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Trying to Live Forever? Christian Views on and Responses to Radical Life Extension

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Introduction

Humanity has long had a fascination with extending life beyond the “normal” human lifespan. In literature as early as the *Epic of Gilgamesh* there are stories of those who seek to attain immortality. Legends of the Holy Grail, the Fountain of Youth, and the Philosopher’s Stone (used to create an elixir of life) have appealed to the imagination for centuries. Even in stories of pure fantasy, such as the popular Harry Potter series, characters such as the evil Lord Voldemort seek for ways to cheat death. Shows such as Netflix’s *Altered Carbon* (based on a novel by the same name) similarly explore what could happen if humanity found a way to collectively overcome biological death.

It is commonly accepted that the upper

limit for a human life is around 120 years.¹ However, there are now numerous attempts to overcome this boundary and achieve radical life extension (RLE)—extending the healthy human lifespan to hundreds or even thousands of years, if not indefinitely. When considering the possibility of radically extending the human lifespan and thereby putting off death, Christians experience an odd tension. On the one hand, we view death as an enemy, a force that, though conquered by Christ at his resurrection, is one to which all people still succumb, and thus one to be fought. On the other hand, death is seen as an inherent part of being an embodied creature, the final step in the journey of life and necessary for bringing us into full communion with our God and creator.²

To further complicate matters, the various methods proposed for achieving

RLE are quite diverse. One method proposes utilizing genetic intervention to identify a “longevity gene.”³ Another method, proposed by Aubrey de Grey, is called SENS (strategies for engineered negligible senescence) and involves reversing aging by halting and preventing the damage that builds up in our cells over time.⁴ Embryonic and adult stem cell research, cloning, organ and tissue replacement, and nanotechnology have all been put forward as potential pathways for ending aging.⁵ All of these lines of research are focused on preserving our physical bodies. But there is also a movement (often referred to as transhumanism) that seeks to use science and technology to improve humanity and the human condition. There are many different schools of thought within the transhumanist movement,⁶ but some of its more radical proponents desire to overcome the limitations of the biological body by merging the human and the machine, with the ultimate goal of separating the mind and the physical

body entirely.⁷

This paper will explore various Christian responses to RLE. Its aim is not to be comprehensive so much as to be representative of different positions and the reasoning behind them. It will compare these perspectives, noting reasons for acceptance or rejection, and identify common themes raised by those weighing the permissibility of RLE for the Christian.

Classifying Objections

The ethical considerations raised by RLE cover a wide array of issues, from questions of equality of access and level of cost to consideration of whether it would even be good for humans to live significantly longer. Because of the variety of ethical considerations raised by RLE, it is helpful to divide the objections to it into a few categories. This will assist in both clarifying the nature and extent of the concerns and in comparing the various Christian responses.

One possible division is whether an objection is unique to RLE or more generic. Many objections raised against RLE also apply to multiple other (or even all) biotechnological interventions. These are concerns such as the potential expense of a procedure, accessibility of the intervention, difficulties in regulation, etc. These types of objections could also apply to other medical interventions such as surgery or vaccine development—how much will it cost, who gets it, and who decides? In contrast are objections unique to RLE. These include such concerns as whether RLE is consistent with “human nature,” whether it is “natural” for humans to die, or what problems might arise in a society where humans live hundreds or even thousands of years.

The objection that RLE could lead to overpopulation serves as a good example of how to apply this division. In theory, if RLE could be made available to all, and was successful enough to extend life

indefinitely, the earth would eventually become overcrowded and under-resourced. At first, it might seem as if this was an objection unique to RLE, as overpopulation would be a direct result of introducing RLE technology into society. However, though it is being considered as a result of RLE specifically, it is not actually an objection against RLE itself. There are other factors that could lead to overpopulation and lack of resources (and in fact, there are those who already worry that the human population will grow to an unsustainable size even without RLE).⁸ Thus, while this objection arises from a result of RLE, it is not unique to RLE, but one common to other interventions. Alternately, concerns over how the fabric of society would change when people can spend thousands of years accumulating wealth and power *is* unique to RLE. While any new technology can raise concerns about how society will be affected, this objection specifically looks at how extreme longevity affects society.

