

Human Morality and Sustainability: Insights from *The Divine Comedy* of Dante Alighieri

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ABSTRACT:

In this paper it is argued that the root cause of the environmental crisis is the moral condition of mankind. Over-indulgence, over-consumption and a desire for material wealth and possessions, far in excess of what is needed for survival and comfort, callous use of technology to overexploit the land and seas for profit, lack of diligence in addressing threats to the environment, and the tendency towards aggressive conflict, all contribute towards the decimation of natural eco-systems. Moral improvement is therefore considered as a possible pathway towards sustainability. The impact of human morality upon the environment is examined using the system of capital vices and virtues. Particular reference is given to *The Divine Comedy* of Dante Alighieri, which provides profound insight into the human condition. The capital vices are shown to play a significant part in the decline of the environment by driving mankind's overconsumption and overindulgence, while cultivation of the capital virtues is shown to provide a pathway of moral improvement allowing human beings to live responsibly and in greater harmony with the planet. Embracing these moral virtues can provide a necessary course correction for human beings today so that we can build upon the successes of our past and thrive as one species sharing the planet with other species and securing a sustainable future.

Keywords: morality, ethics, sustainable development, The Divine Comedy, moral philosophy.

1. Introduction

Since the 1960's it has become increasingly clear that human activities have exploited, depleted and polluted the planet to such an extent that the natural eco-systems are on the edge of collapse and habitat destruction is driving more and more species towards extinction (Costello 2013; Diaz 2019; Meadows 1972). While sustainability is the ability of the planet to provide nourishment and other necessary resources that humanity requires for its survival, it is contingent upon human beings living responsibly within the limits of those natural eco-systems and natural resources (Ceballos 2010; Dirzo 2022). Failure to do so will result in continued and accelerated decline of the biosphere (Meyer 1999), collapse of the services, supply chains and structures of civilisation, significant human depopulation, and extinction of other species that also rely upon natural eco-systems for their nourishment and security (Magurran 2010; Pimm 2014; Ripple 2017). The urgent need for a shift towards sustainable practices underscores the responsibility of individuals, corporations, and governments to implement transformative policies that prioritize ecological balance and long-term environmental health.

In earlier times, when the land could no longer provide the resources needed, perhaps because of drought, flood or soil degradation, a tribe or village would move on to another location (McNeill 1984). But now due to the long-term exploitation of the land and seas

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globally, the option to move on is not available because there is nowhere to move on to. Recent studies show that global forest is being cleared at a rate of approx. 11.2 Mha per year to make way for grazing, farming and mining, and for wood for construction, fuel and paper (FAO 2020; Potapov 2022). Taking into account natural growth and new plantation, this is almost 5 MHa of forest lost per year, an area greater than the size of Switzerland. And of the approx. 8.7 million species on Earth (Mora 2011), an estimated one million are close to extinction (IPBES 2019) as Earth is facing a mass extinction crisis (Ceballos 2010).

It has been recognised for some time that the conditions on Earth that make organic life possible are extremely rare in the Universe (Berry 1988; Gribbin 2011; Lovelock 2016). The conditions necessary to support and maintain life are highly specific, finely balanced and interconnected: a single missing element or degree of variation can offset the entire system, setting off a chain reaction that activates feedback loops (Ripple 2023) and propels the system towards critical tipping points (McPherson 2023; Marques 2023) beyond which balance cannot be restored and the system collapses. Deforestation (Williams 2003), an important example, eliminates vital carbon sinks which would otherwise retain carbon dioxide; as a consequence of this carbon dioxide levels in the air are increasing which is accelerating global warming, increasing wildfires, draughts and floods and in turn leads to more deforestation.

The excessive demands that humanity places on the environment—through deforestation, pollution, mega-mining, overfishing, infrastructure development, and more—have led to the global sustainability crisis and global warming (Trainer 1997). But beneath these actions is a pervasive tendency towards material excess, characterized by luxury lifestyles, demand for increasing profits, and accelerated consumer purchasing, without consideration for the planet's long-term health and the environmental costs. This makes the sustainability crisis global and systemic, in which each person is complicit to some extent. Despite the warnings of scientists (Ripple 2017), rather than slowing down, deforestation of rainforests is increasing (Global Forest Watch 2024); and many consumer items and trends, such as single-use plastics, the fast fashion phenomenon, excessive over-packaging, and the planned obsolescence of consumer electronics, are also causing increasing harm to the environment.

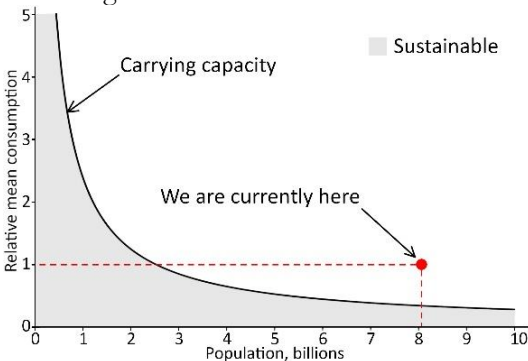


Figure 1. Illustration of Earth's carrying capacity relative to human population and consumption, showing our current location. The shaded area is sustainable.

An in-depth study of the sustainability crisis, with evidence of environmental decline and its relationship to human activities such as consumerism and industry is given in (Whitmore 2024). By analysing global forest area data, the carrying capacity of the Earth was estimated by relating human population and resource consumption to the yearly natural regrowth of forests. Figure 1 shows how the carrying capacity relates to mean resource consumption relative to the current value. This strongly indicates that we are currently living beyond the means of the planet to sustain us by a factor of three. An additional calculation estimated that at the current consumption rate, forests will be eradicated within 85 years.

Forest area change is particularly important due to its connection to carbon dioxide (CO₂) levels and global warming: clearing of forests (clear-cut logging and burning) removes carbon sinks (trees) while releasing CO₂ into the atmosphere. One old-growth tree can be holding as much as 10 tonnes of CO₂ collected over several hundred years (Luyssaert 2008), and when it is cut down and burned that CO₂ is released back into the atmosphere.

