CREATIVE MORAL RESPONSES TO ECO-REPRODUCTIVE CONCERNS: ADDRESSING GAPS IN CHRISTIAN ENVIRONMENTAL ETHICS

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ABSTRACT

Adults in the United States are having fewer biological children in part due to worries about climate change and population growth, yet Christian environmental ethicists frequently avoid or dismiss these "eco-reproductive" concerns. I argue that these avoidances lead to important limitations in the literature, which I address by employing a pragmatic approach for religious ethics. Learning from environmentalists who are critically engaging with their Christian inheritances, I find that informants draw upon religious repertoires to "kinnovate." Namely, they expand notions of family beyond biological lineage by taking up vocations as godparents, youth mentors, foster parents, or chosen kin. I claim that these practices of Christian kinnovation are significant because they help to advance creative moral responses to eco-reproductive concerns in religious contexts—interventions that currently remain underdeveloped in relevant ethical and theological literatures.

KEYWORDS: climate change, kinship, family, eco-reproductive ethics, population growth, Christian environmental ethics

1. Introduction

I take a lot of comfort in the fact that God is both a parent and a child. Parenting is my main lens for realizing that God is with us in every aspect of life . . . I have always valued motherhood, but [my spouse and I] now feel finished having children because of climate change. I'm the youngest of four and always thought growing up that I would want to have four kids because I loved having siblings around me. Now I just don't feel like I can do that with the world the way it's going now. Our two kids have each other, and we wouldn't have wanted to stop at one, but we are not going to biologically have any more kids. We have talked a lot about wanting to foster children [to expand our family], and climate change is definitely one of our big [reasons] why.¹

Environmental crises shape some of the most intimate aspects of human life, including reproductive choices and kinship practices. The quotation above is from one of 30 interviews I conducted in 2022 with self-identifying Christians who are grappling with the ethics of having and raising children in an era shaped by climate change. Various studies now indicate the widespread nature of these

¹ Informant interview with author, 2022.

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"eco-reproductive" concerns: between a quarter and a third of adults in the United States report having fewer or no biological children in part due to worries about climate change and population growth (Hickman et al. 2021; Jenkins 2020; Miller 2018; Schneider-Mayerson and Ling 2020). Foundational ethical questions are often at stake. Some worry, for example, about subjecting a child to a life with more frequent and severe environmental threats. Others worry about contributing to these problems by having children in the United States, where growing and high-consuming human populations disproportionately contribute to climate change. For those who wish to have biological children or already have them, these concerns are understandably fraught.

Despite the moral urgency with which many adults discuss these problems, in Christian environmental ethics there has been a striking lack of engagement about eco-reproductive concerns and issues of population. This absence persists even though (secular) environmental humanists have recently revisited these topics in earnest.² Instead, influential Christian ethicists and eco-theologians tend to implicitly avoid discussions about population growth or explicitly minimize the ways in which it can exacerbate climate threats (Bauman 2009, 2014; Bauman and O'Brien 2020; Deane-Drummond 2008; Francis 2015, 2023; McFague 2008, 2013; Jenkins 2013; Northcott 2007, 2013; Rasmussen 2012, 2022; Tucker and Grim 2003, 2014). While some of these authors avoid population issues because they seek to maintain a pronatalist view of sexual ethics, others want to redress a longstanding focus on birth rates in less developed parts of the world rather than consumption rates in the affluent West.

However, circumventing problems related to population growth leads to important limitations in this body of literature. First, Christian environmental ethicists and eco-theologians undermine their own stated commitments to utilizing climate science as one key source of moral reflection. Their work fails to account for two interrelated factors that significantly contribute to the climate crisis in industrialized contexts like the United States: consumption rates *and* population growth. Second, avoiding discussions about population growth means that constructive moral responses to this problem are rarely articulated. This lack of discussion is a missed opportunity insofar as ethicists are well-equipped to reflect upon unprecedented moral challenges, often in conversation with religious communities, to help cultivate new capacities for agency and responsibility. Christian ethicists and eco-theologians may too easily let themselves off the hook when it comes to addressing some of the significant moral problems associated with climate change, including those related to human numbers.

² Environmental humanists who have recently discussed the intersection of population growth and climate change include philosophers such as Philip Cafaro 2012, 2022; Sarah Conly 2016; Elizabeth Cripps 2017, 2021; Trevor Hedberg 2020; Christine Overall 2012; and Travis Rieder 2016, 2019 as well as science and technology scholars such as Eileen Crist 2019; Donna J. Haraway 2016; and Adele E. Clarke and Haraway 2018.

Contending with this gap in the literature, I aim to better understand how Christian practitioners may be grappling with and responding to ecoreproductive concerns. I ask, if Christian adults are having fewer or no children in part due to climate change and population growth, what kinds of religious repertoires might help to advance viable alternatives? Following Willis Jenkins, I use "repertoires of response" to refer to the embodied skills, habits, practices, or capacities that allow moral agents to address new or unprecedented moral problems, with "religious repertoires" referring to those that emerge in Christian contexts more specifically (2013, 23). By way of method, I also draw upon Jenkins's "broadly pragmatic" approach by conducting and analyzing interviews with Christian-identifying environmentalists (2013, 9). This method does not rely on repairing inadequate moral concepts or worldviews before identifying practical solutions. Rather, it trusts that moral learning, adaptation, and innovation can emerge within concrete problem-solving contexts.

In this study, I find that my informants often draw upon Christian repertoires to develop alternative forms of kinship, namely by expanding notions of "family" beyond the confines of genetic lineage or legal status. Expanding upon the term "kinnovation" (kin-innovation) developed by science and technology scholar Donna J. Haraway, I refer to these practices as "Christian kinnovation" (2016, 102–03). Through Christian kinnovation, my informants (1) cultivate "chosen families" in church contexts; (2) nurture the development of young people through youth ministries or mentorships; (3) consider fostering or adopting children; and (4) prioritize vocations beyond parenting and thus intentionally discern the number of biological children they wish to have. Importantly, these interventions are often pursued in contestation with pronatalist religious cultures that continue to persist even within progressive Christian communities. Yet these critical and creative practices are nonetheless significant because they advance promising moral responses to climate change and population growth in Christian contexts—interventions that remain underdeveloped in relevant ethical and theological literatures.

