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Essay

Christianity and Anthropogenic Climate Change: A Broad Overview of the Catholic Church's Response and Some Reflections for the Future

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Abstract: Religions play a key role in shaping our worldviews, values, and behaviours and this includes our interactions with the environment. Fuelled by the development of the technocratic paradigm, Christianity has historically received a bad reputation for perpetuating anti-environmental views. Nonetheless, the development of ecotheological strands and the emergence of faith-based organisations focusing on climate justice have aided in producing the much-needed environmental reformulations. As such, this paper seeks to provide a broad overview of the role of Christianity in shaping worldviews, from those hindering environmental action to more contemporary ecotheological approaches discussing climate change, particularly Pope Francis' encyclical *Laudato si'*. Christianity's preparedness to navigate climate change will be theorised in relation to empirical evidence and the work of European faith-based organisations, as well as the methodological opportunities that the field of ecolinguistics can offer to inform effective communication.

Keywords: Christianity; anthropogenic climate change; ecotheology; *Laudato si'*; *Laudate Deum*; Pope Francis; liberation theology; ecolinguistics; the Catholic Church



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1. Introduction

Religious narratives have the potential of achieving long-lasting results in encouraging both positive and negative participation at the level of environmental action. This makes religions an important point of departure for the understanding of climate change since they can 'engage people at a deeper level than economics and policy' (Wolf and Gjerris 2009, p. 119). In this sense, and compared to other social actors, religious leaders generally enjoy one of the highest levels of trust (Schliesser 2023) and are therefore key in developing the necessary level of engagement for tackling climate change issues. But even attempting to access the contemporary ecological collapse through a religious lens is complex. One of the main limitations is that different faiths rely on different ontologies and internal divisions within the denominations, so agreeing on climate change, and whether science and technology shall assist humanity, has proven to be challenging (Koehrsen et al. 2022). Moreover, there are different strands within and across religions regarding how environmental concerns are to be approached. As such, an essential enterprise is to individually examine how various religions/religious faiths make sense of the environment to provide an outline of the possible interactions with the topic of climate change. For the purposes of this article, religion is operationally defined as 'semantic and cognitive networks comprising ideas, behaviours and institutions in relation to counter-intuitive superhuman agents, objects and posits' (Jensen 2019, p. 7). Therefore, within this broad definition, faith can be argued to be 'the foundation that supports the creation of social links and the formation of communities. It gives rise to all interactions that result in social integration' (Sztumski 2020, p. 104); thus, it is a critical aspect to most varieties of Christianity, particularly when it comes to developing an ecological ethos.

As such, this article will focus on Christianity, and more specifically, the Roman Catholic Church. First, it aims to provide a broad overview of the various formations

within the Christian tradition that hinder ecological practices, in contrast to more environmental Christian reformulations. Second, the oft-cited assumption (Deane-Drummond 2008; Dedon 2019; Northcott 1996; B. Taylor 2016) that Christianity plays a key role in developing a techno-scientific worldview conducive to anti-environmental practices will be further examined in light of contemporary ecotheological concepts and debates. Particularly, Pope Francis' encyclical *Laudato si'* (Pope Francis 2015) and the apostolic exhortation *Laudate Deum* (2023) will be examined to provide a deeper understanding of its consequences, and more importantly, to find some hopeful ways to approach the current anthropogenic crisis. Finally, and in the pragmatic spirit of this Special Issue, this paper will theorise on Christianity's preparedness to tackle the climate crisis, taking the work of Christian European organisations and empirical research as a vantage point for this exercise, and exploring the potential application of ecolinguistic frameworks to theological corpora.

2. Anthropogenic Climate Change, Christianity and Nature

The Intergovernmental Panel on Climate Change (IPCC) have found empirical evidence that anthropogenic climate change is an unquestionable fact. The IPCC's 2021 Chapter on Human Influence on the Climate System succinctly states that '(...) human influence on the climate system is clear, evident from increasing greenhouse gas concentrations in the atmosphere, positive radiative forcing, observed warming, and physical understanding of the climate system' (Eyring et al. 2021, p. 425). The report provides evidence of continuous global warming since the 1950's, particularly arising from fossil fuel burning and various ways of land (mis)use. More recently, the 2023 Global Climate Report (NOAA National Centers for Environmental Information 2024) found that the average global temperature for the January–December 2023 period was the highest on record. It is estimated that temperatures could reach over 4 °C by the end of the century if carbon emissions continue to increase. The consequences of these emissions are seen in the rapid increase in CO₂ and other gases that remain in the atmosphere, land, and oceans, causing multiple energy imbalances in the systems with serious consequences for society and beyond (Steffen et al. 2015). More tangible effects range from extreme weather conditions to natural disasters, such as wildfires, floods and droughts. Some indirect effects include the migration/displacement of already vulnerable communities (Kolmannskog 2012), food insecurity and the development of mental illness due to the exposure of extreme weather (Walinski et al. 2023), all of which also affect macroeconomic stability in the long term (Ciccarelli and Marotta 2024).