The current study proposes that the reason for this overconsumption and the primary cause of the sustainability crisis and decline of the biosphere is the moral condition of humanity, as it is our moral values and principles that shape our behaviour. The primary example is greed, which drives individuals to take more than they actually need, thus placing excessive demands upon the environment. While innovative sustainable technologies and carbon emissions regulations can play a crucial role in reducing environmental harm, their success ultimately hinges on the ethical development of the individuals responsible for implementing these solutions and embracing proactive policies. A genuine commitment to sustainable lifestyles and responsible living is essential for curbing overconsumption, promoting the well-being of the biosphere, and ensuring that new technologies are not used to exploit natural resources even more than they currently are.

Moral means right in terms of the values and principles that govern an individual's behaviour and decision-making (Bergson 2024). A moral person takes a serious interest in what is right and what is not right because they inherently understand the importance of doing what is right. It is generally recognised that moral development begins when we are very young and are inducted into the ethics of family and society (Lillie 2020); and later our morality is transformed through our reflections on life, the action of the conscience, personal reasoning, and a deepening knowledge of self in which resides an innate morality 'written in the heart' (Romans 2:15). Thus, morality is practical reason (Kant 2003) modified by wisdom, empathy and compassion.

Human beings possess the faculties for rational thinking and objective decision-making: we can evaluate any situation, identify the main factors at play and understand the potential consequences of our actions. We also possess free will, which enables us to make choices about our behaviour. However, this does not always lead to moral action or meaningful change. We recognize the serious side effects of recreational drugs, that smoking damages health, that adultery breaks up families, and overeating leads to obesity, yet in so many instances we fail to act or change. The reason for this paradox is that human beings are in practice not free, we are not in control of our actions and are enslaved by forces internal to ourselves, generally known as vices, that cause us to act immorally. Therefore, although humanity can theoretically reduce its consumption and protect the environment, real change requires overcoming inner failings and moral weaknesses.

This study explores the interplay between morality and sustainability. It draws upon the concepts of the capital vices and the capital virtues, as well as Dante Alighieri's *The Divine Comedy*, to illustrate how the human will can be ensnared by vice, leading individuals to behave selfishly and overindulge themselves at the expense of the environment. It shows that by cultivating moral virtues, individuals can liberate themselves from vice, regain control over their lives and actions, and effectively address the sustainability crisis in a responsible way.

2. Background to the capital vices and virtues

The capital vices, also known as the seven deadly sins (Lansing 2010) were compiled by Pope Gregory the Great (540–604 AD) in his treatise *Moralia in Job* based on earlier lists of moral vices by Evagrius Ponticus (345–399 AD) and Tertullian of Carthage (150–220 AD) (Tilby 2013). The capital virtues (Lansing 2010) were also compiled by Gregory, based on earlier works of authors such as Prudentius (348–413 AD). In both cases these were based on even earlier lists of moral vices and virtues by Greek philosophers including Aristotle (384–322 BC), and were further deepened and elaborated upon by Thomas Aquinas (1225–1274 AD) in his treatises *Summa Theologica, Commentary on the Nicomachean Ethics* in which he discussed Aristotle's foundational writing on moral philosophy, and *Treatise on the Virtues* (Aquinas 2022).

Table 1 lists the capital vices and virtues with a brief description. The Latin names of the vices were *luxuria, gula, avaritia, acedia, ira, invidia* and *superbia* and the virtues were *castitas, temperantia, liberalitas, industria, patientia, benevolentia* or *caritas* and *humilitas*; this gives an idea of the original meanings. The names have been variously translated since the time of Gregory, reflecting different understandings and interpretations of the actual processes at play within the human soul.

Capital vice	Description	Distortion	Capital virtue
Lust	Excessive desire and craving for gratification and pleasure	Excessive	Self-restraint
Gluttony	Excessive and insatiable desire for food and luxuries: over indulgence		Moderation
Greed	Excessive desire for material wealth and property: over consumption		Generosity
Sloth	Apathy and lack of interest or zeal	Deficient	Diligence
Wrath	Intense and destructive form of anger	Harmful	Patience
Envy	Resentment, discontent and desire to possess what other people have		Charity
Pride	Inflated sense of self-importance		Humility

Table 1. The capital vices with a brief description, nature of the distortion and the corresponding capital virtues.

The capital vices represent moral failings or distortions of the soul's natural inclinations toward goodness. The main motive of the soul was understood to be love, in which case the distortions were classified as excessive, deficient, and harmful love. Inclinations such as the need for security, nourishment, comfort, companionship, creativity, and personal growth are fundamentally healthy and represent different aspects of human existence and purpose. But they can become warped under the stresses of life and vulnerable in the absence of moral leadership. The vices are ranked by increasing gravity, from lust to pride, illustrating moral degradation that can deepen if not treated. Pride, in particular, was understood to pose a significant danger as it obscures to a person their own flaws and the need to change. Considering lust in its broader context, the virtue of self-restraint has been used in place of the traditional virtue of chastity.

The first three vices—lust, gluttony, and greed—pertain to an excessive desire for self-gratification, physical pleasure, indulgence and consumption. Sloth reflects a deficiency where there should be a fulness and enthusiasm for good. The more serious vices—wrath, envy, and pride—represent a turning away from the goodwill and benign sentiments in favour of a more malign disposition. Ultimately, each vice drives humans to actions that contradict the natural inclination toward the good, and consequently undermines the health of individuals and society at large.

The capital virtues were an attempt to understand the nature of the human soul in its pure and innocent state, a reflection of divine love, and the spectrum of essential qualities that underlie human existence and its life on Earth. Problems in human life were understood to originate from the capital vices, while cultivation of the virtues was seen as a way of healing and realigning the soul and curing any ills in a larger societal context. In the endeavour of moral improvement, it was believed necessary to start with pride by cultivating humility, and then to progress through charity, patience, diligence, generosity, moderation and self-restraint.

