts, the habits, and overcoming the inertia that prevents meaningful action to be taken. Drawing on Lonergan's notion of a normative scale of values—religious, personal, cultural, social, and vital (Lonergan 2017b, pp. 32–33)—I would like to suggest distinct levels of action, notably at the personal, cultural, and social levels, that are needed to restore the wholeness, the intelligibility of our planetary biosphere. In classical theological terms, these three orders are the primary fields of human cooperation with the divine or religious value (grace). Empowered and upheld in God's grace, we can and must make our faith alive through a love that extends beyond the immediate circle of relationships to embrace the intelligible whole of creation. Human sin is defacing that intelligible whole, undermining catholicity, and only human engagement, personally, culturally, and socially, may redeem what is being lost.

#### 4.1. Personal Value

Lonergan proposes, "Personal value [as] the person in his self-transcendence, as loving and being loved, as originator of values in himself and in his milieu, as an inspiration and invitation to others to do likewise" (Lonergan 2017b, p. 33). Personal value is reflected in the decisions we make, the habits or virtues we cultivate, and the vices we resist. In a world that promotes hyper-consumption regardless of the ecological impact, authentic self-transcendence requires of us a stand against the forces of endless consumerism, to begin to take into consideration the ecological impacts of what we do and buy, of the forms of transport we use, the food we eat, and the clothes we wear. In an era that takes international air travel as a right rather than a luxury, we need to question the need for each trip, cognizant of the carbon footprint of our flying habits. The more ecologically aware we are, the more complex becomes the task of living authentically in our present age, as the planet groans under our present excesses.

Such a personal commitment is what Pope Francis intends when he speaks of "ecological virtues" (LS 88). "Only by cultivating sound virtues will people be able to make a selfless ecological commitment" (LS 211). He lists simple habits of the heart, "such as avoiding the use of plastic and paper, reducing water consumption, separating refuse, cooking only what can reasonably be consumed, showing care for other living beings, using public transport or car-pooling, planting trees, turning off unnecessary lights" (LS 211), which manifest a certain "nobility in the duty to care for creation" (LS 211). He argues that "[w]e must not think that these efforts are not going to change the world" (LS 212). They "can restore our sense of self-esteem; they can enable us to live more fully and to feel that life on earth is worthwhile" (LS 212). However, he acknowledges that this will not be enough to avert continued environmental decline: "Nevertheless, self-improvement on the part of individuals will not by itself remedy the extremely complex situation facing our world today" (LS 219).

To face the challenges of living authentically in an era of ecological decline involves self-discipline, a giving up, a suffering in going against the tide of social and cultural expectations. It will mean not having the newest and the best, paying more for the more sustainable product, or simply doing without things that others seem to find essential. It is particularly difficult when one begins to challenge others to take similar steps towards sustainability, either explicitly or implicitly through one's ecologically informed priorities. All this comes at a personal cost. However, there are also gains to be found in living more simply, in not entering into the world of competitive consumption, and of living life at a more moderate pace. We can rediscover the importance of relationships over things, of friendships and family. Ecological virtues bring rewards as well as some deprivations.

As Pope Francis notes, "[w]e must not think that these efforts are not going to change the world" (LS 212). Personal self-transcendence does not place limits on the scope of

our commitments but expands to a larger horizon of self-constitution through world-constitution (Doran 1990, pp. 58–59). As my horizon expands beyond the decisions I make and virtues I can develop in my own life, I encounter a world of meanings and values (culture) and social, political, and economic institutions that shape the decisions of us all by setting the preconditions of what is possible. Authentic self-transcendence requires we move beyond the limits of our personal world to confront these larger dimensions of human existence, to try to bring about the cultural and structural changes needed if we are to restore humanity to a path of sustainability.