Whilst the scientific research of climate change has focused primarily on the natural science dimension for some time, the call for incorporating the societal and cultural aspects of climate change (Von Storch and Stehr 2006) have now slowly permeated the discussion. As Haberman (2021) notes, many religious communities regard climate change 'as an ominous sign of significant rupture between the human and the divine' (p. 3). Therefore, the multiscale nature of the crisis calls for rapid local responses and the engagement of religious communities to address these issues.

Religion, as a key cultural and social aspect both in theory and practice, is indeed part of the response to climate change (Jenkins et al. 2018), especially since science and technology provide limited assistance to solve problems underpinned in culture (Hulme 2009). But even religions' potential to provide effective societal responses may still be hindered by anti-science biases and climate change denial (Haluzá DeLay 2014). As such, the fields of theology and religious studies must combine efforts in the applied sense by producing 'engaged public scholarship that aids efforts of resiliency and adaptation to climate change, including in the academy' (LeVasseur 2021a, p. xvii). But moving from the discursive scientific realm to the engaged activist and sociopolitical standpoint creates some practical difficulties. Climate change can indeed bring science and religion to work as a united front, not without a host of linguistic challenges when it comes to communicating such a complex issue to all audiences (Tucker 2015). This is a small but crucial aspect which will be tackled further in this essay. Understanding the impact of human activities on

the planet's systems is a necessary step to endeavour a deeper analysis of how religions are instrumental in construing certain beliefs regarding climate change and its causes. In this sense, and compared to other religions, Christianity's historical predominance and involvement in the societies that precipitated the climate change crisis make it a salient target of inquiry (Jenkins et al. 2018).

As noted by several scholars, Christianity's understanding of nature and ecology makes generalisability rather problematic (Conradie et al. 2014). Lynn White Jr.'s work (White 1967) arguably sparked the interest amongst scholars that religious worldviews shaped anti-environmental beliefs (LeVasseur and Peterson 2017). White addresses what he believes are the key elements for the understanding of anti-environmental and especially Western Christian practices, namely, the advances in technology and science that since the Middle Ages have shaped the view of Earth as a source of exploitation, producing a disenchantment and consequent rejection of animism. "The Historical Roots of our Ecologic Crisis" voiced some of the concerns that have previously been pointed out by critics who have not received the same degree of attention as White's paper. As B. Taylor (2016) observes, other prominent theologians (cf. Baer 1966; Sittler 1954) also critiqued Christianity's lack of concern for environmental matters but envisaged radical reform as an option.

One of the greatest challenges in determining the influence of Christianity in anthropogenic climate change is the plurality of views across the different 'Christianities' (Wolf and Gjerris 2009), but also empirical evidence that links religious identity to either pro-environmental or anti-environmental behaviours (LeVasseur 2014; S. Taylor 2002; Zemo and Nigus 2021). To this, Frohlich (2013) adds that 'Dividing Christian environmental thought into distinct categories is easier than dividing Christians into categories (ibid., p. 211)'. Several lines of research have focused on establishing common links between religious affiliation and climate change. After applying an online survey to 1927 Australians across four religious' groups, Morrison et al. (2015) concluded that like American Evangelicals, Christian literalists—i.e., Christians who followed a close interpretation of the Bible—were less likely to believe that climate change is happening; thus, they were more reluctant to endorse environmental actions, while non-literalists expressed split views on the topic.

Earlier studies in the US account for similar findings to the ones in Australia. A 2007 survey from the Barna Group found that more conservative American Christians are less concerned about environmental issues than other segments (i.e., born again Christians, notional Christians). Within Christianity as a whole, Zaleha and Szasz (2015) observe that the 'end of times' is indeed a key factor influencing the lack of engagement in the US. As found in a 2014 Public Religion Research Institute study, supernatural events are expected as the coming of the apocalypse, conflicting with current environmental concerns. While apocalyptic environmentalism has been associated with a lack of engagement, evidence shows that it can have a positive effect in engaging individuals in action (Veldman 2012), particularly in emphasising the potential of narrative endings in constructing a moral that can sustain an ecological collective framework to deal with the crisis.

On the other hand, Clements et al. (2014) present an exhaustive analysis of the hypothesis that American Christianity has been turning 'greener' since the 1990's. Drawing on data from the 2010 General Social Survey, they concluded that self-identified Christians reported lower levels of concern regarding climate change than secular groups. However, they warn that since religious views are also informed by political, ideological and cultural values, these dimensions along with religion shall be explored to observe all the nuances. Similarly, Zaleha (2013) questions whether some religions can encourage more pro-environmental behaviours than others. Drawing on research in sociology and sociopsychology that appear to support this thesis, the author concludes that more research should be pursued to identify whether nature-venerating religions are indeed growing and the impact that these religions have in influencing pro-environmental behaviours. Despite the decline in American individuals self-identifying as Christians since the early nineties (Kosmin and Keysar 2009), American Christians collectively have lower levels of concern

about environmental issues, which would support Lynn White's thesis of Abrahamic religions as highly anthropocentric (Conradie and Koster 2020; LeVasseur 2012; Zaleha and Szasz 2015). Though there is a comprehensive body of research in Australia, the US and Europe, there are relatively few studies in Latin America, Africa, Asia and other areas with a large concentration of Christian followers (Hulme 2016), which informs this article's focus instead on European Christianities broadly.