The capital vices and virtues were enshrined in *The Divine Comedy* of Dante Alighieri (1265–1321 AD) (Hainsworth 2015; Lansing 2010). Dante provides a profound analysis of how vice unbalances the harmony of the soul (Aristotle 1987; von Stuckrad 2022) resulting in inner torment and suffering and actions that harm oneself and others; and how cultivation of the capital virtues can counter these vices, restoring integrity, balance and harmony to the soul, allowing it to live a more purposeful and fulfilling life and to progress in its journey towards spiritual enlightenment.

Extending this to the sustainability crisis, the capital vices drive the overexploitation of natural resources and the abuse of eco-systems, neglecting the actions required to safeguard and nurture them, while the capital virtues foster a more mindful, balanced and considerate approach that prioritises need over greed, and recognises the value and interconnectedness of all life. Therefore, cultivating these virtues can be seen not only as a means of freeing man from the bondage of vice but as a pathway to a sustainable lifestyle in harmony with the planet and the natural world.

Saint Augustine of Hippo (354–430 AD) contrasted two distinct possibilities for human life on Earth, which he called *The City of Man* and *The City of God*. The former is portrayed as a ruthless realm where individuals are consumed by selfish hedonistic pursuits, striving to amass wealth and status regardless of the cost to others, ignoring the greater good and any higher purpose: a Machiavellian landscape rife with fear, injustice and dis-ease, that would poison the Earth and lead to the plundering and destruction of the environment.

In contrast, *The City of God* represents a vision of a world where humanity flourishes in virtue and lives harmoniously in the presence of divine grace. In this idealized realm, existence is characterized by peace, justice, and authentic moral goodness, which extends to stewardship of the natural world. This scenario fosters a deep respect for the environment, recognizing that the health of the Creation is integral to human well-being. And it serves as both an inspiration and a guiding principle for humanity, where individual success is measured not by the accumulation of material wealth, but by the attainment of moral virtues alongside a commitment to nurturing and safeguarding the Earth.

Many cultures, belief systems and teachings assert that individual morality is the basis of a successful society (Flanagan 2016). The moral foundation of a nation's customs and laws profoundly shapes its identity, and in many cases is derived from ancient times. The Western legal system, for example, traces its roots back to Aristotle, St. Augustine, Justinian I, Gratian and St. Thomas Aquinas and their writings on Divine Law, Natural Law and Civil Law (Lansing 2010 p.557). Revisiting these ancient sources of knowledge and reason can be invaluable in reconnecting with the essential ideas and thinking that constitute the foundation of our world. It could be considered particularly prudent to do so in times of crisis, as we are now facing on so many fronts, including sustainability.

The following section explores *The Divine Comedy* in greater depth as it is one of the most profound and significant works of moral philosophy available. Within its verses, we can find valuable lessons that can inform and inspire our efforts toward creating sustainable societies.

3. The Divine Comedy

The Divine Comedy is a 14,233-line epic poem written by Dante while in exile in Verona and Ravenna between 1308 and 1320 (Alighieri 2009; Baranski 2018; Lansing 2010). It is considered to be one of the greatest literary works of all time and a masterpiece of world literature. It was so widely read in Italy that it is accredited with unifying the Italian language to the Tuscan dialect, giving rise to the saying that Dante was 'the father of the Italian language'. According to Pope Francis in his Apostolic Letter *The Light of Eternal Truth*, the poem is 'an almost inexhaustible mine of knowledge, experience and thought in every field of human research' (Francis 2021).

The poem is a recounting by Dante of his visionary journey through the afterlife, led first by Roman poet Virgil (70 BC–19 BC) and later by Beatrice, his beloved. During the journey, Dante witnesses the fate of souls as being a consequence of how they lived their Earthly lives, and he communicates with many of them. The souls share their life stories with Dante, how they thought during life and why they acted as they did. Through these interactions Dante learns important lessons and insights about life and in particular about the effects of vice and sin on the human soul, the value of living a virtuous life, the true nature of freedom, and the journey to enlightenment. During his visionary journey, Dante was given the task of sharing the experience and the lessons he had learned with humanity through his poem so that humanity would have foreknowledge of the afterlife and the importance of living virtuous lives.

Christian teachings on sin and redemption, particularly the writings of Saint Augustine (Lansing 2010; O'Donnel 2024) and Thomas Aquinas (Chenu 2024; Lansing 2010), are brought together in the *Divine Comedy* with concepts from Homer and Virgil and Greek philosophers Plato and Aristotle to illustrate the importance of morality in the development and progress of the human soul. The poem can be taken either literally, based on belief in the immortality of the soul, or allegorically as representing the soul's journey towards enlightenment during life.

There has been considerable resurgence of interest in *The Divine Comedy* in the last few years, especially since the 700th anniversary of Dante's death in 2021 (Corbett 2020;

Baranski 2018). From the perspective of poetry, politics, spirituality, philosophy and theology, *The Divine Comedy* has a great deal to offer in the way of insight and understanding. Several websites are dedicated to *La Commedia* to facilitate the study of this great work (e.g. Digital Dante 2024; The World of Dante 2024).

The poem opens with the statement by Dante: 'Mid way through the journey of our life, I found myself lost in a dark wood... so full of sleep was I, that the true path had been lost.' This tells of the moral condition that Dante found himself in by his middle years: a state of spiritual darkness, disorientation and confusion as a result of living a life of sin. In his vision, Virgil appears to Dante and leads him first through Inferno (Hell) where the souls of unrepentant sinners existed in a state of eternal torment and punishment: the principle of contrapasso (Lansing 2010) ensured that the punishment was not arbitrary but a reflection of their sins. During life these souls had embraced vice, surrendering their free will, and this led them to commit mortal sins for which they did not accept responsibility or repent. In each case vice had eroded the integrity of the soul and drawn it down into a condition of spiritual malaise, guilt and suffering. The state of the soul in the afterlife was a consequence or natural extension of this condition in life, so that souls that had committed more serious sins in life and caused greater harm resided deeper in Inferno where they were subjected to harsher punishment.

After passing through Inferno, Virgil led Dante through Purgatory, the afterlife realm where souls, that during life had sincerely repented for their sins, engaged in a process of purification. Figure 2 shows an engraving of Mount Purgatory by Ugo Foscolo from 1822 and an anonymous illustration from 1891 with the names of the vices purged and virtues cultivated at each terrace.