It can also be useful to divide objections into those that are cautionary versus those that are prohibitive. Cautionary objections are concerned about issues of logistics and are not opposed to RLE *per se* but rather how it might be implemented. For example, concerns about equity of access could be mitigated through universal health coverage or through advances that reduce the cost of an intervention to a manageable level. If a viable solution is presented, the objection is dissolved—i.e., if RLE is available to everyone, then access is no longer an objection. Most of these objections, then, are important to consider and think through but could potentially be overcome.

On the other hand, prohibitive objections typically involve foundational issues or definitions and are indicative of insurmountable problems that necessarily lead to a rejection of RLE. For example, the objection that RLE is contrary to human nature because death is a part of what makes us human leaves no room for solutions to be presented.

Short of a redefinition of the conception of “human,” that objection necessitates rejection of RLE.

At this point two clarifications are helpful. First, difficulty in overcoming an objection is not the same as an insurmountable objection. To return to the question of access, there are no simple solutions to this objection. Healthcare resources are limited, and determining who gets what is a perennial problem. The ultimate goal—ensuring that every person on earth has equal access to life-extending technologies—may be as difficult to achieve as RLE itself. However, even if some solutions to disparities of access are not feasible, they are not necessarily outside the realm of possibility. Thus, equality of access remains a cautionary objection, albeit a strong one.

Second, what is prohibitive for one person may not be prohibitive for another. This is frequently the case for objections that are unique to RLE. Concerns about whether RLE is consistent with one’s account of human nature will vary depending on how exactly one defines “human nature.” Whenever an objection such as this arises from someone’s base definitions and conceptions, it becomes very hard to develop any viable solutions, as most people will not easily alter these most basic beliefs. However, it is also possible for these conflicts to be present in the more general objections as well—for example, individuals will have different thresholds for determining what is enough access or a low enough cost. Thus, especially with the cautionary/prohibitive division, the categories are not concrete.

If the boundaries of the categories are not solid and could vary from person to person, one may question the purpose of having categories at all. Where they are beneficial, however, is in creating a framework for analyzing an individual or group’s reasoning for how they respond to RLE. If someone only puts forward generic objections,

they are likely to be cautious but ultimately accepting of RLE, since there are ways in which their objections can be answered. Alternatively, someone concerned with those objections unique to RLE will be more likely to oppose its pursuit. Even two people who voice the same objections can come to different conclusions if one sees their objections as cautionary while the other views them as prohibitive. The categories' usefulness, then, is best realized in comparing views.

Individual Christian Perspectives

Despite the fact that no technology to allow for RLE yet exists, there are already a number of authors writing from a self-professed Christian perspective on this issue. One of the few book-length treatments, entitled *Should We Live Forever? The Ethical Ambiguities of Aging*, comes from Gilbert Meilaender, a retired professor and former member of the President's Council on Bioethics. In this work, he does not make many definitive statements, but considers aging and life extension from several angles, raising many points for consideration, both positive and negative.

On the positive side, Meilaender recognizes that there are virtuous reasons, such as love for others and for life itself, that could be compelling enough to allow for RLE. Against those who have said that endless extension of life would not be pleasant for humans, he reminds his readers that the Christian does not have to think about this in the

abstract but has a new world with eternal life promised for them. In addition, humanity's ability to even pursue RLE (something unique to them and inconceivable in animals) speaks to some of the traits best associated with being human—creativity and freedom.

On the negative side, Meilaender proposes the prohibitive objection that we should think of a life not as something which should be extended forever, but which has a certain “shape” or “trajectory,” parts of which are aging, passing the torch to the next generation, and eventually dying. Since most forms of RLE seek to mitigate or prevent aging altogether, Meilaender sees these as distorting the natural shape of a human life, and not for the better.