Overall, in critiquing Christian thought as ecologically detrimental, Kinsley (1996) identified three core arguments: nature's desacralization, the anthropocentric domination of nature, and the relegation of nature and matter. The first argument relates to the rejection of animism. Any gods or spirits associated with natural elements are eliminated under the Christian view. Though nature is part of the creation, it is not sacred per se and if it is passive and devoid of spiritual essence, it is purely instrumental for exploitation. This *creatio ex nihilo* exposes nature's dependence and creation based on God's likeness. The passages of the Genesis¹ provide evidence for such claims.

However, Davies (1994) emphasises two key concepts from the Genesis story of creation that can counter such interpretive trends, relationships and responsibility: God created all things to be related to each other in an orderly and perfect way and man is responsible for its protection. In his analysis, he emphasises that for Christian doctrine, the separation of nature/culture is blurred as animals and humanity originate and finish their existence in the dust of earth. Keller (2003) contends the view of 'Creation out of nothing' since it fails to acknowledge the complexity of the *tehom*, the deep chaos of creation. Instead, she coins the term *creatio ex profundis* to emphasise a disembodied divine agency that brings all beings together.

The belief that man is central to God's creation and nature is merely instrumental sets the grounds for the second argument, i.e., man's entitlement to dominate nature. The development of science was decisive in expropriating and recovering the lost power after Adam and Eve's Fall from the Garden of Eden, as observed by Merchant (2001, p. 70) regarding Bacon's systematic attempts in manipulating nature:

Before the Fall, there was no need for power or dominion, because Adam and Eve had been made sovereign over all creatures. In this state of dominion, mankind was "like unto God". While some, accepting God's punishment, had obeyed the medieval strictures against searching too deeply into God's secrets, Bacon turned the constraints into sanctions. Only by "digging further and further into the mine of natural knowledge" could mankind recover that lost dominion. In this way, "the narrow limits of man's dominion over the universe" could be stretched "to their promised bounds".

The development of technology and chemistry enabled mankind to explore and interpret nature and transform knowledge into power. As Merchant (2001) observes, the technocratic advances in the late 1920's often overlooked the environmental consequences, let alone the ethical implications, of producing synthetic products and artificial environments, as the main drive was to achieve control over nature and expand the human empire. This 'logic of domination' has profound implications for mastering not only nature, but also labour, indigenous communities and women. According to Hobgood-Oster (2005), religious and scientific assumptions are often substantiated and reinforced through binary oppositions, as further explained below, which perpetuate their dominance. Several prominent ecofeminists contested the patriarchal values sustained in the Christian tradition (cf. Ruether 2000; McFague 1993; Merchant 1980). Such critiques, along with the works of other environmental humanists, contributed to delineating the ideological constructs deeply ingrained in the Euro-Western social imaginary (Eaton 2016), including capitalist systems established long before the Industrial Revolution and that enabled the so-called 'logic of domination' and exploitation at unprecedented scales (Moore 2017).

The third argument relates to the philosophical belief that to access salvation, matter is to be transcended as the ultimate goal since 'Nature is seen as a cage or prison that restricts and binds the spiritual nature of human beings' (Kinsley 1996, p. 110; cf. Ori-

gen), hence, foregrounding the mind/body divide. The ‘spiritual motif’ undermines the ‘ecological motif’, the understanding that human spirit is found in this Earth (ibid.). Human beings—though endowed with a soul—are trapped in a human body, thus sharing some physiological characteristics with other ‘lower beings’. Plumwood (2002) argues this Christian-specific form of Cartesian dualism has profound implications for how the more-than-human is valued; even if an interdependence is acknowledged, this is only on condition that humans’ superiority is above the rest of the species.

All these arguments helped to fuel social, cultural and scientific developments that over time fostered the divide between the rational human being and the threat of the natural environment and its consequent mastery (Kinsley 1996). However, other trends within the Christian traditions have developed more ecological responses that seek a more balanced view of the relationship between nature, humanity, and God. Such proponents observe that although the Bible does not see nature as divine, it is nonetheless not devoid of life. For example, St. Francis of Assisi, Patron Saint of Animals and Ecology, embraced the natural world as his ‘brothers and sisters’, ascribing intrinsic value to the more-than-human world.

Drawing on the promise of theological renewal, Haught (1996) identifies three approaches that engage in an ecotheological reformulation of Christianity: the apologetic, the sacramental and the eschatological approach. The first follows a conservative and traditional view of ‘Nature as God’s gift’ and relies on the concepts of *stewardship*—often emphasised by Pope John Paul II—and *dominion* as key virtues to be exercised to protect the natural environment. Stewardship is the Christian school taking on board environmental concerns in most segments of American Christianity. However, the term has many interpretations. For liberal Christians, it is an unavoidable call to act, whilst more conservative strands have more reservations, partly due to its associations to pantheism (Zaleha and Szasz 2015). This is particularly evident in Southern Baptists struggling to come to grips with the term, from a distinct conviction on environmental views in the early sixties ‘to equating environmentalism to neo-paganism and endorsing free enterprise’ (Zaleha and Szasz 2015, p. 24). The top-down nature of the apologetic approach, however, does not enable a radical transformation of Christianity, but rather sees the environmental crisis as a failure to interpret the normative message in the scriptures and other theological writings. Nevertheless, it still contributes to emphasising the need of retrieving traditional key concepts within the scriptures.