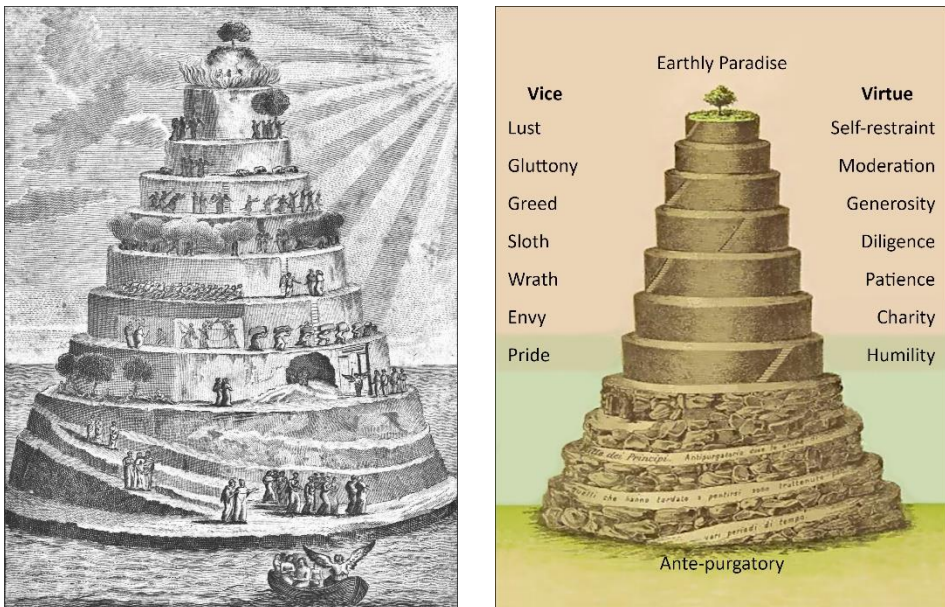


Figure 2. Illustrations of *The Divine Comedy* showing (left) an engraving by Ugo Foscolo from 1822 showing souls ascending Mount Purgatory towards the Earthly Paradise, and (right) from an 1891 print version by anonymous with the names of the vices being purged and the virtues being acquired at each terrace.

Before entering Purgatory proper, these souls ascended three steps symbolizing contrition, an awareness of the necessity of self-reflection, and a genuine willingness to seek penance. They then worked their way up the mountain cultivating one of the capital virtues at each terrace and purging the corresponding vice, from humility as the counter-virtue of pride to self-restraint as the counter-virtue of lust.

At each terrace souls were subjected to a form of penance that reflected the nature of their sins during life, and were guided through a process of instruction and self-reflection where they were shown the consequences of their vices and provided with ideal examples of the virtues they were to cultivate within themselves. The gluttonous, for example, were subjected to hunger and thirst while being surrounded by trees with delicious fruits just out of reach, to remind them of the inherent value of food and of nature's bounty, and to teach them the value of moderation.

After accomplishing the ascent, purified souls emerged from Purgatory into Paradise free from the effects of vice and sin and ready to continue their journey towards spiritual enlightenment. Dante was led through Paradise and the celestial spheres by Beatrice and ultimately reached the Empyrean, the divine abode of God. During this higher journey a different set of virtues was emphasised consisting of the four cardinal virtues (temperance, justice, prudence and courage) and the three theological virtues (faith, hope and charity).

Although harming the environment was not explicitly recognized as a crime during Dante's time, Canto 11 of *Inferno* describes how the seventh circle is reserved for souls that committed acts of violence against God and Nature: 'Violence can be done to the Deity, in heart denying and blaspheming Him, and by disdaining Nature, her beauty and her bounty.' As punishment, these souls are condemned to exist in a desert of burning sand, rained upon by fire. This imagery serves as a sobering reminder of the destructive consequences of deforestation and global warming. It particularly warns those today who are directly involved in harming the natural world for profit, highlighting that such behavior disrespects the intrinsic value of nature.

At the entrance to *Inferno*, Dante described a vestibule or entrance way. This was reserved for those souls that took no definite position on important moral issues—they were bland and indifferent to the state of the world and made no attempt to educate themselves, take a position or contribute in any meaningful way. They were depicted as following a banner that never became planted, while being chased and stung by wasps. In this, Dante gives a warning that humans are expected to exercise their free will in support of truth, righteousness, and the common good.

Through their blandness and indifference to the environmental crisis today, many people are exacerbating the problem. They cannot be bothered to inform themselves of the important issues or contribute to solving them, making little or no attempt to use sustainable alternatives such as recycling. Drawing from Dante's example, we should be more attentive to the state of the environment, the treatment of the planet, and do what we can to ease the strain that we place on the eco-systems.

The essential message of *The Divine Comedy* is that each individual is responsible for the moral condition of their own soul, and must strive to safeguard and nurture their integrity while contributing to the progress of humanity on Earth. Neglecting this responsibility leads to chaos, misery, and destruction, including

destruction of the environment. Dante encourages us to understand *Purgatory* as a metaphor for moral improvement during life. Therefore, sustainability is an achievement of human moral improvement and is intimately connected with our own individual and collective salvation, underscoring the importance of living virtuous lives that promote the well-being of both humanity and the planet.

The next two sections examine in more detail how the capital vices drive the destruction of the environment, and how by embracing the capital virtues in our daily lives we can work towards creating a more eco-friendly and sustainable society.

4. The capital vices and their detrimental effects on the environment

The following passages describe the nature of the capital vices and how they drive humans to act destructively and harm the environment. It focusses on environmental consequences of the vices rather than the psychological or societal consequences. Table 2 gives a summary of this.