He also has some cautionary worries, such as RLE leading to a diminished desire to procreate. If people cling to their own lives and become unwilling to produce and raise new generations, they disrupt the “succession of generations,” which he views as a key facet of humanity.⁹ Regarding the transhumanist quest to rid itself of the body, Meilaender is staunchly opposed. He also warns against the attitude that the aim of RLE is not to defeat death, but to defeat human contingency. While he writes that “there is in principle nothing wrong with trying to retard aging and extend human life,” he fears that actually doing so could result in humans failing to recognize their limits, experiencing diminished meaning in life, and ceasing

to view life as a gift.¹⁰

Ultimately, Meilaender concludes:

we are . . . drawn out of ourselves toward God, and satisfaction of that longing could not possibly come from more of this life, however long extended. . . . we can and should think it a blessing that our lives are of limited duration—not because this life is not good, but because it cannot finally bring the completion needed for us to truly flourish.¹¹

For Meilaender, while most of his objections could be classified as cautionary, taking them together they become prohibitive, leading him to conclude that RLE should be rejected not because there is anything inherently wrong with it, but because it cannot ultimately gratify the deepest human desires it attempts to satiate.

Most other books on RLE are multi-author works, such as *Religion and the Implications of Radical Life Extension*, which includes perspectives from a host of religions. In their chapter “Be Careful What You Wish for? Radical Life Extension *coram Deo*: A Reformed Protestant Perspective,” Nigel Cameron and Amy DeBeats point out that, despite some people's confusion, there is actually a big difference between RLE and transhumanism. While RLE is a central tenet of the transhumanist agenda, for them it is not an end goal, but merely



a waypoint on the quest for a virtual/digital existence—a search for “radical RLE.”¹² Thus, while Cameron and DeBeats reject transhumanism and offer several cautions for general life extension, they are not opposed to “the idea that, if science and medicine permit, human life may continue to extend beyond the range of today’s experience.”¹³ On the societal level, their cautionary objections include questions of affordability and access, resource usage, overpopulation, exacerbation of wealth and healthcare disparities, displacement of research focus, and centralization of power and influence.¹⁴

In the religious sphere, Cameron and DeBeats see mixed potentials for RLE, offering a few points in its favor as well as more cautionary objections. An extended lifespan could provide people more time to spread the Gospel, but the removal of death as an inescapable part of life could also lead to people ignoring their mortality. With many more years to live, people could more easily be multi-vocational, even taking years off of their careers to serve the church; but they could just as easily use the extra time as an excuse to live for themselves, thinking they have time for the “church stuff” later. Intergenerational conflicts could become a much greater problem as many more generations tried to worship together. And there would certainly be effects on marriages and families, as staying faithful to a single spouse looks very different when a marriage lasts not 50–70 years but potentially hundreds.¹⁵

Theologically, Cameron and DeBeats point out the tension Christians have between valuing life (often forbidding abortion, suicide, euthanasia, etc.) while at the same time valuing death as the entry point into eternal life with God. They also point to Jesus’ healing ministry while on earth as caring for the whole person, leading to the conclusion that “medicine is meant to continue in that tradition of healing.” Therefore,

to the extent that RLE technologies serve to heal people of their

diseases and to restore them to physical and mental wholeness, they can be seen as in line with the ministry of healing. But to the extent that they seek to bypass the human and to recreate human beings into something else, they claim to usurp the resurrection, which is God’s alone.¹⁶

Finally, they warn of RLE’s potential to become an idolatrous focus for the Christian, pulling attention away from God and onto the self, and of the need for care and responsibility when using anything with such potential for great good or harm.¹⁷ Their conclusion seems to be that there are a number of difficulties for the Christian who wishes to pursue RLE, but most of them (as long as they do not take a transhumanist route) are neither prohibitive nor insurmountable.

In the same book, Ronald Cole-Turner’s chapter “Extreme Longevity Research: A Progressive Protestant Perspective” presents another affirmative picture of RLE. Cole-Turner makes a distinction between the resurrection life offered through Christ and the life offered through RLE and concludes that the two are in entirely different classes. Furthermore, he posits that proponents of RLE and Christians view life differently—while RLE promises youth and vigor, Jesus calls Christians to lose their lives in order to find true life. With this difference in mind, Cole-Turner cautions against the potential for technology to turn our focus inward and away from being a living sacrifice for God. However, rather than rejecting RLE, he concludes:

there is risk but no essential conflict. The risk is that life extending technology might become just another way in which we try to “save our own life,” specifically in such a way that, according to Jesus, saving it means losing it. . . . The irony here is obvious: technology that offers a self-preserving and self-isolating

eternity may in the end offer nothing but hell. The risk, in other words, is not trivial. But what is not clear is that a decision to use these technologies and extend one’s life is necessarily a decision rooted in selfishness or self-isolation. If it is rooted in quite a different desire, for example, a longing to serve or to grow further into the experience of spiritual transformation, then the use of these technologies might be an aid rather than a risk to faith.¹⁸