I develop these arguments across three main sections. In Section 2, I provide further background about the prevalence of eco-reproductive concerns in the United States and discuss how population growth in industrialized contexts continues to exacerbate climate threats. In Section 3, I analyze how and why Christian ethicists continue to avoid population issues and eco-reproductive concerns, ultimately challenging the merits of these avoidances. To begin redressing this gap in the literature, in Section 4, I draw upon informant interviews to showcase how moral responses to eco-reproductive concerns can emerge from critical and creative engagement with Christian inheritances.

2. Background: Eco-Reproductive Concerns in the United States and the Role of Population Growth

A growing body of evidence indicates that adults in the United States are having fewer or no biological children in part due to concerns about climate change

and population growth. One survey of 1858 adults in the United States found that being "worried about climate change" (33%) and being "worried about population growth" (27%) were two reasons why participants reported having fewer children than they otherwise considered "ideal" (Miller 2018). An even larger study polled 4400 childless adults in the United States, finding that one in four respondents were factoring climate change into their reproductive decisions—that it was either a "major" or "minor" reason why they did not currently have children (Jenkins 2020).³ Eco-reproductive concerns may be even more prevalent among those in "Gen Z," as one survey of 1000 teens and young adults in the United States found that 35% are "hesitant to have children" due to climate change (Hickman et al. 2021).

While these figures can speak to the prevalence of such trends, it is also important to consider why adults are grappling with eco-reproductive concerns. In my interviews, I frequently hear informants discuss three different objects of moral consideration. First, adults often worry about their own (potential or actual) children, especially because the next generation is predicted to face more severe environmental threats throughout the remainder of the twenty-first century (IPCC 2023).⁴ Second, adults routinely contend with the environmental impacts of having children in the context of the United States, where consumption rates are high and where (relatively affluent) human populations continue to grow. Here, moral concern is extended to those who are most vulnerable to climate threats, which includes marginalized human populations (in the United States and abroad), in addition to non-human species and ecosystems (IPCC 2023; EPA 2021). Third, some adults instead see themselves as morally compromised, insofar as they are expected to make difficult reproductive choices within unsustainable collective conditions. Such conditions include living within systems of government that subsize unrenewable energy sources and remain significantly influenced by fossil fuel lobbies (Black et al. 2023; Basseches et al. 2022).⁵

While each warrants further attention, in this article I focus primarily on the second moral concern: the environmental impacts of having children in the

³ Notably, those who self-identified as Christian in the survey reflected this general trend.

⁴ I draw upon reports from the Intergovernmental Panel on Climate Change (IPCC)—an international body of scholars developed to assess and synthesize the science related to climate change—because they are widely considered to be one of the most authoritative sources on this subject. For example, the most recent IPCC Working Group (meeting between 2015 and 2023) brought together 270 experts from 67 countries and synthesized more than 30,000 scientific studies. This Working Group published the IPCC's "Sixth Assessment Reports" between 2021 and 2023, which I draw upon in this article.

⁵ Other authors have discussed some of these eco-reproductive concerns (for example, Cripps 2023; Kallman and Ferorelli 2024; and Rieder 2019). My study departs from these prior works by integrating analyses about religiosity and Christianity more specifically.

industrialized and growing United States.⁶ As I discuss further in Section 3, I take up this particular problem because it is frequently avoided by Christian environmental ethicists and eco-theologians. Before turning to this material, however, I want to further unpack a claim that is constitutive of these concerns—namely that high consumption rates and continued population growth remain significant drivers of climate change. Insofar as this claim about population remains particularly fraught in the religious ethics literature, further evidence may be necessary.

A 2022 report by the Intergovernmental Panel on Climate Change (IPCC) finds that human population growth and per capita GDP increases are two central drivers of global carbon emissions, continuing well-documented trends since the 1990s (2022, 217). More specifically, the growth of per capita GDP (often used synonymously with "consumption rates") has increased annual emissions by 2.3%, whereas population growth has done so by 1.2% (IPCC 2022, 217, 245). Population and consumption are also connected in insidious ways:

Population growth has remained a strong and persistent upward driver [of greenhouse gas emissions] in almost all regions... although per capita emission levels are very uneven across world regions. Therefore, modest population increases in wealthy countries may have a similar impact on emissions as high population increases in regions with low per capita emissions levels. (IPCC 2022, 246–47)

As this report indicates, population growth is especially costly within highconsuming contexts such as the United States. Unlike most other developed nations with high per capita emission rates (such as Norway or Japan), population is projected to continue to grow in the United States until about 2050 because of demographic momentum and immigration despite the decline in average birth rates (United Nations 2024; Vespa et al. 2018).

To be clear, population growth is not the only driver of climate change but is rather one significant factor that accelerates it. This dynamic is why researchers often use the language of "threat exacerbation" or "threat multiplication" to describe the environmental effects of increasing human populations (United Nations 2024; Dodson et al. 2020; Crist et al. 2017). High-consuming lifestyles make even modest population growth a more significant environmental problem, and well-intended efforts to curb consumption rates can be undermined by population growth. Consumption and population should thus be understood as interconnected contributors to climate change, rather than dichotomous or unrelated factors. For these reasons, I suggest that population growth in high-consuming

⁶ My dissertation, "Climate Change and Kinship: Creative Religious and Moral Responses to Eco-Reproductive Concerns" (forthcoming 2025) offers a fuller analysis of all three moral considerations. In this dissertation, I also argue that both individual and collective agents are responsible for addressing climate threats. While this article focuses primarily on individual agents and their moral responses to eco-reproductive concerns, in this larger work I also address the moral responsibility of collective agents such as governments and corporations.

contexts remains an important problem that warrants ongoing moral reflection. However, attention to this issue has been significantly neglected by contemporary Christian environmental ethicists. I address this body of literature in the section that follows.

3. Christian Environmental Ethics Literature on Climate Change, Reproduction, and Population

In the 1980s and 1990s, Christian ethicists and theologians such as John Cobb (with Herman Daly, 1989), James Gustafson (1984), Catherine Keller (1995), and Susan Power Bratton (1992) reflected on some of the moral and environmental challenges associated with human population growth. Concerns about global climate change were not yet present in most of this literature. Instead, authors typically focused on the ways in which population growth was projected to exacerbate other forms of environmental degradation and resource scarcity in the century to come. Authors entered high-stakes debates about global population control practices—conversations that also took place within literatures that focused on public policy and sustainable development. In keeping with these other literatures, most Christian authors agreed upon interventions that would enhance individual autonomy rather than rely on state coercion. Such policies included more comprehensive sex education, universal access to contraception, and economic models that prioritized a more equal distribution of resources. Decades later, these aims still read as ambitious; they remain unfulfilled in many parts of the world, including the United States.

