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## Christian Ethics and the Ambiguities of Slowing Human Ageing

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### Abstract:

Extending the human lifespan by slowing ageing has moved from legend to the laboratory, offering hope that we might live longer, healthier lives. Though Christian opposition to slowing ageing through technology is common, there is considerable moral ambiguity over ageing attenuation when viewed through the doctrines of creation and the fall, Christology, and eschatology. This paper will survey these varying Christian perspectives on slowing ageing, suggesting that further exploration of the concepts of sin and virtue may help articulate a clearer Christian vision on this vexing subject.

### Outlandish attempts to stay young, and the challenges of an ageing society

The ancient quest for longer life is a bizarre history that includes ancient meditative techniques, the search for legendary fountains, alchemy, and even xenotransplantation (monkey testicles). More recent attempts are no less eccentric and include stem cell transplants, hyperbaric oxygen chambers, young blood transfusions, ketogenic diets, nootropic smart drugs, and pulsed electromagnetic field therapy. Though most of these techniques have yet to produce any real results, life expectancy *has* doubled over the last century in the developed world, largely through improvements in public health and medicine, economic growth, and developments in the areas of nutrition, behavior, and education.<sup>1</sup> North Americans born in 2000 for instance, can on average expect to live to nearly 80 years, compared to just 47 years in 1900.<sup>2</sup>

However, longer life has led to an increasingly older society, and a surge in age-related diseases such as Parkinson's, high blood pressure, dementia, and heart disease. While we are now younger for longer, The President's Council on Bioethics pointed to a 'mass geriatric society' in 2005, with a growing percentage of the US population expected to reach 85 years and beyond.<sup>3</sup> For many, these later years will be a 'prolonged dwindling' marked by chronic illness and increasing frailty.<sup>3</sup> Indeed, recently the Institute for Health Metric and Evaluation's Global Burden of Disease study has noted that (North) Americans are living longer but also spending more time in declining health. We're likely to be sick longer. Over the last thirty years the estimated gap between our lifespan and our 'healthspan'—years of good health—has grown from 10.8 to 12.7 years.<sup>4</sup> While this decrease of time spent in good health has been influenced by the rising prevalence of obesity, diabetes, and substance abuse, the growing gap between lifespan and healthspan can also be attributed to living longer.

Such demographic changes place enormous emotional, social, and financial burdens on healthcare systems still learning to adapt to these changes at the end of life. In the United States for instance, treating Alzheimer's Disease and dementia is already more expensive than cancer and heart disease, costing Medicare and Medicaid over 200 billion dollars in 2020.<sup>5</sup> The number of individuals with Alzheimer's Disease in the US is expected to rise from 4 million in 2005 to nearly 14 million in 2050, with an estimated cost of 584 billion dollars by 2050.<sup>5</sup> Moreover, any successful mitigation of a single disease—whether Alzheimer's or most other common forms of cancer—would increase life expectancy by only a few years at best while doing little to assuage the population growth of those 85 years and older.<sup>6</sup> These troubling statistics have led to the recent formation of the Longevity Dividend Initiative Consortium (LDIC), founded by epidemiologists, gerontologists and economists, among others, devoted to slowing the ageing process itself in hopes of reducing the onset of age-related diseases.<sup>7</sup> The Longevity Dividend envisions older people remaining 'useful'—an admittedly troubling term—and productive for more of their lives, creating wealth for such individuals and the nations they inhabit.<sup>8</sup>

## Slowing the ageing process

Recent laboratory evidence suggests that human ageing may indeed be attenuated. Over the last two decades scientists have extended the healthy lifespans of nematode worms, fruit flies, and mice by slowing the ageing process through genetic engineering, caloric restriction, and other techniques. Scientists are now searching for human analogues, and limited human trials have shown age-reversal in older adults as measured by DNA methylation.<sup>9</sup> In contrast to transhumanist doctrine which aims at radical life extension—including immortality—the LDIC envisions a modest deceleration of ageing, hoping to delay all age-related diseases by approximately seven years, with the possibility of compressing the period of decline before death.<sup>7</sup> Such deceleration would not only reduce the age-specific risk of death, frailty, and disability by roughly half at every age, but would also, it is believed, yield comparable health and longevity benefits for successive generations. The LDIC argues that increased funding for research into slowing ageing makes good sense from a scientific, economic, and public health perspective.