For Turner, then, his objections are strictly cautionary. RLE itself is not the problem, but rather the motivation from which it is undertaken. If done for the right reasons, RLE is a licit option for Christians.

Turner has also edited a book that expounds a great deal upon life extension, *Transhumanism and Transcendence*. Though the essays within are primarily focused on transhumanism in general, RLE is so tied to transhumanism’s objectives and worldview that many of the chapters end up dealing with RLE in some capacity. While space does not permit a detailing of every author’s opinions, some distinctive themes arise. In his chapter “Chasing Methuselah: Transhumanism and Christian *Theosis* in Critical Perspective,” Todd Daly uses Athanasius and Karl Barth to demonstrate two ways in which Christians should approach life-extending technology. He writes,

If Athanasius’s reflections on the first Adam remind us *positively* that the process of slowing aging is inextricably intertwined with the moral project of bringing one’s body under the control of one’s Word-guided soul, Barth’s reflections on the second Adam . . . remind us *negatively* that modifying the body to allay fears of death and aging can never effectively mitigate the fear that dwells in one’s soul.¹⁹

While Daly is ultimately critical of the goals of transhumanism, he leaves open the possibility that life extension could be acceptable for the Christian if it is subsumed “under the greater goal of being formed in Christ’s image.”²⁰

Brent Waters’ chapter in the same volume takes a decidedly more negative perspective on life extension, including some arguments that would seem to be prohibitive, not merely cautionary. He concludes that finitude, mortality, and death are

a necessary feature of being a creature that has been created by a good God. . . . In consenting to the necessity of death, they affirm the goodness of the one who created them. And remaining creaturely as they await their redemption is a good well worth defending, a good that should inform a theological and moral imagination that claims to be Christian.²¹

It is difficult to say more in analyzing Waters’ position here because his approach is so tied to his analysis of transhumanism. Most of his reasoning to reach this conclusion relates not to RLE itself, but to the underlying worldview driving the transhumanist agenda. Thus, while the chapter under consideration might seem to be offering strictly prohibitive objections, in a different, earlier essay Waters wrote

Does the preceding argument imply that Christians should not resist aging and death? No, for in affirming the finite and embedded character of our status as creatures, medicine is a useful instrument in assisting us in pursuing our respective callings and vocations. Extended longevity and enhanced performance, however, are not the proper ends of medicine, but residual benefits. The proper goal of medicine is not to improve the prospects of individual survival, but is a concrete act enabling the love of God and neighbor.²²

Thus, Water’s position is not against all life extension, potentially allowing for it as a side effect of other medical interventions. Nevertheless, according to him life extension should not be pursued for its own sake, which would likely rule out RLE.

A final essay from *Transhumanism and Transcendence* by Gerald McKenny deals with ideas of transcendence and makes a distinction between Christian and transhumanist approaches to limitations. He condemns trying to throw off dependence and limitation entirely, as this would be a rejection of how God has made us. His concerns are largely cautionary, however, as McKenny accepts that it is permissible to “chip away at human limitations”—to improve ourselves, even in terms of our lifespan, within the limits of human finitude.²³

The book *Future Perfect: God, Medicine, and Human Identity* also contains several essays applicable to RLE. Though he does not raise any specifically theological points, Ulf Görman posits that life extension might be allowed as a result of medical treatments for disease but should not be pursued for its own sake. His primary reason is a prohibitive one—the attempt to alter humans so that they live forever might inadvertently weaken some key aspect of being human, especially in the relational sphere.²⁴ In another essay, Celia Deane-Drummond raises several matters regarding RLE. She is especially concerned about how Christian eschatology plays into its acceptance, the ways in which proponents of RLE follow socio-cultural rather than biblical values, and the social injustices that would likely be exacerbated by RLE technologies. However, while she raises many points of caution, she does not provide definitive answers to whether RLE is off the table or if there are ways which it could be morally practiced by the Christian.²⁵