A key feature of this literature was substantially critiqued in the mid-1990s and early 2000s, however. Many authors in the 1980s-90s focused on the growth of human populations in less developed parts of the world, where both poverty and birth rates remain high. Little attention was given to industrialized nations, where birth rates were declining but consumption rates continued to increase. This focus in the literature-including its racist and colonialist subtexts-was criticized during and after high-profile conferences such as the 1994 International Conference on Population and Development hosted by the United Nations in Cairo. Various conference attendees, including government officials, development experts, religious leaders, environmentalists, and reproductive justice advocates, began to emphasize the complexity of sustainable development problems and solutions. The "Programme of Action" report that emerged from the conference displays these shifting perspectives (United Nations Population Fund 2004). While recognizing that population growth matters, the report makes clear that reducing consumption rates in developed nations is also essential for achieving sustainable development goals (2004, 13-21).

Likely due to the prominence of these critiques in the 1990s, issues related to population growth have largely fallen away from the Christian environmental ethics literature. Yet Christian ethicists and theologians have overcorrected in the face of these critiques. They left behind important considerations about population growth that continue to persist—especially in industrialized contexts like the United States. This absence still shapes the literature in Christian environmental ethics, even though many (secular) environmental humanists have recently revisited the intersection of population growth and climate change in earnest.⁷

In the contemporary Christian ethics literature, I have found that influential authors attempt to side-step the topic of population growth in one of two main ways: they (1) implicitly avoid discussing it in their critical or constructive analyses or (2) explicitly minimize the ways in which it can exacerbate climate threats. Of these two trends, the first is most common and is characterized by little overt discussion about population growth and its effects. While authors will occasionally acknowledge that population growth is one driver of climate change, they ultimately offer little to no analysis as to how it should be addressed from a religious or ethical perspective. The second trend in the literature is less common but involves a stronger claim: that population growth need not be addressed because it is less important than the other factors that contribute to climate change. In such cases, authors minimize the stakes of population growth, often by falsely dichotomizing it with consumption rates. Taken together, these two trends are concerning because they lead to important limitations in the literature. Authors undermine their own stated commitments to using climate science as a source of moral reflection and rarely articulate possible moral responses to eco-reproductive concerns.

Before discussing the limitations of this literature further, I first review the work of four Christian theologians or ethicists to elucidate these trends: Sallie McFague, Larry Rasmussen, Pope Francis, and Willis Jenkins. These authors demonstrate an ongoing focus on matters of consumption rather than population in their work, often across multiple publications, and have significant influence within their respective disciplines and religious networks. While some like McFague and Jenkins speak primarily to academic audiences in theology and religious ethics, works by Rasmussen and Francis reach both scholarly and religious communities (in Protestant and Catholic contexts, respectively). As such, I aim to show how prominent authors in the disciplines of religious ethics and eco-theology are liable to avoid (McFague and Rasmussen) or minimize (Francis and Jenkins) issues of population growth in their work—a pattern that is reflected more broadly within the literature.

3.1 Implicitly avoiding population growth: Sally McFague and Larry Rasmussen

I now address two Christian authors who implicitly avoid eco-reproductive concerns and population issues. The first, Sallie McFague, was a pioneering feminist Christian eco-theologian who wrote extensively about the intersection of religion and climate change in texts such as *A New Climate for Theology: God, the World, and Global Warming* (2008) and *Blessed are the Consumers: Climate Change and the Practice of Restraint* (2013). There is much to admire about McFague's theologically creative work on climate change, which considers how Christian resources can

⁷ See n2 above.

provide models for countercultural forms of life—particularly in ways that challenge overconsumption (2013, xii). Yet in these texts, McFague often implicitly avoids discussions about population growth by focusing exclusively on high consumption rates and inequitable economic systems. McFague does so despite claiming to ground her work in "a careful reading of our empirical situation," believing that "theology [ought to] be done within the contemporary scientific worldview" (2008, 3).

In *A New Climate for Theology*, for example, McFague reviews the main drivers of climate change as found in IPCC reports and acknowledges that "the interlocking systems of our planet are changing under the weight of the human population and its desired lifestyle" (2008, 16). While population is recognized briefly here as one driver of climate change, this recognition falls away within the remainder of the text. Instead, McFague attends most to matters of consumption among the affluent, frequently criticizing the "high-consumption lifestyle[s]" and "greedy, controlling practices" of those living in the industrialized West (2008, 16). This critical focus also continues in her next book, *Blessed are the Consumers*. Here McFague reiterates that the most important problems to address include the "twin crises in ecology and economics" or the interconnected issues of "climate change and unjust financial distribution" (2013, xii, 171). McFague is right to argue that consumption rates and inequitable economic systems are central contributors to climate change but avoids discussing how population growth can exacerbate these issues (2008, 3).

By avoiding one important driver of climate change, McFague's constructive solutions only partially respond to the problem at hand. For example, in A New Climate for Theology, McFague develops an "ecological economic model" that counters the neoclassical capitalistic economic paradigm (2008, 85). This model views human well-being "as interrelated and interdependent with the well-being of other living things and earth processes" and aims to shift patterns of consumption accordingly (2008, 85). A similar constructive program is developed in Blessed Are the Consumers. Here, McFague studies and analyzes the lives of Christian exemplars such as John Woolman, Simone Weil, and Dorothy Day, who provide theological models for cultivating "lives of simplicity" that we can also inhabit by making more sustainable housing, transportation, and dietary choices (2013, 209). Across these two texts, McFague focuses her constructive analysis on issues of material consumption and economic distribution, which respond to the central problems that she identifies. In so doing, she does not analyze the problem of population growth nor consider how it might be addressed from a Christian ethical perspective.