Indeed, anti-ageing research has moved from legend to the laboratory, though it not certain that even a modest deceleration of ageing will produce the purported effects. There is no widespread agreement on whether life extension should focus on extending the healthy lifespan (adding years to life) or on compressing the period of decline before death (adding life to years). Transhumanists, for instance, are widely committed to the former, and those of the Longevity Consortium to the latter. While both perspectives view ageing as a problem for science, perhaps the more challenging case, ethically speaking, concerns the possibility of marginal gains in longevity by slowing ageing as expressed by the LDIC.

## Christian responses to life extension

While religious responses to life extension vary, Christians have tended to view slowing ageing with suspicion, drawing scorn from those who have difficulty imagining what might be wrong with trying to extend the healthy lifespan. Recent surveys indicate that many Christians resist life extension as either being contrary to the will of God, who determines the number of our days, or because the promise of eternal life relativises the importance of this earthly life, especially if the afterlife entails eternal youth.<sup>10</sup> Paul's declaration—'to live is Christ, and to die is gain' (Phil. 1.20 RSV)—is often seen as a biblical expression of this

relativisation. Indeed, a recent survey of students at a Christian university indicated that those holding to some doctrine of an afterlife found the idea of life extension less desirable than those who do not.<sup>11</sup> Generally, those who scored higher on intrinsic religiosity showed significantly less desire to use a strong life extension [i.e. extending the current maximum lifespan] intervention.<sup>11</sup> As one of the co-authors, Loren Martin, concluded: 'it is clear that the Christian population is less in favour of life-extending technologies than non-Christians.'<sup>12</sup>

Such attitudes echo the sentiments of some Christian organisations. The Ethics and Religious Liberty Commission, for instance, has asserted that Christians should reject the utopian, technologically-fuelled dream of transcending ageing.<sup>13</sup> The Commission sees the desire for youth as rooted in a utilitarian understanding of humanity, tempting us to see old age as a burden while also fostering a dismissive attitude towards the elderly who are unable to contribute to society. To the contrary, because humans are created in God's image (Gen. 1.26-27), and thus endowed with intrinsic dignity, old age is not something to be avoided, but *embraced*. 'God casts a rich vision for growing old—one Christians should champion in a world that fears, fights, and attempts to hide aging.'<sup>13</sup> Though the Commission endorses technologies aimed at fighting the effects of ageing as an example of 'common grace,' it warns Christians that since death and disease are the products of the fall (Genesis 3), they can never be eradicated apart from Jesus Christ, who was raised from the dead.<sup>14</sup>

More nuanced arguments against ageing attenuation have been put forward by Judith and Richard Hays, who observe that the Bible never presents ageing as a problem requiring a solution, an attitude that is also consistent with the early church.<sup>15</sup> The problem is not ageing as such, but *death*, which will ultimately be conquered by Christ at his return. Hays and Hays also follow the work of Karl Barth in asserting that Jesus of Nazareth, who aged and grew older, presents us with humanity as God intended it. Moreover, Jesus' willingness to suffer death on the cross 'stands as a permanent reminder that *fidelity* is more important than *longevity*.'<sup>15</sup> The Apostle Paul described such fidelity as knowing Christ and the power of his resurrection, so that he might share in Christ's sufferings, becoming like him in his death (Phil. 3.10). Elsewhere, Paul points out that he was always carrying in his body the death (*nekrosis*) of Jesus so that Jesus' life might also be visible in the body (2 Cor. 4.10). Though long life is certainly a blessing (Prov. 16.31; 20.29), no one should presume the right to one.