While the apologetic approach seems inadequate for tackling the problem more radically, the sacramental approach entails a more holistic understanding. God reveals himself in nature, and it is experienced through the relationship with the cosmos; thus, *creation* rather than *redemption* is focal to the understanding of the ‘continuity of humans with the rest of the world’ (Haught 1996, p. 273). This calls for a reintegration with the environment and the rejection of dualism since in alienating itself from the natural world, humanity has also abandoned God.

The world is our companion in transcendence and though a creation-centred theology aims at a radical transformation, the eschatological approach incorporates the need of connecting the pressing environmental issues to the *future promise of Nature*. This dimension, in Haught’s analysis, is critical since ‘Nature is not yet complete, nor fully revelatory of God. Like any promise it lacks the perfection of fulfilment. To demand that it provide fulfilment now is a mark of an impatience hostile to hope’ (Haught 1996, p. 283).

The turn of the millennium saw Western civilization experiencing individualism and consumerism, a ‘sacred canopy’ rooted in neoclassical economics shared not only by Christianity, but by the government, and the economic system which explicitly promotes anti-environmental behaviour (McFague 2001). Under this ongoing situation, McFague (2001) writes ‘It is difficult to believe that science and technology alone can solve the ecological crisis supported by a triumvirate (. . .) (ibid., p. 126)’. Indeed, Leduc (2007) notes that political and economic decisions in the US at a critical juncture of taking action to mitigate climate change were instead being informed by the various Christian worldviews,

particularly in relation to the burning of fossil fuels and peak oil during the Bush, Jr. administration.

Furthermore, in his analysis, [Leduc \(2007\)](#) draws connections between the apocalyptic understanding of climate change and lack of engagement of the Republican lead, especially after the American decision of not endorsing the Kyoto Protocol in 2001. The close ties between the Republican party and the fundamentalist Christians are used to exert their influence over political matters, particularly in rejecting climate change science on the grounds that ‘the social disruption of climate change, wars, energy shortages are divine responses to the liberal order’s ungodly homosexuality, humanism and environmentalism’ (*ibid.*, p. 268). Nonetheless, these claims contrast with the more (and currently minority) ecological views of the Evangelical Environment Network that acknowledges climate change as a sign of ‘failure to exercise proper stewardship’ (*ibid.*, p. 268), but emphasises the possibility of renewal, drawing on both apologetic and eschatological approaches ([Kinsley 1996](#)). [Leduc \(2007\)](#) concludes that by turning well-rooted beliefs, ‘(…) both individuals and their political economic institutions may be able to actively follow religious and secular scientific signs towards an imaginative climate policy response that can fuel the way to an enduring earth and civilization’ (*ibid.*, p. 281).

Whilst attempts are being made by the Evangelical Environmental Network, advances are slow. As [Zaleha and Szasz \(2015\)](#) point out, it might be worth looking at the more liberal segments of the Roman Catholic Church, particularly protestants and liberal Christian theologians who have been developing environmental strands for the past fifty years. However, policy statements do not often permeate well in US local congregations, which can be reluctant to too forward-thinking views: ‘American Catholics, can, and do, ignore Catholic popes when they dislike what they say’ ([Zaleha and Szasz 2015](#), p. 28), which can also lead to a lower credibility of the Pope and a lower concern for climate change issues ([Nche et al. 2022](#)), thus leaving less margin to inspire actual change. To overcome this, a more ‘worldly Christianity’ is needed ([McFague 2001](#)), one that shifts the focus from neoclassical economics to an ecological model that promotes ‘the good life’ in light of the Christian doctrine.

3. *Laudato si’* and *Laudate Deum’s* Contribution to Harmonising Environmental Views on Climate Change

The previous section broadly outlined some of the key strands within the topic of Christianity and human-induced climate change, drawing on both theoretical and empirical data. As mentioned previously, religious leaders play a key role in engaging communities and creating trust. This section will problematise the notion of human-induced climate change in relation to two key documents by Pope Francis: the encyclical *Laudato si’* (2015) and the apostolic exhortation *Laudate Deum* (2023).

Whilst environmental concerns have previously been voiced by former popes ([Edwards 2006](#)), it was not until the encyclical *Laudato si’* (“Praise be to you”) was released in 2015 that an explicit and radical call was made from the highest spheres of the Vatican foregrounding ‘the deep structural causes of the climate and the ecological crisis’ ([Stephenson 2015](#), p. 14). Francis echoes some of the concerns of environmental activists and climate change advocates, thus positioning the encyclical not only as a theological document, but as a controversial and politically charged one from someone who is not associated with political affiliations and who comes from an institution seen as traditionally opposing science and reason ([Pou-Amérigo 2018](#)).