Though a different medium, Stephen H. Williams’ address given at the conference *Bioethics & Being Human* puts forth several prohibitive reasons why Christians should not support

RLE that are quite distinct from those raised above. Despite some superficial similarities between Christians and proponents of RLE, such as a desire to promote human flourishing and eliminate disease, he believes that there are crucial differences. Yes, Christians want to support human flourishing, but what about the Bible’s commands to be content in whatever situation? Additionally, Williams rejects lines of reasoning for RLE that depend on arguments about the “intended” state of humanity pre-fall—we simply do not know enough about what life would have been like in Eden to make any normative claims. The same is true for eschatology—Paul tells us we will be raised in a spiritual body, but what exactly this means is again a source of speculation. What is certain, however, is that we cannot “leap” from what we are now to what God has in store for us. According to Williams, “The redemption of the body is not for now, it’s for later, and when our Lord describes the normal Christian life, he speaks in terms of self-denial, and suffering, and carrying our cross.”²⁶

Williams also argues that human flourishing from a Christian perspective must take our current fallen state into account. In Genesis 6, God deliberately shortens the human lifespan. If God has done this, Williams asks, why should we try to extend it? Could this not simply extend sin’s reign on the earth? Finally, he raises the example of Babel and its window into fallen humanity’s pride and anxiety. It represents humans striving to achieve on their own terms what God might give on his. It is a part of Genesis’ larger theme of dominion gone wrong. Thus, “we ought to approach with suspicion technologies which seek to advance, according to their own agenda, human well-being as they [their developers] conceive it.”²⁷ Williams concludes that we will have to become comfortable with tensions between fighting and accepting sickness and disease, allowing some enhancements and forbidding others, and that these decisions should not be made

individually, but through Christians working in community together.

Another voice of opposition to RLE comes from Albert Mohler, president of Southern Baptist Theological Seminary. In an interview, he stated:

the tranhumanists [sic] increasingly see death as an oddity that is to be overcome. Christians certainly do not embrace death as a good in itself, but we understand that death is a part of what it means to be human, and that, indeed, the effort to forever forestall death is itself an act of defiance that will be both unworkable and morally suspect.²⁸

Unlike others who have spoken against transhumanism, Mohler does not appear to make a distinction between the transhumanist agenda and extending life through other means. For him, his concerns are truly prohibitive; if death is an essential aspect of being human, then RLE cannot be morally pursued unless we are willing to become something other than human.

Denominational and Organizational Statements

In addition to noting what individual Christian authors have said regarding RLE, it is instructive to see what Christian denominations and organizations have said. A helpful resource for those looking for such statements is the Christian Biowiki, an online resource curated by The Center for Bioethics & Human Dignity that compiles major denominations' statements on bioethical issues.²⁹ The Christian Biowiki has two categories related to RLE—Human Enhancement and Transhumanism/Posthumanism. A survey of these categories reveals that, of the 48 denominations they have cataloged, only five have any kind of statement on human enhancement—Assemblies of God (USA), Church of the Nazarene, Roman Catholic Church, Seventh-Day Adventist Church, and United Methodist Church—and none

of these say anything directly regarding life extension.³⁰ This fits with a study done by the Pew Research Center, which, as of 2013, concluded that “no religious group in the United States has released an official statement on radical life extension.”³¹ Christian Biowiki does list one Christian organization that has statements in the human enhancement category (National Association of Evangelicals), but that statement does not specifically address RLE.³²

Statements on Human Enhancement

Despite this lack of specific engagement, what denominations have said about human enhancement more generally gives some insight into how they might respond to RLE. As none of the statements address RLE directly, any concerns raised will of necessity be generic ones. The statements themselves pertain specifically to genetic therapy/engineering/enhancement, but many also have things to say about biotechnology more generally. Most of the statements affirm the use of biotechnology for the purpose of fighting disease, but are hesitant, if not outright opposed, to using it for non-therapeutic reasons. For example, The Assemblies of God statement indicates that they do not want to limit all research on the modification of human life, but urge caution: “We call on everyone engaged in scientific and medical research to find a standard of ethical and moral conduct, to articulate it clearly so all of society understands the premises on which any such research and experimentation is conducted. We believe God’s inspired and authoritative Word, the Bible, is that standard.”³³ Thus, though they have cautionary concerns, they neither affirm nor reject any particular use of biotechnology.