Rather than making an idol of longevity by clinging to life at all costs, the way of discipleship eschews a life of self-protection, and includes enduring the suffering that inevitably accompanies ageing. Thus, the cross and resurrection liberate us from the paralysing fear of ageing and dying, setting us free from the frantic pursuit of forestalling death at all costs.<sup>15</sup>

Ephraim Radner is also deeply sceptical of slowing ageing. In *A Time to Keep*, he argues that the doubling of life expectancy over the last two centuries has muted our sense of finitude and dramatically reshaped our thinking on having children, maturation, gender roles, the meaning of work, and our understanding of embodiment.<sup>16</sup> Though we can be thankful for the longer life, our current 'death-marginalizing life expectancy' obscures the unchanging reality that we remain fundamentally limited creatures who depend on God for our existence.<sup>16</sup> Radner asserts that we have drained death of meaning, and thus struggle to imagine that 'our mortality serves as an instrumental grace in our common life.'<sup>16</sup> However, Christians can only view mortality itself as a 'vessel of grace' against the backdrop of the Christian story which speaks of bodily resurrection and future judgement where we will have to give an account of the lives we've lived on earth as embodied creatures (2 Cor. 5.10).<sup>17</sup> Though we have been created as finite beings, the death resulting from the fall (Genesis 3) is not biological, but *spiritual*. Radner thus argues that Christians need to remember these fundamental realities in order to recover a proper sense of the shape of finite, embodied life, where its generative, filial purposes and ineluctable transitions are given their appropriate weight.

In light of these deeper theological realities, Radner sees slowing ageing as a deeply flawed project of modernity, as another form of masking our creatureliness in ways that only strengthen our false presumptions that every technological breakthrough renders death still more remote. Hence, 'Nothing is gained theologically by extending our lifespan. . . . There's no greater, deeper understanding of who we are as human beings. Tacking on another 15 years will obscure further the reality of who we are as creatures.'<sup>12</sup> For Radner, even this modest increase in lifespan is no less problematic than earthly immortality when situated within the Christian framework which includes bodily resurrection and divine judgment. It is interesting to observe that, unlike the Christians who rejected life extension in light of the better life to come, Radner, who also affirms bodily resurrection, is more concerned with

how that transcendent reality impacts the character of earthly lives *now*. More generally, he argues that wisdom is derived from honouring the contour of life within its current limits, with all of the stages and weaknesses particular to each stage. For Radner, life extension confuses *more* life with *abundant* life. And yet, despite these theological objections, there are earlier views that have embraced slowing ageing as a way of overcoming the effects of the fall (Genesis 3).

## The Baconian project and slowing ageing

The modern quest to slow human ageing can be traced back to Francis Bacon (1561-1626), and his call for science to cultivate *useful* knowledge—over against mere theoretical or contemplative knowledge—to improve the human condition. More generally, contemporary science is often described as ‘Baconian’ insofar as it seeks to eliminate suffering and expand choice.<sup>18</sup> But Bacon framed this quest theologically; such knowledge would be put to use for ‘the benefit and relief of the state and society of man,’ namely, ‘an enlargement of his power over nature.’<sup>19</sup> By ‘power over nature,’ Bacon means specifically that power Adam exercised before the fall (Gen. 3), a power assigned to man by God himself. In short, Bacon was calling for scientists to cultivate practical knowledge, but to do so within a Christian framework. Hence, ‘all knowledge is to be limited by religion, and to be referred to use and action,’ specifically, Christian charity.<sup>19</sup> Without such charity, asserted Bacon, it would be impossible to properly advance scientific knowledge.<sup>20</sup> If properly and humbly pursued, such knowledge would also exalt God’s glory.