Vice	Effect on the environment
Lust	Excessive desire for luxury items, physical pleasure, designer goods, and instant gratification can lead to unnecessary consumption and purchases, overexploitation of natural resources, and overpopulation, all of which are detrimental to the environment.
Gluttony	Excessive desire to consume and indulge, whether of food or of other goods or activities, leads to overconsumption of natural resources, generates excessive waste, pollutes the environment, and leads to conflict over resource sharing.
Greed	Excessive desire for material wealth and property, beyond what is necessary, drives the overexploitation of the environment, and the tendency to prioritise short-term profit and unsustainable practices over long term investment in sustainable alternatives.
Sloth	Lack of interest and motivation prevents individuals from actively considering, questioning or addressing environmental issues, or finding and implementing sustainable, eco-friendly alternatives and solutions.
Wrath	Harms the environment directly through war, ecocide, pollution and arson, and indirectly by resisting sustainable development, which is seen to jeopardize the individual's opportunity to profit and indulge at the expense of the environment.
Envy	Harms the environment by perpetuating the exploitation of natural resources through coveting the wealth, possessions and lifestyle of others further exacerbating environmental degradation and global warming.
Pride	Harms the environment by prioritizing individual desires and interests over the well-being of the planet and other species, rejecting personal accountability and resisting change to eco-friendly alternatives.

Table 2. *The capital vices, from lust to pride, and their detrimental effects on the environment.*

Lust is the excessive desire and craving for instant gratification and physical pleasure. Commonly associated with sexual lust but broadly manifesting as lust or craving for luxurious items or delicious foods, designer clothes or trips to exotic locations. Lust for luxury goods such as fine leather, precious stones and exotic woods leads to deforestation and loss of biodiversity, lust for exotic delicacies such as caviar and shark fin soup leads to loss of biodiversity, lust for fashion and luxury clothes contributes to

pollution and waste, lust for travel to exotic locations leads to an increase in carbon emissions and pollution of remote places. Lust for luxury sports cars, cream cakes, new and appealing goods, the latest fashions, and so on lead to unnecessary purchases and over-consumption, depletion of natural resources and pollution of the environment. Sexual lust can lead to overpopulation through unintended pregnancies, a major global problem (Klima 1996), and the subsequent increase in demand for natural resources. Lust is perfectly summed up in the words of Giovanni in Ford's medieval play - 'Lost, I am lost: my fates have doomed my death: The more I strive, I love, the more I love, the less I hope: I see my ruin, certain.' (Ford 1633).

Gluttony is excessive over indulgence and waste, and as such it takes out from society and the environment much more than is necessary, which causes depletion of natural resources and pollution of the environment. This relates not only to food but to other resources including energy, water and raw materials. Excessive waste over burdens and pollutes the environment, drives land clearing for production and landfill sites, generates excessive amounts of plastic waste for packaging, and carbon emissions associated with excess farming, fishing, manufacture and shipping. The economy of nature is based in balance, and excessive consumption from any one species causes imbalance and depletion of the resources necessary for the survival of other species.

Greed is the excessive desire for material wealth and property. The relentless pursuit of material wealth drives overconsumption, leading to the rapid depletion of natural resources. Industries often prioritize short-term profits over long-term ecological health, resulting in practices that harm the planet, such as deforestation, overfishing, and pollution. These destructive actions not only degrade ecosystems but also exacerbate the effects of climate change, threatening biodiversity and the stability of vital habitats. Greed promotes unsustainable agricultural and industrial practices that degrade soil, contaminate water supplies, and threaten wildlife. This diminishes the Earth's ability to regenerate and maintain its natural eco-systems. And greed undermines efforts toward effective environmental stewardship and the development of resilient communities.

Sloth is a lack of effort, diligence and motivation, and is associated with apathy, indifference and procrastination. It is easy to see how sloth can follow on from the previous three vices, as individuals are exhausted satisfying their own appetites. Sloth contributes to environmental decline through neglect of critical issues like pollution, waste management, and resource depletion, allowing environmentally harmful practices to persist. Overreliance on convenience and single-use products contributes to increased waste and environmental pollution. For instance, individuals may opt for take-out meals in disposable containers instead of cooking at home. Additionally, sloth can hinder the adoption of sustainable practices, such as recycling or conserving energy and water. When people lack motivation to make small changes in their daily lives, such as using public transport, reducing consumption and waste, and recycling, it impedes collective progress toward a sustainable society. And sloth can reduce the effectiveness of community engagement and activism required to confront environmental issues. Active participation in conservation efforts, policy advocacy, and sustainable initiatives is crucial for driving systemic change. A fitting proverb for sloth is: 'All that is necessary for the triumph of evil is for good people to do nothing.'

Wrath is a powerful and malignant form of anger that can be harboured within to grow and become overwhelming and consuming making it hard to think clearly or act rationally. It can be caused by many factors such as frustration, resentment, loneliness, rejection, discontent, failure and so on that brew over time into a volatile mix that can lash out destructively or plan acts of revenge. Wrath can damage the environment directly through intentional pollution, war and arson, ecocide, as well as indirectly through aggression towards advocates of conservation and policies designed to regulate environmental usage, which are seen by those driven by excess as impeding their opportunity to profit and indulge through exploitation of the environment.

Envy is enmity prompted by covetousness (Whitney 1895), and it can cause individuals to act in harmful and destructive ways and pursue lifestyles that are excessive purely to match or outdo other people. In this way envy perpetuates the demand upon the environment to provide resources and can drive unsustainable practices especially when obsession causes violation of laws and regulations intended to protect the environment. Competition for property ownership can lead to conflict and war, which are detrimental to natural eco-systems. Advertising often promotes envy to sell products that people don't need, and this increases demand upon the environment and generates waste and pollution associated with excess unnecessary production.

Pride, as conceived during Dante's time, is an exaggerated or inflated sense of self-importance that places the individual at the centre the Universe. This leads to the subjugation of other human beings and a lack of empathy and compassion. The good-will and warmth that can exist between human beings, and the longing for a more profound connection the divine, can be lost and this leads to a sense of isolation and coldness. This extends to the environment, where it is too often treated as a commodity to be plundered for personal gain, and to the cruel exploitation of animals through practices such as factory farming, branding, vivisection, testing for cosmetics and pharmaceutical drugs, and fur coat manufacture.