#### 4.2. Cultural Values

Lonergan describes cultural values thus: “Over and above mere living and operating, [we] have to find a meaning and value in [our] living and operating. It is the function of culture to discover, express, validate, criticize, correct, develop, improve such meaning and value” (Lonergan 2017b, p. 32). We have already identified some of the present cultural meanings and values that undermine ecological sustainability, such as the value placed on conspicuous consumption, to which we can add a hyper-individualism absorbed in personal “right claims” to the detriment of any sense of ecological responsibility. Pope Francis has written of the mechanistic “technocratic paradigm” (LS 101) which distorts our thinking, imagining the world as a giant machine with ourselves and the natural world just components within it (Ormerod 2020). Rather, we need cultural meanings and values, carried in narrative, poetry, film, philosophy, and theology, that develop a sense of the interconnectedness of all things—“everything is connected” (LS 91)—so that we develop “a distinctive way of looking at things, a way of thinking, policies, an educational program, a lifestyle and a spirituality, which together generate resistance to the assault of the technocratic paradigm” (LS 111). Theologians in particular have a responsibility to respond to the call of Pope Francis in *Laudato Si’* to be at the forefront of developing a new ecological culture within church communities. Pope Francis’ encyclical, *Laudato Si’*, has already drawn together resources from the tradition that can underpin such a cultural transformation.

Again, the work for such a shift in cultures comes at some cost. This cost has largely been borne by those scientists working in the field of climate change who have faced threats of violence, abuse, and ridicule for their commitment to the scientific evidence on climate change (Waldman and Heikkinen 2018). Within churches, those who promote ecotheology have been branded as neo-pagan and pantheist for suggesting that the earth is “sacred”. The theological debate often revolves around Genesis 1:28 with its emphasis on “dominion” and 2:15 with its emphasis on “tilling and caring” and the impact of the fall on our relationship to the earth, Genesis 3:17–19. Lynn White famously accused Christianity of providing the cultural underpinning of the drive to dominate the natural world on the basis of Gen 1:28 and the assertion of human dominion over all of creation, yet in the same article he draws on other elements in the Christian tradition, particularly St Francis, to call for a different approach (White 1967). Fifty years and more later, these theological arguments continue to be debated.

Just as culture provides the meanings and values that shape the way we think and feel towards ourselves and the world, so, too, do political, economic, and technological institutions structure the material conditions that shape what it is possible to achieve. The task of self-constitution through world-constitution requires an expansion of our horizon to embrace political actions that will challenge our political, economic, and technological institution.

#### 4.3. Social Values

Lonergan refers to social values: “such as the good of order which conditions the vital values of the whole community, have to be preferred to the vital values of individual members of the community” (Lonergan 2017b, p. 32). As I argued earlier in this paper, the orderings we encounter are complex interacting schemes of recurrence for the production,

distribution, and consumption of the material goods of our society, such as healthcare, housing, food, clothing, and the like, which “condition the vital values [e.g., health] of the whole community”. We could add to this a certain normative dimension: to *sustainably* produce, *justly* distribute, and *responsibly* consume. It is clear that our present social order fails on all three counts: our production processes are *unsustainable*; the goods so produced are *not justly* distributed; and the patterns of consumption are *irresponsible*. The principal lever for working for change for the ordinary citizen is political action. Political policies set the conditions for production, distribution, and consumption through tax policies, incentives, government priorities and so on. Governments can provide environmental protection for waterways, pristine areas, air quality, and endangered species. However, it is also the location of the corruption of the proper purpose of politics through subversion by special economic interests. The fossil fuel industry, in particular, has almost unlimited resources to direct to thinktanks and politicians, distorting both public discourse and political decision-making. The social order they seek to promote is not towards a common good but towards their own short-term profits.

Pope Francis saved his most scathing criticisms for our political leaders, “Politics and business have been slow to react in a way commensurate with the urgency of the challenges facing our world” (LS 165). In relation to climate change, various international accords have been “poorly implemented” (LS 167) and “the advances have been regrettably few” (LS 169). He identifies the need for “stronger and more efficiently organized international institutions . . . empowered to impose sanctions” (LS 175). He also demands that “non-governmental organizations and intermediate groups, put pressure on governments to develop more rigorous regulations, procedures and controls. Unless citizens control political power—national, regional and municipal—it will not be possible to control damage to the environment” (LS 179). This is a direct call to political action issued to all those who are ecologically converted.