Larry Rasmussen also represents this trend. Rasmussen is a Christian ethicist who has written about environmental degradation and climate change in multiple texts, including *Earth-Honoring Faith: Religious Ethics in a New Key* (2012) and *The Planet You Inherit: Letters to My Grandchildren When Uncertainty's a Sure Thing* (2022). In these texts, Rasmussen raises important critiques about our current industrialized, capitalistic, and human-dense world, tracing the histories of these developments and documenting their detrimental impacts upon humans

and non-humans alike. To Rasmussen, religious communities and ethicists can help to construct viable alternatives by "[generating] new capacities for new responsibilities on an altered planet" (2012, 7). While I agree with Rasmussen's views about the possible role of religion, my concern is that he also avoids a thorough treatment of population growth in his work—especially as it relates to his constructive arguments. More so than McFague, that is, Rasmussen often acknowledges that population growth is a central driver of climate change. Yet in keeping with McFague, Rasmussen does not ultimately develop a constructive religious response to this problem.

For example, in his Earth-Honoring Faith, Rasmussen acknowledges that endless economic growth, overconsumption, and population growth are three significant reasons why humans are not living sustainably. He writes, "we are far too many and many of us are far too rich, with far too much stuff and the wrong kind of economy, for the planet to bear" (2012, 4). In light of these problems, Rasmussen advocates for a number of "long-haul transitions," one of which involves a "demographic transition" wherein "human population levels off or slowly declines and the negative per capita impact on the rest of nature gives way to mutual enhancement with other life" (2012, 78). Yet in the remainder of the text, Rasmussen constructs an "earth-honoring" faith and ethic that does not concretely address this necessary demographic transition. To Rasmussen, an earth-honoring faith requires a perspectival shift "that embraces Earth's distress and understands the dangerous downside of human privilege and power" and puts forth an ethic that "[embraces] all of life and its generative elements" (2012, 110-11). What remains unclear is how, if at all, this earth-honoring faith and corresponding ethic provide a concrete moral response to some of the significant problems Rasmussen outlines, including that of population growth.

Rasmussen's most recent work follows this trend. In *The Planet You Inherit*, Rasmussen provides an intergenerational reflection about current and future climate threats. Writing letters to his grandchildren, Rasmussen considers what they might face by the year 2050 if current human behaviors do not substantially change. He writes, "Anthropocene citizens who continue Holocene habits doom their children" (2022, 12). These habits include economic growth and corporate capitalism, or "a growing, extractive economy running on ecological deficits" (2022, 15, 162). The continued growth of human populations, especially in high-consuming contexts like the United States, is not posed as a problem that future generations will have to face or address. Moreover, Rasmussen recognizes that his grandchildren may witness immense tragedy in their lifetimes, such as "climate instability, mass uncertainty, and breathtaking extinction" (2022, 12). Yet nowhere does Rasmussen consider the ways in which his grandchildren, like many adults today, may grapple seriously with the morality of having biological children because of these environmental threats.

In sum, works by McFague and Rasmussen exemplify one important limitation in the literature: an implicit avoidance of population growth and eco-reproductive moral concerns. I have attended specifically to the works of McFague and Rasmussen

because both authors display an avoidance of population growth in multiple publications throughout the course of their careers while remaining influential within their respective disciplines. However, a review of different authors could have sufficed. Among others, Whitney Bauman and Kevin O'Brien (2020), Michael Northcott (2013), and John Grim and Mary Evelyn Tucker (2014) also circumvent discussions about population growth in their work on climate change. Like McFague and Rasmussen, these authors occasionally acknowledge that population growth is one significant driver of climate change but do not provide critical or constructive analyses about this problem. Instead, issues related to consumption, fossil fuel extraction, economic inequality, and anthropocentrism often take precedence in their work. In so doing, such authors do not consider how population growth should be addressed *alongside* or *in addition to* these other contributing factors.

3.2 Explicitly minimizing the effects of population growth: Pope Francis and Willis Jenkins

I now address a second trend in the literature: explicitly minimizing the ways in which population growth can exacerbate climate threats. Pope Francis is one prominent Catholic leader who exemplifies this trend in his writings on climate change, especially in his influential encyclical *Laudato Si': On Care for Our Common Home* (2015). In this encyclical, Francis's primary aim is to "address every person living on this planet" about "the harm we have inflicted" on shared environments through climate change, pollution, and biodiversity loss (§2–3). Francis contends that he bases his understanding of these problems "on the results of the best scientific research available today," which then provides "a concrete foundation for the ethical and spiritual itinerary" in the encyclical writ large (§15). To Francis, environmental degradation is the product of multiple human ills, including our rampant consumerist culture, disregard of the poor, and lack of motivation (§15–16). Among these, Francis repeatedly criticizes the consumptive habits of the wealthy and the ideologies of "economy and progress" that support these lifestyles (§16, §22, §27, §90).

Laudato Si' has been rightly celebrated for its impressive scope and laudable efforts to address the intersecting causes and effects of climate change. I, too, appreciate Francis's focus on the most vulnerable throughout this encyclical, in addition to his defense of spiritual traditions as sources of motivation and resilience in the face of accelerating climate threats (§216). However, what remains unsatisfactory is the way in which Francis briefly and inadequately handles the issue of population growth. Within the 182-page document with 249 numbered paragraphs, he addresses this topic most directly in a single passage:

To blame population growth instead of extreme and selective consumerism on the part of some, is one way of refusing to face the issues. It is an attempt to legitimize the present model of distribution, where a minority believes that it has the right to consume in a way which can never be universalized, since the planet could not even contain the waste products of such consumption. Besides, we know that approximately a third of all food produced is discarded, and "whenever food is thrown out it is as if it were stolen from the table of the poor" (Pontifical Council for Justice and Peace 2013, 483). Still, attention needs to be paid to imbalances in population density, on both national and global levels, since a rise in consumption would lead to complex regional situations, as a result of the interplay between problems linked to environmental pollution, transport, waste treatment, loss of resources and quality of life. (§50)

In this passage, Francis is correct to deem excessive consumerism an important contributor to climate change, yet his position on the role or importance of population growth is rather confusing. Francis acknowledges that population growth is linked to environmental problems and requires "attention" but also claims that focusing on population growth rather than consumption is "one way of refusing to face the issues." My concern is that addressing the full range of "issues" would require Francis to take seriously both consumption *and* population, especially within industrialized contexts. Francis fairly critiques those who take population growth to be the sole source of the problem but then makes a similar error by focusing primarily on consumption rates instead.