The term *anthropocentrism*, is the view that ecosystems and other species on Earth only exist to serve the needs of mankind (Sessions 1974). This viewpoint is a significant driver of unsustainable practices, and together with self-righteousness, which prevents individuals from acknowledging their own weaknesses, failings, or culpability, poses significant obstacles to positive change, particularly in relation to environmental conservation and regulation of resource consumption. We have to ask ourselves: are we willing to alter our behaviour to establish a sustainable society and save the planet?

A particular danger of pride is that it can lead us to equate our intrinsic worth as human beings with our financial and material wealth. This conflation can result in an undue emphasis on the accumulation of material possessions rather than the acquisition of moral virtues, which leads to competition for natural resources and sometimes violent conflict. When society places greater value on material wealth than on the wellbeing of the biosphere, and we pursue excess at the expense of natural ecosystems, we are on a path of destruction that will decimate the planet, cause widespread suffering and wipe out the source of our own sustenance. The Amazon rainforest, for example, which has evolved over some 60 million years, now faces destruction within 50 years to make way for soybean farms so that ranches and farms in the US and Europe can meet the increasing demand for cheap meat (Seymour 2019).

A fundamental principle in Greek philosophical thought was the belief that the Universe is governed by an eternal, immutable, and divine and rational order known as Logos, within which all things have a reason for being. According to this philosophy, human beings have a responsibility to align themselves with this cosmic order through the cultivation of rational faculties and moral virtues. How individuals conduct themselves, treat others, and interact with the environment, are meant to mirror this divine order. Extending the famous saying of Mahatma Ghandhi: the greatness of humanity and its moral progress can be judged by the way it treats the planet and the other species that it shares the planet with.

5. The capital virtues and their beneficial effects on the environment

Table 3 lists the capital virtues and their contributions to building an environmentally friendly and sustainable society. These virtues are considered to be essential qualities of human nature that must be cultivated if humanity is to progress. Each virtue is described as an expression of love, and collectively they can save humanity from falling into decay and damaging the eco-systems that form the basis of life on Earth. Cultivation of these virtues is depicted as a transformative journey, a reversal or undoing of the descent into vice and sin, starting with humility and ending with self-restraint.

Virtue	Towards a healthy and sustainable society
Humility	A realistic self-view that recognises that we share the planet with many other species and are part of an intricate web of life in which we are reliant upon the planet and the environment for our survival.
Charity	To navigate our lives with good will, kindness and mercy, treading softly in the world so as not to unbalance the delicate fabric of life, and to organise our activities with eco-friendly sustainable alternatives that consider the environment and the well-being of all living things.
Patience	The ability to make long-term investments in sustainable alternatives and to persist with long term sustainable development projects, allowing eco-friendly solutions to be employed that support the preservation, restoration and growth of natural resources.
Diligence	To make the practical effort to find out about the environment crisis and sustainability, to develop and implement sustainable solutions and eco-friendly alternatives, and to establish and enforce regulations to protect and conserve the environment.
Generosity	Contributing to the life of the planet in many practical ways as stewards, protectors and responsible inhabitants, helping to restore depleted eco-systems, supporting ecological conservation efforts, building tree plantations, investing in sustainable solutions.
Moderation	Maintaining our consumption levels within rational and sustainable bounds, reducing waste and pollution, and utilising sustainable alternatives to conserve resources and protect biodiversity, thereby minimising our impact upon the environment.
Self-restraint	A safeguard against impulsive and irrational desires and actions, reducing the unnecessary impulse-driven purchase of luxury items, foods and travel, and reducing unintentional pregnancies, thereby reducing our demand upon natural resources.

Table 3. The capital virtues, from humility to self-restraint, and their contributions to building a healthy and environmentally-friendly sustainable society.

Humility is a quality that forms up in human beings when we contemplate such things as the vastness of the Universe, the nature of God, the power of the sun, the expanse of the sea, the beauty of a butterfly or the miracle of a baby being born. These things inspire a sense of awe and wonder that allow us to have a modest and realistic view of ourselves and our place in the Universe. Humility also allows us to realize our failings and weaknesses, and—in the case of the environment—our complicity in its decline. It encourages us to acknowledge our reliance upon the processes and fruitfulness of nature, to listen to the wisdom of indigenous communities, and to be mindful of the well-being of the planet, future generations and all living beings. Through humility, we can cultivate gratitude and simplicity, leading us to make conscious decisions and lifestyle choices that reflect a commitment to environmental stewardship, conservation, and sustainability.

Charity is the quality of mind inspired by humility that guides us to navigate our lives with good will, kindness and mercy. It encourages us to treat the world in a manner that nurtures rather than exploits, and that values and respects the delicate and finely balanced systems that underpin the biosphere. Usually thought of in relation to other human beings, it can be extended to all forms of life, embodying the desire for all beings, including humans, animals, plants, and the environment, to live their lives with the natural dignity that reflects their inherent value and right to exist. Charity would want the planet's biodiversity and ecosystems to be free from oppression and exploitation, that they might live without fear. Charity can significantly help the environment by advocating for sustainable practices, conservation efforts, public education, environmental clean-up, habitat restoration, disaster relief, and response. In the case of construction projects, for example, ensuring that the environment is disturbed as little as possible and that displaced animals are relocated and properly rehabilitated, and the land replanted. As stewards of our planet, we have the responsibility to respect its ecology while also seeking ways to flourish without causing harm.

Patience is the quality that allows a person to wait calmly and endure without agitation, a process that requires self-discipline and self-control. In a world dominated by the relentless pursuit of quick profits and instant gratification, patience allows for longer term projects with longer term prospects. This is crucial for the environment, as it allows for investment in well-planned long-term solutions that support sustainable practices like forest plantation, which are essential for environmental conservation. In contrast, pursuit of short-term profits typically leads to destructive practices such as clear-cut logging and neglect of regulations intended to protect the environment from pollution and other forms of harm. To effectively address global warming, biodiversity conservation, and promote sustainable alternatives we must commit to long-term strategies and sustained efforts. For instance, a business planning to construct an access road may need to wait for migratory birds to depart before beginning construction, and the road's design may need to include a detour or tunnel to avoid disrupting natural habitats, which would require extra planning.