In contrast, The Church of the Nazarene focuses more on potential social ramifications: “We oppose any use of genetic engineering that promotes social injustice, disregards the dignity of persons, or that attempts to achieve racial, intellectual, or social superiority over others (eugenics). . . . In all cases, humility, a respect for the inviolable

dignity of human life, human equality before God, and a commitment to mercy and justice should govern genetic engineering and gene therapy.”³⁴ Likewise, the Seventh-Day Adventist statement raises several social concerns (such as resource usage) and presents many questions but provides no definitive answers. It concludes, however: “It is a Christian responsibility to prevent or relieve suffering whenever possible . . . the primary purpose of human genetic intervention should be the treatment or prevention of disease and the alleviation of pain and suffering.”³⁵ Again, while this is in the context of genetic intervention, it would seem the same principles could apply to RLE, especially since genetic manipulation is one of the methods under investigation for achieving RLE.

In the same way, the United Methodist Church urges regulations and “public accountability” in response to genetic engineering. They temper permission with caution: “The responsibility of humankind to God’s creation challenges us to deal carefully with and examine the possibilities of genetic research and technology in a conscientious, careful, and responsible way. We welcome the use of genetic technology for meeting fundamental human needs for health and a safe environment.”³⁶ For each of these denominations, their concerns are for the most part cautionary—they want society to be careful and equitable in its use of biotechnology, but would seem to have little problem with utilizing it if proper safeguards are in place.

These statements, all of which could be read as providing tentative permission for genetic and even RLE technologies (if used in a responsible manner), stand in contrast to the Roman Catholic Church’s position. Their 2008 statement *Dignitas Personae* makes acceptance of RLE unlikely: “The statement on genetic engineering for purposes other than medical treatment says that it is too closely associated with the idea of eugenics and humanity controlling itself by setting its own criteria on itself. The church instead encourages care for other

people and of accepting human life in its concrete historical *finite* nature.”³⁷ While not definitive, it seems likely that the Catholic Church would rule out RLE based on this statement.

The sole organization in this category, the National Association of Evangelicals, has several things to say about the kinds of technology that would be used for human enhancement (and thus, RLE): “fundamental changes in human physiological nature using biotechnology, genetics, nanotechnology, artificial intelligence, and other means must be prohibited;”³⁸ and “any technology that attempts to modify or eradicate the essential uniqueness of human beings among God’s good creation should be rejected.”³⁹ How exactly this applies to RLE, and if there are any types of RLE that would be deemed acceptable, are less clear. Nevertheless, these would seem to be prohibitive, not just cautionary, concerns, and it seems safe to say that they would approach any such technologies with at least suspicion, if not outright rejection.

Statements on Transhumanism/Posthumanism

Under the category Transhumanism/Posthumanism, the Christian Biowiki lists no denominations as having a statement on the issue, although there is one organization, the Christian Medical and Dental Associations (CMDA), that does.⁴⁰ This group affirms “that immortality can be achieved only by the saving work of Jesus Christ (1 John 5:12); utopian false promises of re-engineered, matter-based, so-called technological immortality are an idolatrous illusion and a counterfeit salvation.”⁴¹ While this could be taken as a clear-cut denial of RLE, matters are a little more complicated. Because this comes from CMDA’s position statement on human enhancement, it is less than clear what they are referring to by “re-engineered, matter-based, so-called technological immortality.” The statement defines re-engineering as

structure or function of a given genetic, anatomical or physiological state or function. Re-engineering technologies seek to “improve” upon traits that are within or supersede normal levels and make them “superhuman.” Re-engineering efforts are not directed at healing or restoration but at change simply because change is desired. Re-engineering, a more objective term than “enhancement,” is a repudiation of normal human life and its Creator.⁴²