Notably, Francis's avoidance of these issues has been reflected in recent Catholic-focused anthologies about climate change. Since the release of *Laudato Si'*, many such texts have been published that do not provide critical or constructive discussions about population growth (DiLeo 2018; Deane-Drummond and Artinian-Kaiser 2018; and Pasquale 2023). Often engaging closely with Francis's arguments in *Laudato Si'*, these texts instead focus on the problems of economic inequality, overconsumption, and anthropocentrism.

Francis's positions on population remain consistent in his more recent papal document, an "apostolic exhortation" titled *Laudate Deum: To All People of Good Will on the Climate Crisis* (2023). In the years that have passed since writing *Laudato Si'*, Francis conveys with greater urgency that "our responses have not been adequate, while the world in which we live is collapsing and may be nearing the breaking point" (§2). Francis cites IPCC data throughout to describe these worsening effects (§5–8), yet once again creates a false dichotomy between population and consumption when describing the central causes of climate change. He claims that "in an attempt to simplify reality, there are those who would place responsibility on the poor, since they have many children" even though "per capita emissions of the richer countries are much greater than those of the poorer ones" (§9). Here again Francis fails to address the ways in which growing populations *also* matter in high-consuming contexts—not just in less developed countries. While accusing others of "simplifying reality," Francis does so by continuing to focus exclusively on issues of consumption.

Francis's avoidance of population growth in these papal documents may have to do with the Catholic Church's moral objection to the use of artificial contraceptives and abortion. The Catechism of the Catholic Church prohibits these methods, viewing sexual intercourse within a marriage to be "ordered to the procreation

and education of offspring" (2016, 412–13). While Francis succeeds in maintaining Catholic teachings on these matters, he undermines his own commitment to synthesize a "spiritual itinerary" with scientific forms of knowledge (2015, §15). Rather than taking both population and consumption seriously, as climate reports do, Francis attends almost exclusively to the latter. In both *Laudato Si'* and *Laudate Deum*, Francis does not consider how population growth can exacerbate consumption or how efforts to minimize consumption can be undermined even by modest population growth. Francis posits that a "fruitful dialogue" exists between science and religion, yet this is a clear case where scientific interpretation challenges at least some of the moral positions of the Church (2013, §62). When these religious and scientific positions conflict in meaningful ways, Francis demonstrates that he will affirm the positions of the Church even if it departs from the scientific evidence at hand.

A longstanding objection to artificial contraception might lead us to simply expect Catholic leaders like Francis to avoid difficult discussions about population growth. Yet even among Protestant authors, for whom birth control practices are typically less fraught, population issues are still minimized. Such is the case for Willis Jenkins, a Christian and environmental ethicist, whose *The Future of Ethics: Sustainability, Social Justice, and Religious Creativity* (2013) has gained significant influence within the discipline of religious ethics. Though Jenkins makes similar argumentative moves to Francis when minimizing population issues, he does not share many of the theological positions that Francis holds—especially regarding contraception. Whereas Francis aims to maintain the Church's positions on sexuality and contraception, Jenkins does something of the opposite: he wants to affirm reproductive autonomy and avoid policies that lead to reproductive coercion.

Jenkins addresses population issues most directly in a chapter titled "Impoverishment and the Economy of Desire" in *The Future of Ethics* (2013, 232–81).⁸ Here Jenkins takes up interconnected issues of impoverishment—including human poverty, biodiversity loss, and climate change—and considers how industrial expansion, economic growth, and human population growth have contributed to these problematic legacies. Jenkins affirms that "demographic changes matter within a broader human economy of consumption and development" (2013, 253). In addition to this baseline recognition, Jenkins moves past the authors profiled above by considering how Christian commitments to justice and liberation can provide a framework for population reduction efforts in parts of the world where birthrates remain the highest. Rather than needing more oversight or control, Jenkins argues, women in impoverished contexts instead need liberation:

⁸ Jenkins also discusses the intersection of environmental and reproductive justice in "Toxic Wombs and the Ecology of Justice" (2013, 190–231), focusing on the disproportionate impacts of toxic waste among women and children of color who live in poverty. Although important, this material takes up a different set of moral considerations than what I address here: climate change and population growth as factors that inform reproductive choices.

greater access to education, contraception, and economic independence (2013, 251, 272). In this regard, Jenkins follows well-accepted theories of development which find that women tend to have fewer children when they are afforded greater autonomy.

While Jenkins moves the religious ethics literature forward in this way, he ultimately does not grapple with the effects of population growth in industrialized contexts, where the environmental costs of these trends are comparatively higher. Instead, Jenkins may even deflate his own position about the importance of population growth when he focuses primarily on the problem of excessive consumerism in the United States. Jenkins writes,

Human impact on ecological systems is less a product of how many persons exist than what those people do. If the average United States citizen uses twenty times more of earth's resources and services than the average Nigerian, then US practices of consumption matter more to the whole economy than Nigerian practices of reproduction. (2013, 254)

Like many of the authors described above, Jenkins is right to emphasize the detrimental effects of excessive consumerism in developed contexts, above and beyond population growth in less affluent nations. Yet what remains underdeveloped in Jenkins's work is some treatment of how reproductive choices may *also* matter in industrialized contexts rather than in locations where consumption rates are low. My concern is that Jenkins, too, explicitly minimizes the ways in which population growth can exacerbate climate threats in these contexts by opting instead to focus on issues of consumption.

For good reasons, Jenkins is eager to shift focus away from the reproductive practices of women in less developed countries and to reject the once-popular idea that coercive political policies are needed to keep birth rates in check. This move is in keeping with reproductive justice advocates, who routinely contest the idea that women living in poverty are most responsible for environmental problems (Ross and Solinger 2017). However, I find that Jenkins's narrow focus on consumption in the industrialized West still misses something important. In *The Future of Ethics*, Jenkins's own method suggests that creative moral responses can emerge in concrete problem-solving contexts (2013, 8–10). As I have noted above, adults in the United States are not just grappling with issues related to consumption: for many, climate change and population growth are significantly complicating the ethics of reproduction. Moreover, in nations like the United States, adults have greater access to contraceptives and reproductive health care than those living in less developed parts of the world. It is within these contexts where eco-reproductive concerns are especially pertinent, yet where moral reflection remains underdeveloped.

3.3 Limitations in the Christian environmental ethics literature

To varying degrees within the literature, authors are apt to avoid or minimize the seriousness of population growth and eco-reproductive ethical concerns.