Diligence is a quality that encompasses being conscientious, dedicated, and hardworking. The preservation of the environment requires a collective and unwavering dedication from human beings to embrace sustainable practices across all aspects of life. This entails implementing sustainable alternatives in personal and professional settings,

shaping governmental and business policies, enhancing resource regulation and management, and fostering the innovation of eco-friendly solutions and technologies. Moreover, it involves the integration of environmental awareness and a sense of responsibility into educational programs. Our existing infrastructure was established without due consideration for sustainability; and by embracing a new paradigm rooted in sustainability, we must persist in the necessary changes to overcome old habits and replace old infrastructure with new sustainable alternatives. It is essential to conduct thorough due diligence regarding the environmental history of consumer products, as only by understanding their impact on the environment can we make informed and sustainable choices.

Generosity is the quality, once referred to as noble and magnanimous, that emphasises acts of giving rather than getting. Giving as a way to contribute to the world and in that sense, giving is purpose. It can play a crucial role in every aspect of sustainable development. With many problems today, the solution is obvious but not always profitable, and consequently it goes unfixed. But generosity does away with or reduces the profit motive allowing problems to be addressed more directly and honestly. For instance, a business donating a percentage of its profits to support reforestation programs or wildlife conservation efforts, or having a water tank on-site for aquaculture to contribute to the restocking of fish populations in the sea or local water eco-systems, or manufacturers and retail agents giving more information to consumers on the ecological impact of their products.

Moderation is the quality of achieving balance and rationality in our actions. It helps us resist impulsive urges, especially those that lead to excessive consumption, and to select things in a more reasonable way, with recognition of what is actually needed, and of the cost to the environment. Between survival and excess is a comfort zone that can be fine-tuned to achieve sustainability. This enables us to mitigate instances of excess and reduce our demand on natural resources. And it allows us to cultivate healthier, more balanced and sustainable lifestyles. Through fostering responsible and sustainable living practices, moderation is a pivotal virtue in safeguarding the environment, ensuring its preservation for future generations, and laying the foundation for the construction of sustainable societies. When one person consumes too much, it is not a problem for the planet; but when excess becomes systemic and an entire population eat too much or take too much, then natural resources become overexploited and depleted. If the modern world can change from being a culture of excess to a culture of moderation, then the sustainability crisis is solved.

Self-restraint is a quality of personal management and self-discipline that serves as a foundation for humanity, moral integrity, and the preservation of free will. It acts as a safeguard against fanciful, frivolous, and excessive desires and impulses, enabling a healthy and respectful engagement with life, as well as the development of relationships based on mutual respect and trust. Self-restraint benefits the environment by helping to keep family size within the Earth's sustainable carrying capacity and by reducing unnecessary consumption of luxury items, exotic foods, and superfluous consumer goods, thus lessening human demand on natural resources. Ultimately, by embracing self-restraint in both personal and societal contexts, individuals can contribute to a more sustainable and balanced relationship with the planet.

6. Discussion

Western economies have been built on a consumer model that is based on the view that individual material wealth and consumption are the primary means of achieving prosperity. Advertising has accelerated this, and the rise of department stores and shopping catalogues have brought the opulent world of Marie Antoinette into the common household. As consumer goods are derived directly or indirectly from natural resources, and human population is increasing rapidly, and mega nations such as China and India are using the same model for economic growth, this is now becoming a very serious problem that is very rapidly driving exploitation and destruction of the planet.

A previous analysis of environmental data from the literature (Whitmore 2024) showed the decline of the biosphere, deforestation, the increasing lists of endangered species, and of increasing pollution, atmospheric carbon dioxide and resource extraction. Based on data from the global forest area measurements of (Potapov 2022), the study estimated that mankind is currently taking three times more from the planet than the planet can sustain, and that at the current rate of consumption all trees will be gone within an estimated 85 years. Leading up to that time, a cascading effect of extinctions and biosystem collapse would be expected, which in turn would lead to the decline and disappearance of civilisation.

Having found a system of civilisation that does work well to a large degree, it is now necessary to regulate its resource usage and consumption so that it coexists more harmoniously with the natural environment. This means making our cities and industries more efficient through adopting sustainable alternatives, reduction of waste and recycling, and by fine-tuning our individual lifestyles to be less excessive and more eco-friendly (Alexander 2012; Jain 2023). Nations and people have grown considerably on the over-exploitation of natural resources, and now it is time to adopt a more sustainable approach, while emerging nations and economies such as China and India need to implement sustainable values and sustainable policies from the outset.

The current study has argued that overconsumption and overindulgence in foods and physical pleasure, excessive desire for material wealth and possessions, and associated excessive waste and pollution, are the root causes of our unsustainable treatment of the biosphere and excessive extraction of natural resources. Three levels of material prosperity can be said to be: survival, comfort and excess. Survival being the minimum, comfort being a moderate level and excess being more than is needed. It is the excess that is causing the problem to sustainability, and this needs to be reduced to a moderate comfort level.

It is therefore advantageous to cultivate a society that does not encourage material excess, but that promotes environmental consciousness and personal responsibility instead. When human beings are no longer interested in excess, then the market that supplies that excess will diminish and this will reduce the demand upon natural resources. For example, when the demand for cheap meat is reduced, then the demand for soy beans will reduce, which in turn will save the rainforests which are currently being cleared to make way for soy bean plantations to feed the pigs and cows in the US and Europe.

In Canto 16 of *Purgatory*, Marco Lombardo laments that the world is plagued by bad leadership and a populace that mindlessly follows. It is this that allows vice, crime and corruption to flourish (Damijan 2023). Marco goes on to explain that each individual possesses the gift of free will, and this comes with an obligation to take personal responsibility for their actions and decisions. He stresses that this dual aspect of free will—freedom and responsibility—is critical for spiritual growth, requiring individuals to consciously choose between good and evil.

Two very important leaders in society are politicians and teachers, and both have a significant effect in advancing society towards a sustainable future. Politicians have the responsibility to organise and allocate resources, and thereby regulate the practical functioning of society. Teachers influence future generations, instilling values of environmental stewardship and responsible citizenship.