It would be unfair to state that Francis was the first Christian leader to voice concerns about the environment, but rather, the encyclical brought the Church closer to the conversation on climate change. For the past thirty years, the Ecumenical Patriarch Bartholomew I, leader of the Eastern Orthodox Church, has been actively engaging in climate change conversations with Orthodox leaders and various other actors to emphasise the role of environmentalism in spiritual practice ([Chryssavgis 2007](#); [Gschwandtner 2010](#); [Morariu 2020](#); [Theokritoff 2017](#)).

In the encyclical, Francis establishes deep intertextual connections with the Ecumenical Patriarch Bartholomew I and former Catholic popes by endorsing their stances at the same time he acknowledges more forward-thinking positions such as Thomas Berry's cosmic dimension (cf. McIntosh 2023 in this issue) and liberation theology (Roccia 2021), a movement that began in the early 1960's with Peruvian priest Gustavo Gutiérrez (1988) and Brazilian ecotheologian Leonardo Boff as the main exponents. Drawing from traditional Christian texts, particularly Franciscan sources, Boff's influential book "*Cry of the Earth, Cry of the Poor*" (Boff 1997) is central to bridging the gap with former ecotheological approaches, particularly by bringing both environmental ethics and liberation theology in conversation (Nothwehr 2016). In this regard, *ecology* is a fundamental concept in the understanding of eco-complex social relationships in the world:

Ecology embodies an ethical concern likewise drawn from all knowledges, powers and institutions: to what extent is each individual collaborating to protect nature, which is in jeopardy? To what extent does each particular knowledge incorporate the ecological dimension not as one more topic for it to discuss, leaving its specific methodology unquestioned, but rather to what extent does each particular knowledge redefine itself on the basis of the findings of ecology, thereby contributing toward homeostasis, that is, toward dynamic and creative ecological balance? (Boff 1997, p. 4)

Similarly, in *Laudato si'*, Francis acknowledges previous efforts, but questions the quality of such endeavours by explicitly critiquing the lack of engagement and advocating for a united front to *protect our common home*:

Many efforts to seek concrete solutions to the environmental crisis have proved ineffective, not only because of powerful opposition but also because of a more general lack of interest. Obstructionist attitudes even on the part of the believers, can range from denial of the problem to indifference, nonchalant resignation or blind confidence in technical solutions. (Pope Francis 2015, §14)

These understandings seem to align well with Gutiérrez's concept of 'integral liberation' developed in the early 1980's (Castillo 2016), namely in outlining the relationship between salvation and the process of human liberation. As Castillo (ibid.) observes, liberation in this sense is achieved at three levels: the socio-political, the cultural/psychological and the theological. Each dimension calls for a break from hegemonic economic, social and ideological patterns. Similarly, what appears to be at the heart of the contemporary debate is a deep critique of the dominant economic paradigm: to overcome the crisis, we need to shake off previous worldviews. This is not an easy task, as Eaton (2016) warns: to abandon obsolete worldviews is a complex—if not impossible—enterprise since we are immersed in them, 'we live within worldviews [...] and the idea that one can substitute one worldview for another is misleading' (ibid., p. 126).

Francis explicitly targets the role of technology in Chapter III fittingly named "The Human Roots of the Ecological Crisis". If Lynn White's efforts were to draw attention to religion—particularly Western Christianity—as the main cause of the contemporary crisis, then Francis draws attention to the anthropocentric technocratic paradigm. Whilst the great deeds of scientific advances are listed at the beginning of Chapter III, such compliments are also charged with criticism, namely, humanity's heavy reliance on science to solve our problems and the thirst for power that paradoxically brought us to this current bleak and rather ironic situation, given that we will still need to rely on science and technology to adapt to runaway climate change. It appears that technology is substantiated in religion, and religion is perpetuated through science, as Clingerman and O'Brien (2014) reflect in connection to the geoengineering debate. The authors refer to Barbour's observation 'that separation is but one possible relationship between religion and science; it is also possible to understand the two as competitive, harmonious, or complementary' (ibid., p. 30). This is indeed a point to consider when attempting to break away from the dualistic approach

deeply entrenched in the technocratic paradigm, an aspect critically taken on board in *Laudate Deum* (Pope Francis 2023).

Whilst advances in technology have also been key in alleviating poverty in many parts of the world, *Laudate Deum* (Pope Francis 2023) fails to consider the wide-ranging impacts technology has had on a broader scale, and the potential of artificial intelligence (AI) to being part of the solution (Gallego 2023). For some, new technologies such as the development of AI contribute to exacerbating the divide and humanity's reliance on technological fixes that can threaten democratic human decision-making (Coeckelbergh and Sætra 2023). In this regard, democratic engagement can promote a more just climate adaptation and resilience by counteracting top-down approaches that perpetuate systemic injustice (Olsson 2022), particularly in terms of the empirical limitations the technocratic framework has on climate-related disasters and marginalized citizens (Gagné and Chostak 2023). These aspects appear to align well with Francis' call in *Laudate Deum* (2023) for bringing together international organisations that foster genuine political cooperation, an enterprise that would also involve the engagement of various actors including religious leaders and their communities. But a deeper challenge lies underneath our reliance on geoengineering, and that is addressing the capitalist conditions imposing the agenda on the hegemonic political groups driving the global economy. Therefore, geoengineering is only one of the culprits for perpetuating consumerist lifestyles that enable climate change denialism.