Bacon’s religious vision for the renewal of all things is breathtakingly expansive. By *interrogating* nature rather than merely *interpreting* it, useful knowledge would enable humanity to make significant inroads on the conditions of fallen, embodied existence marked by disease and decay. This included ‘a discovery of all operations . . . from immortality (if it were possible) to the meanest mechanical practice.’<sup>19</sup> But no feature of prelapsarian Eden warranted more attention than greatly extending life by slowing human ageing. By continually treating the body’s own repair functions, Bacon speculated that ageing might be perpetually forestalled, allowing us to live much longer, if not indefinitely: ‘the matter whereby they [parts of the body] are repaired would be eternal, if the manner of repairing

them did not fail.<sup>21</sup> Though Bacon also interpreted ageing as a punishment from God, he also believed that we could recover the lifespans of the biblical patriarchs, which spanned centuries (Genesis 5-11). He thus sharply criticised physicians who too easily declared diseases incurable, holding them culpable for failing to uncover the various mechanisms of ageing. 'But the lengthening of the thread of life itself, and the postponement for a time of that death which gradually steals on by natural dissolution and the decay of age,' asserted Bacon, 'is a subject which no physician has handled in proportion to its dignity.'<sup>22</sup> If attempting to recover Methuselah-like lifespans did not violate God's sovereignty, neither was there any perceived conflict between a longer earthly life and the promised eternal life. Indeed, Bacon warned Christians against gazing too intently into the mysterious glories of heaven, lest long life be too lightly esteemed. Though Christians 'ever aspire and pant after that land of promise,' we should also consider long life as 'a mark of God's favour if, in our pilgrimage through the wilderness of this world, these our shoes and garments (I mean our frail bodies) are as little worn out as possible.'<sup>21</sup>

Bacon contributed little new knowledge into human ageing, but his urgent call for searching out its causes in order to bring it under human control lent considerable prestige to the idea of prolonging life through inductive science. Even though his speculation concerning earthly immortality stretches the tension between this life and the next to the breaking point, the difficulties of earthly life and the promise of a better life to come presented no real theological impediment to his program of life extension, for he utterly rejected pursuing longevity for longevity's sake. Long life was inextricably tied to a Christian vocation of bringing an end to sickness and suffering through the cultivation of instrumental knowledge, even as we move inexorably toward our heavenly home.

As we have seen, Bacon drew inspiration for his longevity program from the story of the fall in Genesis 3. Prelapsarian (pre-fall) Adam stood as a figure of hope of what might be recovered through the cultivation of instrumental knowledge while also providing a theological safeguard against imposing any template on nature rooted in vain imagination. 'God forbid,' declared Bacon, 'that we should give out a dream of our own imagination for a pattern of the world.'<sup>23</sup> Ultimately, he saw no real conflict between the potential of earthly immortality and eternal life. However, we might ask whether Bacon's vision is sufficiently

*Christian* insofar as his references to Jesus Christ—the last Adam (1 Cor. 15.45)—are missing from his account of slowing ageing. How might the Incarnation impact a Christian understanding of life extension? In turning to Karl Barth’s Christological understanding of the human creature, we find a more theologically robust framework, allowing for, in principle, for a near indefinite length of life.

## Karl Barth’s (1886-1968) Christocentric anthropology

For the Swiss theologian Barth, permissible forms of intervention or ‘enhancement’ are not determined by our own values and desires (agreeing in principle with Bacon), but by the picture of humanity as revealed in the Incarnation of Jesus Christ—God in the flesh (John 1.14)—who took on our full human nature. Jesus is the ‘Archimedean point’ from which true knowledge of humanity might be established, though there are no simple, straight lines to be drawn from his human nature to ours.<sup>24</sup> For Barth, to be human is to be ‘determined by God for life with God.’<sup>24</sup> Barth’s theological anthropology rests on the fact that God has determined and created humans to be God’s covenant partner; to be God’s covenant-partner is to *be* human. But if this is true, notes Barth, then it would seem that our *finite* nature and its appropriateness as revealed in Jesus Christ contradicts our divine determination as covenant partners of the *eternal* God.