In the same statement, CMDA states: “The goals of medicine are to cure disease, restore lost function, palliate symptoms, enable living with disease or disability, and prevention of disease through stewardship. Human re-engineering, however, is not included in or compatible with the goals of medicine.”⁴³

Clearly, CMDA’s statements are prohibitive towards transhumanist approaches to enhancement such as cognitive uploading or turning humans into cyborgs. CMDA would also likely reject the possibility of genetic alteration for the purpose of extending life. It is less clear, however, if they would forbid RLE on the SENS model, which frames its goals as repairing damage to the body. This could easily fit under the goals of restoring lost function or preventing disease (many of which appear as a direct result of aging), and might not fall under the category of re-engineering, as it is returning the body to a previously held state, not altering its basic functions. Without further information, however, it is unknown how they would rule on specific methods of RLE.

One organization not included on the Christian Biowiki that bears mention is the Christian Transhumanist Association. This group, founded in 2013, and in contrast to most of those considered, sees Christian theology and transhumanism as complimentary, not contradictory. Their website offers no official perspective on RLE, but several

of their core affirmations (such as “we seek growth and progress along every dimension of our humanity: spiritual, *physical*, emotional, mental”) would seem to indicate they would fully support Christians pursuing RLE.⁴⁴

The lack of engagement by Christian denominations on issues of RLE is not necessarily noteworthy. It has historically been the case in the American church that bioethical issues do not receive broad Christian attention until after some major events brings an issue national attention.⁴⁵ Since RLE remains speculative, it is unsurprising that dedicating time and resources to responding to it has not been made a priority among most denominations. This is not to say, however, that there is no need for concern. It is generally better for ethical reflection to work ahead of available technology, not behind it, giving time for people to fully appreciate the issues and reach informed conclusions. Clearly, the church has work to do to prepare itself in case RLE becomes a reality.

Analysis

Having considered all of these responses, several common themes have emerged. It is apparent that there is no consensus among Christians as to whether RLE technologies should be allowed. There is a relatively even split among those who accept and those who reject RLE, with many others who do not offer a definitive resolution. Among those who allow for RLE, the most common reason is that healing and fighting disease are goods which Christians should pursue. Common to all of those in favor was an acknowledgement of the risks involved, especially the risk of life extension becoming idolatrous, but with the conclusion that the risks were not prohibitive but cautionary.

For those who oppose seeking life extension, virtually all brought up the idea that RLE goes against some of the fundamental aspects of being human, such as dependence, contingency, or mortality. Several have even said that

Efforts to alter the substrate,

death is an essential part of being human. These are clearly prohibitive concerns that rule out any possibility of pursuing RLE. Others pointed out the social risks, such as the exacerbation of inequality. Here especially the earlier discussion of prohibitive verses cautionary objections becomes salient, as not all of those who raised these concerns came to the same conclusions as to RLE's acceptability. For example, Deane-Drummond is quite worried about the social ramifications of RLE. However, while her concerns would seem to forestall RLE, it is unclear whether they are truly prohibitive or if she would allow it if these could be mitigated. Others, such as Cameron and DeBeats, address the same concerns, but as cautions, while still being open to the possibility of RLE. So too the denominational statements nearly all bring up social concerns as cautions, but with the implication that there are ways in which new technologies, possibly including RLE, could be licitly used.

Finally, common to the majority of those considered, whether they were in favor of RLE or not, was the conclusion that how it was pursued matters. Those who approved of RLE were cautious about methods which treated the physical body as disposable. Almost none of the individuals or groups analyzed were in favor of the transhumanist program,

opposing both their goals and their underlying worldview. There are some exceptions, such as Cole-Turner (who is on the Academic Advisory Council of the aforementioned Christian Transhumanist Association), although even he raised some cautionary concerns. Common to all of the advocates, then, was a feeling that those doing or applying this research should proceed with caution.