If both climate change and capitalism are deeply entrenched in a similar process of conformism/denialism, then Francis' call for a radical transformation in the sense of a 'social metanoia' (Cruchley-Jones 2010), a fundamental change in the way we think and engage with the world, is a much-needed appeal to tackle these issues.

4. Translating Theory into Practice: Christianity's Preparedness to Tackle a Warmer Planet

The urgency of moving away from technological fixes and fossil fuel societies is explicitly stated in *Laudato si'* and *Laudate Deum*, though the specific 'how' is somewhat undeveloped (Holden and Mansfield 2018). The implications are far more reaching, as carbon markets, in Francis' view, do not offer a radical solution but rather encourage speculation and perpetuate the consumption of the elites at the expense of the more deprived sectors of society. The latter are a motivating concern of the document, informed by Francis' concern for the poor, a concern that traces back to Jesus directly, providing evidence of how a Christian worldview can assist in challenging structural inequalities of the climate generation. Advocating for a degrowth in fossil fuel burning directly impinges on the interests of large multinational companies, international corporations, banks, investors, and supporters of 'green capitalism', amongst other stakeholders. Therefore, to believe that the Catholic Church alone can provide a solution to our multi-layered dependence on fossil fuels is absurd, if not rather naïve. It may aid, however, by providing insights on where to focus the attention to find significant responses (Pou-Amérigo 2018). In this regard, disciplines are certainly needed, but 'the specialization which belongs to technology makes it difficult to see the larger picture' (Pope Francis 2015, §110). Instead, we should rather, as Francis suggests, look at 'a humanism capable of bringing together the different fields of knowledge, including economics, in the service of a more integral and integrating vision' (ibid., §141). Such a statement justifies the need for the field of the environmental humanities as instrumental in consolidating the responses that can 'generate resistance to the assault of the technocratic paradigm' (ibid., §111), and more specifically, for this Special Issue's call 'to rapidly address global heating in their research and teaching, and thus, the requirement for the field of religious studies/theology to rapidly do the same' (LeVasseur 2023).

While the political implications of the Church's message are beyond the scope of this article, the attempts of translating policy into practice informed by a religious worldview shift can still be acknowledged. For instance, in preparation for the UN Climate Change Conference COP 26, forty faith leaders convened at the Vatican to produce a joint

appeal urging to take global action to safeguard the planet, with ‘stewardship’ as a key concept. These efforts are exemplary and highlight the importance of dialogue and interconnectedness within (inter)religious groups. Networks, such as The European Christian Environmental Network, have been advocating for ecological and social responsibility, taking care of creation since the late nineties; however, a few movements have emerged in recent years to tackle the climate crisis from a religious perspective. For instance, The Global Catholic Climate Change Movement (GCCCCM)—an international network comprising over 400 member organizations framed in a tripartite dimensional approach, spiritual, lifestyle, and mobilization/advocacy—appeals to both the internal and external transformation embodied in *Laudato si’*. Social movements are also witnessing a renewed interest not only in addressing climate change issues, but also in protecting animals, natural resources and developing legislation that frames anti-ethical practices.

Even nine years after its publication, *Laudato si’* remains a relevant document for the climate change conversation and influence not only academic production but also decision-making and planning (Molina and Pérez-Garrido 2022). A note of caution is needed, of course. This is because despite the effervescence of Pope Francis’ encyclical and its updated reflection in *Laudate Deum* (2023) continue to generate, questions arise as to whether this radical transformation is actually taking place (McCallum 2019; Praise and Action 2023). In the African context, for instance, Nche (2020, 2022) notes a gap between the Catholic priests’ framing of the climate change message and the more local, pressing issues affecting parishioners. A more seamless and effective framing showing how competing issues, such as local poverty and migration, are deeply connected to climate change would allow more engagement. To do this, making clearer connections with other topics (science, politics, environmental politics, etc.) is needed to drive change at a systemic level. In this sense, the Ethiopian Orthodox Tewahido Church’s sacred forests have been pivotal in ensuring the conservation of many endemic and endangered species in the region (Baez Schon et al. 2022; Fischer 2024), a successful example of how religion can work with other disciplines.

But low environmental action is also seen in the clergy. Wilkins’ (2020) interviews to a US diocese revealed several barriers hindering action. At the individual level, the clergy manifested little prior environmental knowledge, a perceived irrelevance of Catholicism to discussing environmental issues and lack of time in their packed schedules. Added to these hurdles, structural barriers such as reducing ecological impacts and the public’s perceptions that the environment is not within the diocesan priorities compounded with the clergy’s concern of parishioners’ resistance are also part of the list of overall aspects inhibiting action. Recycling programmes and setting up gardens are valid efforts, but a more systemic approach is needed in order to achieve the change that Francis urges in the encyclical. Whilst there is evidence of small local projects run by local parishes with success in Switzerland, for instance, established head church organisations lag in implementing environmental actions, partly due to bureaucracy and fear of green innovation (Monnot 2022).