Politicians need to make every effort to support eco-friendly and sustainable alternatives and solutions. When politicians also lead by example through the use eco-friendly sustainable alternatives and sustainable lifestyles, then they inspire others to adopt the same standard. This *sustainable leadership* is an important way in which sustainable practices can become popular in society.

Educational institutions play a vital role in fostering a moral and sustainable society, and teachers need to recognize that their actions and their own positions on moral issues, often speak louder than their words in shaping the moral development of students. It is essential for educators to appreciate their role in advancing society and enhancing the human condition by nurturing the intellectual and ethical capacities of children and young people.

Incorporating principles of environmental awareness (Lee 2023) and responsibility alongside social accountability and critical thinking (Ennis 1991) into the curriculum is crucial. It is important to discourage the desire for excess, and overconsumption and greed, as these promote unsustainable practices. Instead, teachers should encourage values such as self-restraint, moderation, and generosity, cultivating a generation that is committed to a more ethical and sustainable future.

While moral and ethical values are included in most early schooling through lessons and stories, the academic subjects of moral philosophy and ethics are generally considered to be suitable only for advanced schooling. However, it is very important to discuss moral questions in the classroom, because they give young people a moral perspective and an idea of the value of moral behaviour as well as examples of how to approach and solve moral questions (Singer 2024).

In schools, academic forums, and public discourse, it is crucial to explore a diverse range of viewpoints and value systems as they relate to the environment. It is important to recognize that not all of humanity shares the same views on environmental issues. Our view of an ecosystem—whether we see it as a source of beauty that commands our respect or as a source of capital—significantly influences how we relate to and treat that ecosystem: whether we make concerted efforts to preserve it or whether we exploit it, or whether we find ways to extract what we need but do so with respect and moderation.

The environment is safeguarded within the framework of Environmental Law (Dernbach, 2011), a complex system that encompasses a wide array of laws, policies, regulations, and enforcement mechanisms addressing critical issues such as pollution, conservation of natural resources, wildlife protection, and global warming. Environmental

law is typically viewed as a part of Positive Law, designed to regulate human activities in a pragmatic manner. However, this form of law often lacks the deeper ethical understanding and guiding principles necessary to effectively address many ecological problems.

If Environmental Law were to integrate more closely with Natural Law—which posits that there are inherent moral principles arising from human nature and the natural order, which can inform our understanding of justice and ethical behavior—it could provide a more substantial ethical foundation to guide decision-making processes regarding the environment. This would help address essential questions such as: Is water sacred? Do trees possess rights? Do animals have a fundamental right to life?

The complexity of human existence, marked by our capacity for free will, necessitates our engagement in moral decision-making (Kant 2005). Moral standards such as the Golden Rule (do unto others as you would have them do unto you) and the principle of non-maleficence (do no harm), and respect for all living beings, are widely applicable, but do not always provide clear resolutions for the diverse and complicated situations in which humans can find themselves (Brightman 2010; Hursthouse 2023).

In the *Divine Comedy*, Dante describes three different moral conditions. *Inferno* represents moral failure, *Purgatory* emphasises human reasoning and self-reflection, and *Paradiso* highlights divine love and divine revelation. This supports the essential understanding that in Earthly life human reason needs to be balanced with empathy and compassion, while divine insight and revelation are attainable through faith and a profound desire to learn and understand.

The capital vices and virtues are based on a profound understanding of human life and the human condition, arrived at by philosophers and theologians since the time of Ancient Greece. They have a sense of universality in that they transcend differences between individuals such as nationality and race. The present study has shown their applicability to sustainability, and suggests that their value and relevance extends beyond that. Any curriculum of moral and ethical studies would benefit from their inclusion.

The Divine Comedy includes many discussions between Dante and different characters in the afterlife on a wide range of moral issues, and this makes the poem particularly valuable for students of morality and ethics. The text however is in many places cryptic and contains many references to events and persons in Italy at the time of writing. It therefore needs to be read in combination with commentaries on the text that can explain the historical context and the different social and political dynamics at play at the time.

Dante emphasized that the Earth and its ecosystems are integral components of divine creation, framing sustainability as a sacred human duty that compels us to live responsibly and protect the environment. This perspective acknowledges the intrinsic value of nature and elevates environmental stewardship to a divine task, a view that is resonant with many spiritual traditions worldwide (Singh 2023). By respecting the natural world and striving for moral improvement, humanity can honor the Creator and fulfill its duty as stewards of the Earth.

Cultivating a culture of critical thinking, self-reflection, and social and environmental responsibility empowers individuals to act freely while respecting moral laws, environmental integrity, and the greater good. In this way, we can foster a society where ethical conduct is a shared aspiration, ultimately contributing to a more harmonious existence for humans and planet.

7. Conclusion

Through an examination of morality in relation to humanity's sustainability on Earth, and by drawing lessons from *The Divine Comedy*, three possible future scenarios can be identified:

1. A world in which moral accountability is abandoned, resulting in rampant overconsumption and competition, and rife with fear and tyranny. In such a reality, humanity exploits every available natural resource, leading to ecological desolation, deforestation, mass extinctions, global warming and collapse of civilization.
2. A world in which Earthly life is seen as a place of moral improvement and social and environmental responsibility. Embracing this view, we would strive for a society that respects and upholds the intrinsic value and right to life of all living beings; we would build sustainable cities, embrace eco-friendly lifestyles and act as responsible stewards of the environment.
3. A world in which the spiritual ideals of harmony, peace, and divine love are integrated into our daily lives, this scenario illustrates humanity as a positive force for the planet. In this vision, we nurture both ecological well-being and spiritual evolution, creating a sustainable future for all living beings.

Ultimately, we are presented with two paths: we can either choose to advance morally as individuals and as a society or risk succumbing to moral decay, which would inevitably result in environmental destruction and societal collapse. Choosing the former is essential for creating a sustainable future, minimizing our impact on the planet, and ensuring a thriving world for generations to come.

The model of capital vices and capital virtues offers a clear pathway for moral improvement that can guide humanity toward sustainability. Sustainability extends beyond environmental conservation; it embodies our obligation to cultivate both a healthy ecosystem and a virtuous society for those who will inherit the Earth after us.

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