Some of these avoidances may be attributed to rather straightforward reasons, such as Francis's desire to maintain a pronatalist view of sexual ethics. Yet even if most self-identified Christians do use artificial contraception at some point in their lives (including Catholics), it is fair to say that pregnancy and birth announcements are joyful events in Christian congregations.⁹ Religious and cultural celebrations that mark these occasions include baby showers and ritual sacraments such as baptism. Such celebrations for the birth of new children—especially without commensurate rituals that honor childlessness—surely contribute to the moral difficulty of discussing population issues. Beyond this, however, some authors want to redress longstanding focuses on birth rates in less developed parts of the world rather than consumption rates in the affluent West. This move can be seen explicitly in Jenkins's work and may be the implicit reason why authors like McFague and Rasmussen also avoid discussions about population.

While recognizing these reasons for avoidance and the moral difficulty that comes with population issues, I nonetheless consider ongoing and careful discussions about these topics to be important for multiple reasons. One reason involves taking climate science seriously as a key source for ethical reflection. While Christian environmental ethicists and eco-theologians often claim to ground their work in scientific forms of knowledge, many authors undermine this position by failing to address how population growth meaningfully contributes to climate change. Most authors implicitly or explicitly neglect population issues by focusing instead on overconsumption and economic distribution. While these factors are undoubtedly important, I have emphasized throughout that both population and consumption must be considered together as prominent and interrelated drivers of climate change.

There is a second and perhaps more practical reason why ongoing attention to population growth matters. As discussed in Section 1, polls and surveys indicate that concerns about climate change and population growth are *already* influencing reproductive choices among adults in the United States. For those who identify as Christian, eco-reproductive concerns may further complicate inherited notions of "the good life," especially when it comes to the (still relatively common) expectation for couples to have biological children. Insofar as these moral tensions are currently shaping the experiences of Christian adults in high-consuming contexts like the United States, ongoing reflection is sorely needed. Yet by dismissing the significance of population growth and eco-reproductive concerns, authors leave a significant gap in the literature. By avoiding a fuller view of the problem, that is, constructive moral responses are rarely articulated by religious ethicists or theologians.

⁹ Despite the official positions of the Church, most practicing Catholics are not morally opposed to the use of contraceptives and report using them at some point in their adult lives (Pew Research Center 2016).

To date, two such exceptions include short pieces by Grace Y. Kao (2023b) and Kathryn D. Blanchard and Kevin O'Brien (2014). These Christian ethicists have acknowledged that adults may be having fewer or no children due to climate change or population growth and begin to gesture toward moral responses that are internal to Christian traditions. For these reasons, Kao sees promise in scholarship that challenges the prevailing pronatalist positions of many Christian communities (2023b, 642). Work by Monique Moultrie, for example, has found that Black Christian women who remain childfree often creatively reinterpret Christian notions of legacy, nurturing, and family (2021). Blanchard and O'Brien likewise suggest that Christians who have fewer or no children for environmental reasons can emphasize "spirituality families, linked not necessarily by biology but by faith" (2014, 143). While these pieces begin to take the literature in a promising direction, I am interested in identifying a broader range of religious repertoires-embodied practices, habits, skills, and capacities-that may help to facilitate creative moral responses to eco-reproductive concerns. In the section that follows, I begin to identify such resources by learning from Christian environmentalists.

4. Constructive Moral Responses to Eco-Reproductive Concerns: Learning from Christian Environmentalists

If Christian adults are deciding to have fewer or no children in part due to climate change and population growth, what sorts of religious repertoires might help to advance viable alternatives? I investigate this question by drawing upon a "broadly pragmatic" method articulated by Jenkins, which takes seriously that individuals and communities can creatively respond to new or unprecedented moral conundrums—especially when their inherited traditions are not equipped to provide straightforward answers.¹⁰ Per Jenkins, this approach does not rely on repairing inadequate moral concepts before identifying practical solutions. Rather, it trusts that moral learning, adaptation, and innovation can emerge within concrete problem-solving contexts (2013, 4 and 20). This pragmatic and qualitative approach is also in keeping with other studies in religious, reproductive, and environmental ethics, as it recognizes the normative force of everyday ethical deliberation and action (Fredericks 2021; Kao 2023a; Miller 2016).

With this aim in view, I conducted and analyzed 30 interviews in 2022 with Christian environmentalists who are actively grappling with eco-reproductive concerns. I refer to these informants as "Christian environmentalists" because they self-identify as

¹⁰ Jenkins's "broadly pragmatic" approach takes inspiration from C. S. Peirce and Cornel West, including Peirce's pragmatic supposition "that problems properly give rise to doubts and uncertainties that drive intellectual learning" and West's notion of "prophetic pragmatism" which encourages social experimentation directed toward emancipation from collective disaster. See C. S. Peirce 1997 and West 1989, both cited in Jenkins 2013, 9.

Christian and affirm that they have a relationship with a Christian tradition today (regarding belief, practice, or inheritance, with or without formal membership in a religious organization). They are "environmentalists" because they express concern about environmental threats like climate change and are actively "working to change human thought, behavior, and/or institutions in response to these and other environmental problems" (Bauman and O'Brien 2020, 3). As described more fully in the Appendix, my sample of informants represents a relatively wide range of Christian affiliations in the United States—both Catholic and Protestant—but otherwise skews politically progressive, highly educated, female, and white.

The homogeneity of this sample, especially regarding political affiliation, was an anticipated outcome of the study. Because this project focuses on ecoreproductive ethical concerns, it would not have been especially productive to speak with people who deny the existence of climate change. Given the political polarization that surrounds this issue, I expected my sample to primarily include people who identify as progressive (Dunlap et al. 2016). It perhaps goes without saying that politically conservative Christians may reject the existence or severity of climate change and even more so the idea that it should inform reproductive choices and kinship practices. Thus, my study follows a method of qualitative interviewing known as "purposive sampling" to seek out more detailed narratives from a specific group of people, rather than aiming to learn from a representative cross-section of a given population (Patton 2002).