Drawing on empirical evidence from Christian churches in the Exeter area (UK), Harmannij (2022) uncovers the tension that exists between the expectations from activists, academics and the media and the practical applications of faith-based environmental action: ‘The reason why so many academics, media, and activists are so enthusiastic about churches and faith-based organizations is because they are seen as excellent places to challenge the status quo, mobilize people, move beyond individual behavioral action, and start collective action to save the environment’. (p. 315). However, as noted by Wilkins (2020), churches appear to struggle to transcend from individual action. In the German-speaking context, Blanc’s (2022) findings suggest that whilst there is environmental action in terms of materialisation—i.e., traditional measurable outputs—whether these are theologically triggered is not clear. Therefore, ‘environmental commitment appears as an individual issue shaped by personal experience, rather than collective theological reasoning’ (p. 127). As Taylor et al. (2016) note, there is little evidence of religious groups or individuals exerting effective environmental action. Contrary to the perceived ‘greening’,

environmental concerns within the realm of religion appear to be of low or no priority at all in most cases. Therefore, this trend would appear to suggest that much of the preparedness to face the climate crisis will likely stem from individual efforts not necessarily associated with religious involvement.

But religions cannot work on their own. Just as the faith communities need to be in dialogue, disciplines must do the same in the face of climate change (Deane-Drummond and Artinian-Kaiser 2018), crucially by positioning nature at the centre (LeVasseur 2021b). Therefore, examining both how religious leaders frame and communicate their environmental messages and how recipients respond to them is a useful exercise to assess the effectiveness of these messages translating into practice, given the above data that suggest that large-scale action has to-date been lacking. As such, an ecolinguistics approach (Stibbe 2021) can provide the linguistic evidence that can assist the field of religious studies, particularly ecotheology with the interdisciplinary angle needed during times of crises.

Ecolinguistics draws on cognitive science, discourse analysis, and a variety of methods to understand and reveal the stories that connect humans and their environment. An analysis of *Laudato si'* (Pope Francis 2015) with the Lancaster Desktop Corpus Toolbox (LancsBox) revealed patterns in the collocations and concordances of specific lexical items ('cry', 'Earth', 'poor') that appeared to confirm the hypothesis that Francis' encyclical leans towards liberation theology. For example, the first and most explicit instance of 'cry' in connection to all lexical items appears in Chapter V. Global Inequality: 'Today, however, we have to realise that a true ecological approach always becomes a social approach; it must integrate questions of justice in debates on the environment, so as to hear *both the cry of the earth and the cry of the poor*' (Pope Francis 2015, §49 emphasis in the original). As Goodchild (2016) points out, Pope Francis' explicit emphasis on the above suggests an acknowledgement of the debt to the liberation theologies of the Global South, a debt owed by the more traditional strands of the Church.

On the other hand, 'Earth' occurs 58 times in the corpus and can be broadly classified within five themes: Earth personified as a Sister/Mother; Earth as subject to dominion; Earth as something we are part of and should protect; Earth as God's creation; and Earth as in scientific discourses. The most frequent category, 'Earth as something we are part of and should protect', closely aligns with the understanding of positive discourses, namely those that 'value and celebrate the lives and wellbeing of all species, promote human wellbeing, call for a reduction of consumption, and promote redistribution of resources from rich to poor' (Stibbe 2021, p. 22).

The noun phrase 'poor' is another salient marker in the corpus (N 61). Whilst the struggles of the oppressed rather than ecological concerns are the focus in liberation theology, Boff (2014) argues that 'the relationship to ecology is direct, for the poor and the oppressed belong to nature and their situation is objectively an ecological aggression' (p. 321). The poor are central to liberation theology. In adopting their standpoint, the story contained in this theology reveals the extent to which societies marginalise the poor and how 'religions and churches are tied to the interests of the powerful' (Boff 2014, p. 322). What makes liberation theology distinct from other theologies is its recognition that true liberation is ultimately achieved at a political level. In the same vein as Boff, Francis links the struggle of the poor with the environmental catastrophe and exemplifies 'the intimate relationship between the poor and the fragility of the planet' (Pope Francis 2015, §16). He enumerates several environmental- and human-related phenomena in which the poor are portrayed as affected participants—premature deaths by atmospheric pollutants (Pope Francis 2015, §20, 48)—due to a variety of climate change phenomena forcing the poor to migrate (Pope Francis 2015, §25, 51, 190), such as water scarcity and water pollution (Pope Francis 2015, §29, 30, 48), human and organ trafficking (Pope Francis 2015, §91, 123), food scarcity (Pope Francis 2015, §50), and unfit living conditions (Pope Francis 2015, §152). The linguistic analysis shows that such conditions also apply for the use of 'poor' as a modifier, as in 'poor countries/nations' (Pope Francis 2015, §52, 78, 142, 176), and 'poor areas/regions' (Pope Francis 2015, §51, 52, 172). For Francis and Boff, the poor