Many have taken up this call for political action and paid a price in terms of the dedication to the cause through the attacks and threats they endure and the violence they face. There are international networks working towards divestment from fossil fuels or holding shareholder revolts. There are similar networks working for changes in government policies seeking to establish a carbon price, to remove subsidies to polluting industries, and to support shifts to renewable energy sources. Some environmental activists work through non-violent protests, blocking rail lines, and delaying mining work, such as the opening of the Australian Galilee Basin coal mine, which would be one of the largest coal-producing areas in the world were it to go ahead. Environmental activists have been arrested and fined, and in some countries have experienced violence and been killed as they seek to defend the planet from environmental plunder (Sengupta et al. 2021). This is the most demanding form of redemptive suffering, which exposes the depth of the sin where human life counts as nothing in the face of the lust for wealth and power.

While personal and cultural transformation are both important and necessary, given the timeframes and reach of these types of changes, there is a certain urgency to the level of social, economic, and political struggle. Cultural change may take decades to embed and to become the new common sense; personal change can be undertaken relatively quickly, but the scope of its effects is too limited to turn around the problem. Only social changes, largely through political action, has both the scope of impact and the timeframe of operation to bring about the needed changes in a timely manner.

## 5. Conclusions

Can humanity turn around our current decline into terminal ecological collapse? It is a question that remains open to debate. However, as we struggle with the implications of catastrophic climate change, we may need to reimagine our notion of the final judgment scene expressed in Matthew 25:31–46. Without losing sight of the hungry and thirsty, the sick and marginalized, the naked and imprisoned, we need to expand our vision to include species starved to the point of extinction, landscapes desertified by lack of rains, waterways

poisoned by industrial toxins, species pushed to the margins by deforestation, the land stripped of forest cover and exposed to erosion, and species imprisoned in ever decreasing ecological niches. We must, as Pope Francis reminds us, “integrate questions of justice in debates on the environment, so as to hear *both the cry of the earth and the cry of the poor*” (LS 49). Without attention to the whole of creation, and the wholeness of creation, we will among those who ask the Lord, “when did we see you, hungry and thirsty, sick and a stranger, naked and imprisoned?” and the Lord will point to the broken earth and say, “when you failed to do so to these least, you did it to me”.