The limitations of my sample regarding race and gender may reflect my own identity and presentation as a white woman and the social media networks with which I am familiar and used to recruit interview participants. It is not necessarily representative of the people who express eco-reproductive concerns, however. In the study cited above that polled 4400 childless adults in the United States, Hispanic and Black participants "were especially likely to say that their concern for climate change has impacted their plans" not to have children (Jenkins 2020). More specifically, 41% of Hispanic respondents and 30% of Black respondents reported that climate change "is a major or minor reason they don't have children," compared to 23% of white participants who also affirmed this statement. Within this same poll, a similar percentage of men and women reported that climate change was a major or minor reason they do not have children, indicating that this concern is not limited to women or birthing persons. Because my findings primarily reflect the insights of white and female-identifying informants, future studies of this kind may benefit from focusing specifically on the perspectives of men and people of color in the United States. If I were to conduct research about ecoreproductive concerns among racially minoritized populations in the future, I would follow recommended practices for qualitative researchers, which includes building trust over multiple years and working with a team of researchers rather than independently (Ashley 2021; Campbell et al. 2021).¹¹

¹¹ For a recent study that focuses specifically on eco-reproductive concerns among people of color in the US, see Jade Sasser 2024.

Across interviews, I find that Christian environmentalists often grapple with the ethics of having and raising biological children because of climate change and population growth. Though they may have fewer or no biological children in part for these reasons, many nonetheless draw upon Christian inheritances to pursue creative alternatives. For example, many (1) cultivate "chosen families" in church contexts; (2) nurture the development of young people through youth ministries or mentorships; (3) consider fostering or adopting children; and (4) prioritize vocations beyond parenting and thus intentionally discern the number of biological children they wish to have. Christian repertoires can provide resources for these creative alternatives, yet not without complication: many informants still encounter covert or overt social pressure to have biological children, even within progressive religious communities.

Put differently, my informants often pursue innovative kinship practices in response to climate threats by expanding notions of "family" beyond genetic lineage or legal status. In her recent work that draws upon multispecies ethnography and queer theory, Donna J. Haraway refers to these practices as "kinnovation" (2016, 102–03). While my own informants kinnovate by critically and creatively engaging with their Christian inheritances—what I refer to as "Christian kinnovation"—Haraway does not consider how kinship alternatives can develop in religious contexts and remains skeptical that Christians in particular are up to this task (2016, 3, 6, 88, 208). As such, by showcasing possibilities for kinnovation in Christian contexts, I am not only redressing a gap in Christian environmental ethics. I also aim to contribute to the (secular) environmental humanities literature by showcasing how religious spaces can facilitate moral reflection and innovation in the face of ongoing climate threats. The following four examples further elucidate these critical and creative religious responses.

First, informants frequently discuss how they develop "chosen families" in church contexts, through both informal relational ties and formal ritual sacraments. One informant named Ethan, for example, remains unsure if it is ethical to bring new children into "the calamity of existing in the twenty-first century."¹² This concern is fraught for Ethan because he imagines parenting to be one of the "highest callings in the land" and "would otherwise love to be a dad." For these reasons, Ethan expresses interest in adopting or fostering children but worries that he may experience barriers to these options as a queer man. Regardless of his status as a parent or primary caregiver, however, Ethan aspires to become a godparent-a non-parental figure who commits to nurturing the spiritual development of a child during their baptism. He half-jokingly tells his friends, "I want to be your child's godfather even if you're not religious or getting baptized." As a practicing Episcopalian, Ethan imagines taking up this role in his religious community as friends begin to have children; he wants to enhance a young person's "community and family structure" and serve as a "built-in" figure of support. Ethan finds this type of role to be formative for

¹² All informant names are pseudonyms.

adults, as well, who get to participate in the rewarding process of "helping people develop [and] enter into the world as the fullest version of themselves." Be it through informal friendships or formal roles like godparenting, developing "chosen families" is a religious repertoire that is often facilitated in Christian contexts for many of my informants.

Second, multiple informants discuss how their religious communities help to facilitate long-term relationships with children through youth ministries and mentorships. Such is the case for Morgan, a youth pastor in the Pacific Northwest, who remains unsure about having biological children primarily because of climate change. Morgan is especially concerned with the severity and duration of fire seasons that have become more common on the West Coast. She and her spouse worry about bringing a child into a climate-threatened area and about contributing to these problems by adding more people to the planet. Morgan has found that it can be difficult to discuss these issues in church contexts, however, noting that they are often dismissed as "silly" or "selfish." For her own part, Morgan thinks that these dismissals fail to recognize the difficult reproductive choices that adults are making "while the climate is flipping out."

Although she remains uncertain about her own reproductive future, Morgan intends to support young people in her capacity as a youth minister. She states,

Honestly, in light of climate change, we're not sure that we can make [the] choice to [bring] more humans onto the planet . . . but I'm a Baptist, and we talk a lot about "calling" and "sacred purpose." That's how I feel about children's ministry in particular I've heard people talk about having kids so that they have a "channel" for their nurturing energy or something like that. But that's not how I feel. I already have places where do that in my life, where I care for children in some of those ways [as a youth minister]. While there *is* a path where I wouldn't have biological children, there's just *no* path that I see for myself where I'm not involved with children at some level.

Importantly, Morgan does not contend that youth ministry can *replace* reproduction or parenting. She instead emphasizes the importance of building communities where broader ties of care and responsibility can be developed. Morgan sees this not only as a move toward environmental sustainability but also as a transition away from cultures of individualism in Western Christianity and the US writ large. In these ways, Morgan takes seriously that children might be nurtured in communities with multiple caring adults alongside primary guardians and believes that (well-functioning) churches may be especially apt to provide these infrastructures of support.

Third, most informants I interviewed expressed interest in adopting or fostering children in part due to eco-reproductive concerns (19 of 30). Only two had become foster or adoptive parents by the time the interviews took place, primarily because most were not yet ready to take up new or additional childcare responsibilities. However, others discussed how multiple barriers exist for prospective foster and adoptive parents, such as significant investments of time, money, and emotional energy. Within certain states and through some agencies, there are also restrictions that prevent queer adults or adults with disabilities from adopting or fostering children (many of which, as noted by Ethan and others, are Christian-affiliated). Moreover, some informants expressed reservations about adoption agencies and the foster care system writ large. They cited cases where parents were separated from their children due to financial difficulties—rather than issues of abuse or neglect—only to have the state pay for other families to care for the child. This problem disproportionally affects parents and children of color in the United States, who are more likely to experience poverty.