Conclusion

As the church engages the issues around RLE, it is helpful to have some common language that can be used to compare and contrast the concerns raised by those considering whether it can be pursued licitly. Recognizing what issues are unique to RLE verses common to other biotechnologies, or whether objections are cautionary ones which could be overcome or completely prohibitive, can help those writing about these issues better articulate their positions. It can also help others to better weigh the various positions as they seek to determine what uses of technology are acceptable or if there are any lines we should not cross, even if we have the ability to do so. Given that RLE technology does not yet exist, there are still many unknowns, and many ethicists are hesitant to make definitive statements on permissibility when crucial aspects

like the mechanisms for achieving RLE are still unknown. Since it is impossible to address every speculative avenue of pursuing RLE, the ability to classify concerns can assist with understanding the reasoning behind them and in applying them to various methods of RLE should one or more ever become successful.

The prospect of radically extending the human lifespan has been, and continues to be, one that draws people's attention. There is still a great deal of ethical reflection that needs to take place regarding the permissibility of RLE for the Christian. The tension between the competing goods of seeking long and healthy lives and accepting death as the means by which we enter into God's presence is one that we must continue to wrestle with. Fortunately, the church is not starting from scratch. Plenty of theologians and ethicists have already begun the task of thinking through the issues and making preliminary (or even more definitive) recommendations. The current lack of response denominationally is somewhat concerning, but there is still time. If Christians could recognize the importance of this issue and begin their reflection on it now, it could go a long way toward helping them decide whether or not to make use of RLE technologies should they ever become available. ●●●

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- 2 This tension is famously expressed by the apostle Paul in Philippians 1:21: "For to me to live is Christ, and to die is gain" (ESV).
- 3 See, for example, David B. Friedman and Thomas E. Johnson, "A Mutation in the Age-1 Gene in *Caenorhabditis Elegans* Lengthens Life and Reduces Hermaphrodite Fertility," *Genetics* 118, no. 1 (1988): 75–86; as well as Cynthia Kenyon et al., "A *C. Elegans* Mutant That Lives Twice as Long as Wild Type," *Nature* 366, no. 6454 (1993): 461–64, <https://doi.org/10.1038/366461a0>.
- 4 Aubrey de Grey and Michael Rae, *Ending Aging: The Rejuvenation Breakthroughs That Could Reverse Human Aging in Our Lifetime* (New York: St. Martin's Press, 2007), 28–29.
- 5 For a comprehensive treatment of the history behind many of these experiments, see Hall, *Merchants of Immortality*. See also Derek F. Maher and Calvin R. Mercer, "Introduction: Living for 1,000 Years—or Longer," in *Religion and the Implications of Radical Life Extension* (New York: Palgrave Macmillan, 2009), 5–11.
- 6 See Hank Pellissier, "Transhumanism: There are [At Least] Ten Different Philosophical Categories; Which One(s) are You?" Institute for Ethics and Emerging Technologies, July 8, 2015, <https://ieet.org/index.php/IEET2/more/pellissier20150708> for an overview of several different varieties of transhumanism.
- 7 For one of the most famous examples of this program, see Ray Kurzweil, *The*

Age of Spiritual Machines: When Computers Exceed Human Intelligence (New York, NY: Penguin, 2000), especially chapters 6 and 7. See also Ray Kurzweil, "The Evolution of Mind in the Twenty-First Century," in *Are We Spiritual Machines? Ray Kurzweil vs. the Critics of Strong AI*, ed. Jay W. Richards (Seattle, WA: Discovery Institute, 2002), 12–55.

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- 10 Meilaender, *Should We Live Forever*, 85.
- 11 Meilaender, 113.
- 12 Nigel M. de S. Cameron and Amy Michelle DeBeats, "Be Careful What You Wish for? Radical Life Extension Coram Deo: A Reformed Protestant Perspective," in *Religion and the Implications of Radical Life Extension*, ed. Maher and Mercer, 40–41.
- 13 Cameron and DeBeats, 41.
- 14 Cameron and DeBeats, 41–43.

- 15 Cameron and DeBeats, 43–44.
- 16 Cameron and DeBeats, 45.
- 17 Cameron and DeBeats, 45–49.
- 18 Cole-Turner, "Extreme Longevity Research," 59–60.
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- 20 Daly, 140. Subsequent to the writing of this article Daly published his own book-length treatment of RLE entitled *Chasing Methuselah: Theology, the Body, and Slowing Human Aging* (Eugene, OR: Cascade Books, 2021).
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