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## References

- Arneth, Almut, Humberto Barbosa, Tim Benton, Katherine Calvin, Eduardo Calvo, Sarah Connors, and Zinta Zommers. 2019. Summary for policymakers. In *Climate Change and Land. IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems*. Geneva: IPCC, Available online: <https://www.ipcc.ch/srccl/chapter/technical-summary/> (accessed on 19 August 2021).
- Bergstrom, Dana M., Barbara C. Wienecke, John van den Hoff, Lesley Hughes, David B. Lindenmayer, Tracy D. Ainsworth, Christopher M. Baker, Lucie Bland, David M. J. S. Bowman, Shaun T. Brooks, and et al. 2021. Combating ecosystem collapse from the tropics to the Antarctic. *Global Change Biology* 27: 1692–703. [CrossRef] [PubMed]
- Butler, Colin, and Ro McFarlane. 2018. Climate Change, Food Security, and Population Health in the Anthropocene. In *Encyclopedia of the Anthropocene*. Edited by Dominick A. DellaSala and Michael I. Goldstein. Oxford: Elsevier, pp. 453–59.
- Darwin, Charles. 2006. *On the Origin of Species by Means of Natural Selection*. Mineola: Cover Publications. First Published 1859.
- Darwin, Charles. 1871. *The Descent of Man and Selection in Relation to Sex*. London: John Murray.
- Doran, Robert M. 1990. *Theology and the Dialectics of History*. Toronto: University of Toronto Press.
- Francis, Pope. 2015. *Laudato Si'*. Vatican City: Vatican.
- Glennon, Robert. 2017. The Unfolding Tragedy of Climate Change in Bangladesh. Available online: <https://blogs.scientificamerican.com/guest-blog/the-unfolding-tragedy-of-climate-change-in-bangladesh/> (accessed on 19 August 2021).
- Kelley, Colin P., Shahrzad Mohtadi, Mark A. Cane, Richard Seager, and Yochanan Kushnir. 2015. Climate change in the Fertile Crescent and implications of the recent Syrian drought. *Proceedings of the National Academy of Sciences of the United States of America* 112: 3241–46. Available online: <https://www.jstor.org/stable/26462026> (accessed on 19 August 2021). [CrossRef] [PubMed]
- Loneragan, Bernard J. F. 1992. *Insight: A Study of Human Understanding*. Toronto: University of Toronto Press.
- Loneragan, Bernard J. F. 2000. *Grace and Freedom: Operative Grace in the Thought of St. Thomas Aquinas*. Toronto: University of Toronto Press.
- Loneragan, Bernard J. F. 2017a. *A Third Collection*. Toronto: University of Toronto Press.
- Loneragan, Bernard J. F. 2017b. *Method in Theology*. Toronto: University of Toronto Press.
- Loneragan, Bernard J. F. 2018. *The Redemption*. Translated by Michael G. Shields. Toronto: University of Toronto Press.
- Loneragan, Bernard J. F. 2019. *Archival Material: Early Papers on History*. Toronto: University of Toronto Press.
- McNeill, Doug, Paul R. Halloran, Peter Good, and Richard A. Betts. 2011. Analyzing abrupt and nonlinear climate changes and their impacts. *WIREs Climate Change* 2: 663–86. [CrossRef]
- Myers, Samuel S., Matthew R. Smith, Sarah Guth, Christopher D. Golden, Bapu Vaitla, Nathaniel D. Mueller, Alan D. Dangour, and Peter Huybers. 2017. Climate Change and Global Food Systems: Potential Impacts on Food Security and Undernutrition. *Annual Review of Public Health* 38: 259–77. [CrossRef]
- Nunez, Christina. 2019. Sea Level Rise, Explained. *National Geographic*. Available online: <https://www.nationalgeographic.com/environment/article/sea-level-rise-1> (accessed on 19 August 2021).
- Ormerod, Neil. 2005. Chance and necessity, providence and God. *Irish Theological Quarterly* 70: 263–78. [CrossRef]
- Ormerod, Neil. 2020. The Technocratic Paradigm: Diagnosis and Therapy. In *Integral Ecology for a More Sustainable World*. Edited by Dennis O'Hara, Matthew Eaton and Michael Ross. Lanham: Lexington, pp. 209–20.
- Ormerod, Neil. 2021. The Law of the Cross and Climate Change. *Theological Studies* 82: 238–58. [CrossRef]
- Ormerod, Neil, and Cynthia S. W. Crysedale. 2013. *Creator God, Evolving World*. Minneapolis: Fortress Press.
- Peppard, Christiana Z. 2016. Hydrology, Theology, and Laudato Si'. *Theological Studies* 77: 416–35. [CrossRef]
- Ryliškytė, Ligita. 2020. Conversion: Falling into Friendship Like No Other. *Theological Studies* 81: 370–93. [CrossRef]
- Sengupta, Somini, Catrin Einhorn, and Manuela Andreoni. 2021. A Global Plan to Conserve Nature Is Lacking a Vital Ingredient. *New York Times*. March 12, p. 13. Available online: <https://www.nytimes.com/2021/03/11/climate/nature-conservation-30-percent.html> (accessed on 19 August 2021).

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- Waldman, Scott, and Niina Heikkinen. 2018. As Climate Scientists Speak Out, Sexist Attacks Are on the Rise. Available online: <https://www.scientificamerican.com/article/as-climate-scientists-speak-out-sexist-attacks-are-on-the-rise/> (accessed on 19 August 2021).
- White, Lynn. 1967. The Historical Roots of Our Ecologic Crisis. *Science* 155: 1203–7. [[CrossRef](#)] [[PubMed](#)]