Denise is one informant who became aware of these issues when she was learning more about the foster care system. After multiple years of discernment and training, Denise and her spouse became foster parents in an urban context where needs for temporary care are especially high, with the aim of reuniting children with their families of origin. When asking what led to their interest in foster parenting, Denise describes how both environmental and religious commitments informed their decision. Citing eco-reproductive concerns, Denise states, "This child is already here and needs love and a home.... So why wouldn't I prioritize that?" As practicing Catholics, their interest in foster parenting also came from living in a Catholic Worker House for multiple years, where they came to appreciate non-traditional family structures and collaborative childrearing practices. However, their path toward foster parenting was met with some resistance from their congregation's leaders. Before their wedding, Denise and her spouse participated in pre-marital counseling and had extensive conversations with their priest about the vow to "accept children lovingly from God." Denise recounts that she needed to convince their priest that they would be fulfilling their marital vow by "accepting" foster children into their marriage, rather than trying to have biological children. Although it may depart from some Catholic interpretations, she sees herself as living into this marital and communal commitment in ways that are "a bit more creative." As Denise showcases, the possibility of becoming a foster or adoptive parent, though not without its complications, offers another religious repertoire for responding to eco-reproductive concerns.

Fourth and finally, multiple informants emphasize that parenting is one vocation among many. As such, having fewer or no biological children may allow them to pursue other "callings" within and beyond their religious communities. Some informants are intentionally childless for these reasons, but others who wanted to become parents deliberatively discerned the number of biological children they intended to have—usually deciding between one and two. For example, Lucy is a faith-based environmental organizer and a single parent, who recounts her decision to have one biological child in the following way:

I felt vocationally called to being a parent, even though it is clear that climate change is real and is affecting people in really hard and brutal ways. And we know that it's going to continue to get worse. I [also] feel accountable to a systemic reality in which children born in the US are born with a larger carbon footprint. So I struggled with it [the decision to become a parent] for these reasons. And also, as I said, I felt really

called to be a mom. [I eventually decided that] I was only going to carry one kid into the world if that was going to be biologically possible. My commitment to be in the struggle—to work for climate justice—means that I am not particularly interested in adding any other children to our immediate family. I want to be able to focus on both my daughter and the struggle for now.

In her "struggle" for climate justice, Lucy serves as a lead organizer for nationwide fossil fuel divestment campaigns within Christian congregations. Lucy sees this as an important reparative task for Christians, who, in her view, have not always leveraged their faith commitments toward the protection of the natural world. After having a child, Lucy claims that her vocation as an environmental organizer became even clearer: her daughter became "the lens through which [she] sees everything else" because "taking care of the planet is by extension taking care of her." As is the case for Lucy, the religious repertoire of vocation may help Christian adults discern their reproductive and parenting decisions in the context of other "callings" within the church and world writ large.

5. Conclusion

Contemporary Christian environmental ethicists frequently avoid ecoreproductive concerns and issues of population therein. In this article, I claimed that these avoidances are problematic because they undermine authors' own commitments to engage seriously with climate science as one key source for moral reflection. Moreover, by deflecting from difficult conversations about population, constructive moral responses to eco-reproductive concerns remain underdeveloped in this body of literature. Rather than acknowledging the moral difficulty of eco-reproductive concerns and beginning to address them, authors tend to focus instead on other (less controversial) contributing factors to climate change such as high consumption rates.

To address this gap in the literature, my central goal was not necessarily to identify Christian concepts or principles that would resolve eco-reproductive moral concerns. Rather, by drawing upon a "broadly pragmatic" method outlined by Willis Jenkins, I sought to understand how religious repertoires can help to facilitate constructive responses to these difficult moral problems. To do so, I conducted interviews with Christian environmentalists who are grappling with eco-reproductive concerns in their everyday lives. Such an approach trusts that moral learning and adaptation can take place in problem-solving contexts, even when current moral concepts do not provide straightforward solutions. My informants displayed this capacity for innovation by viewing their religious communities as spaces to "kinnovate"—to develop alternative forms of family in Christian contexts with or without having their own biological children. Often in contestation with pronatalist religious cultures, my informants showcase that having fewer or no biological children can be an important dimension of Christian vocation and community-building.

These findings are significant because they gesture toward the development or recovery of creative religious responses to complex moral problems, including those related to climate change and population growth. Practices of Christian kinnovation may help to advance viable futures in religious and familial contexts, namely by expanding moral imaginations and capacities for broader forms of kinship. They are by no means exhaustive, however. Continuing to study these dynamics in a variety of religious contexts may allow us to better understand and elevate additional moral possibilities.

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APPENDIX

Informant Demographics

Demographic trait	Informant responses (30 total)
Religious affiliation	Catholic (12)
	Episcopalian (6)
	Lutheran (5)
	Protestant Christian (4)
	Baptist (4)
	Methodist (2)
	Evangelical (2)
	Unitarian (1)
	More than 30 responses are represented in this count because informants
	were able to self-describe their religious affiliations (as opposed to select-
Gender identity	ing from a pre-established list) and thus occasionally listed multiple. Female (23)
	Male (3)
	Gender queer or non-binary (3)
Political affiliation	Still considering their gender identity (1) Liberal, progressive, leftist, or Democratic voters (24)
	Independent, moderate, or have no party preference (5)
Educational attainment	Conservative (1) Completed or are currently earning a bachelor's degree (all 30)
	Completed or are currently earning a master's degree (18 of 30)
Age	Completed or are currently earning a doctoral degree (6 of 30) Between 21 and 25 years old (6)
	Between 26 and 30 years old (12)
	Between 30 and 35 years old (7)
	Between 36 and 40 years old (4)
	Between 41 and 45 years old (1)
	The age of my informants ranged between 21 and 45. The average and
Parental status	median age is near 30 years (29.8 and 29.5, respectively). Current parents or guardians (9): to biological children (7), adopted chil-
	dren (1), or fostered children (1)
	Not currently parents or guardians (21). Of this group, about half ex-
	pressed interest in becoming parents or guardians one day, either through
	biological reproduction, foster parenting, or adoption (10). Others remain
	uncertain (6) or do not intend to raise children (5).

Demographic trait	Informant responses (30 total)
Sexual orientation	Straight or in a heterosexual relationship (20)
	Gay, lesbian, or queer (6)
	Sexual orientation not disclosed (4)
Racial identity	Asian (2)
	Black (2)
	South Asian (1)
	White Hispanic (1)
	White or Caucasian (24)

APPENDIX (Continued)