ultimately experience ‘the gravest effects of all attacks on the environment’ (Pope Francis 2015, §48) due to perverse economic systems (Pope Francis 2015, §52) which perpetuate their dependence on the wealthiest nations. Whilst the usage of the word ‘poor’ is largely associated with emphasising the degradation of both the excluded and the environment, Francis also draws attention to where to put the focus, namely, developing an ecological perspective that considers the unprivileged. Religions, in this regard, play a prominent role ‘in protecting nature, defending the poor, and building networks of respect and fraternity’ (Pope Francis 2015, §201) as well as encouraging more minimalistic lifestyles centred in God, the poor and the environment (Pope Francis 2015, §214).

Since the choice of lexicalization can be ideologically and politically charged (Alexander 2009), applying an ecolinguistics framework, as in the example above, can assist in revealing the extent to which the underpinning stories in religious discourses are respectful of the ecological systems or whether they perpetuate a logic of domination over nature and human groups. More importantly, such analyses can inform the communicative practices of religious leaders. Given the large reach of religious communities and their important role in communicating the values and world visions needed to tackle a warmer planet, it is imperative that more research is carried out to gather empirical evidence (Okyere-Manu and Nkansah Morgan 2022). With a few exceptions, the nexus between ecolinguistics and religious studies remains relatively underexplored (cf. LeVasseur 2018; Roccia 2021).

5. Conclusions

Several historical, philosophical, and anthropological approaches and examinations inform our worldviews, but religion appears to be crucial along with science. The paradox of worldviews and climate change lies in that Christianity, a global religion of over a billion people, can equally be held as ecologically harmful and ecologically responsible for the (mis)understanding of climate change. Many scholars acknowledge that Western history owes much of its anthropocentric thirst for dominion to the Christian tradition, framing certain constructs to subdue not only nature but individuals and societies. Such is Christianity’s influence that it foregrounded modern science and the much-critiqued technocratic paradigm. Contemporary research sustains that individuals construe certain views regarding the environment in line with the interpretations of different strands within the tradition and that certain sectors are reluctant to acknowledge humanity’s responsibility, particularly in responding to climate change. Paradoxically, we rely on science and hard data to obtain such observations.

However, it is in light of more contemporary debates from the Roman Catholic strand, such as the revival of liberation theology, that Christianity may redeem itself. The Vatican is explicitly calling for a radical transformation, ‘a conversion’ in the deepest sense of the word. Such a call has profound implications on the other components of the ‘sacred canopy’ (McFague 2001), and if the current message is aligned with liberation theology, then global institutions and social structures will also have to undergo this process. Therefore, for this radical transformation to take place, a more granular approach questioning both the capitalist processes that drive the sociopolitical decisions underpinning global economic processes should be pursued, an effort that will involve several actors, apart from the Church. As many have previously observed, Pope Francis’ message may not have all the answers but may nevertheless assist in providing some cues that lead the way to more concrete solutions and shift away from the much-contested reliance on technology. More importantly, it can promote an inter-trans and multidisciplinary approach that can truly aid in this transformation.

Maybe re-imagining ‘nature’s unfulfilled promise’ (Haught 1996) could also change behaviours, or as Veldman (2012) claims, ‘To say that endings are essential in order for stories to have morals is already a hint that stories alter behaviour, that they encourage action in the real world even as they invoke an imaginary one’ (ibid., p. 10). This may redefine environmental ethics under the premise of an integral ecology that encompasses the different dimensions of eschatology, the doctrines of creation, and scientific evidence to

‘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*’ (Pope Francis 2015, §49). It also becomes clear that for true practical action stemming from faith-based communities, broader systemic measures need to be in place.

Individual actions can only generate a number of valid efforts that may not be sufficient for the pressing urgency of the climate crisis. Similarly, religious groups as a standalone cannot be held responsible for generating the shift that Francis urges; efforts need to come jointly from other actors and sectors, and the role religion plays in this must be part of the conversation. Activism and faith-based action can be hindered by bureaucracy, time constraints and even a lack of prior environmental knowledge. Whilst this is a non-exhaustive list, it illustrates the hurdles religious communities must overcome to transform into environmentally engaged groups producing effective and rapid responses. More empirical research will be needed to uncover the effectiveness of environmental messages’ production and reception—an exercise that will require the involvement of other disciplines such as ecolinguistics and ecotheology.

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Note

- ¹ 26 Then God said, “Let us make mankind in our image, in our likeness, so that they may rule over the fish in the sea and the birds in the sky, over the livestock and all the wild animals, [a] and over all the creatures that move along the ground.”²⁷ So God created mankind in his own image, in the image of God he created them; male and female he created them.²⁸ God blessed them and said to them, “Be fruitful and increase in number; fill the earth and subdue it. Rule over the fish in the sea and the birds in the sky and over every living creature that moves on the ground.” (NRSV).

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