Though Barth dismisses any ‘abstract’ longing for life beyond one’s allotted span, he nevertheless considers whether this covenant relationship with God demands that our earthly life be unlimited. ‘What but an unlimited, permanent duration can be adequate for the fulfillment of this determination?’<sup>25</sup> Indeed, this summons to be God’s covenant partner is a ‘gift and task from the eternal God’ while at the same time being ‘the cause of the discontent.’<sup>25</sup> Barth says that following God and serving our fellow creatures means that life must endure: ‘it has an urge for perfection; it is impatient with all limitations; it storms all barriers.’<sup>25</sup> There is real tension here between our divinely-determined allotted span and our determination as God’s covenant partners. And yet, in spite of our desire to ‘storm all barriers,’ Barth insists that our natural, bounded lifespan is also a sign of our divine determination on account of the Incarnate Word, Jesus Christ, who took on human nature ‘in His time.’<sup>25</sup> Hence, ‘the existence of the man Jesus in time is our assurance that time as the form of human existence is willed and created by God and given to man.’<sup>25</sup> Not only was



Jesus' embodied limitedness necessary for him to die on the cross, but it also means that *finitude is proper to our existence*, and should not be regarded as intrinsically negative or evil. To the contrary, we should welcome our allotment with gratitude and joy.<sup>25</sup>

In light of this Christological anthropology, Barth can acknowledge that 'we are right to ask for duration and perfection in our life' while also warning us against thinking 'that we ourselves can and must achieve this duration and perfection by a power immanent in our life as such.'<sup>25</sup> Might then there be some warrant for using technology to extend the lifespan—perhaps even radically—within the tension created between these two divine determinations? Some say 'yes.' For instance, Gerald McKenny asserts, 'Not only does Barth have no direct objection to such proposals [radical life extension]; his conception of the normative significance of human nature seems to have nothing at all to say about them, unless it is simply to issue a warning not to cross the line into actual immortality and thus eliminate one boundary of our lives.'<sup>26</sup> While Barth briefly considers the dangers of an unbounded life in vitiating our responsibility for the perfection demanded for fellowship with God, extending life by an extra decade or so would hardly seem to threaten this responsibility, or entail a rejection of the goodness of our finitude as determined by the real man Jesus.<sup>25</sup> Indeed, might not anti-ageing technology assist one's pursuit of the perfection demanded of Christians as co-partners in God's gracious covenant?

Though Barth might have no objection to life extension, he is certainly aware of the nature of sin as determined by the real man Jesus (who was without sin), whose soul was in perfect submission to God, and whose body was perfectly ruled by his soul. Sin, says Barth, manifests itself as sloth (*Trägheit*), a disruption in the proper order of body and soul, and anxiety (*Sorge*), understood as disruption of our right relationship to our temporality. In our sloth we are unable to rest in the givenness of our own being, fretting over our limited existence and wishing things were rather different. Specifically, 'we try to arrest the foot which brings us constantly nearer to this frontier.'<sup>27</sup> Moreover, in our anxiety (*Sorge*) we make our allotted duration of life unbearable which only fuels frenetic, ceaseless activity, and often includes quests for longer life.<sup>27</sup> From Barth's Christocentric perspective, we might consider contemporary attempts to slow ageing as products of both sloth and anxiety. Nevertheless,

the question remains as to whether *all* such attempts to slow ageing must fall prey to these temptations. It should be noted too that Barth's Christology may prove useful to any larger consideration of human enhancement from a Christian perspective insofar as Jesus Christ presents us with the picture of humanity as determined by God. Though great care is required in drawing out the implications Jesus' humanity has for ours, the Incarnation bespeaks a divine validation of human creatures *as* human.

## Conclusion

This brief, selective survey has shown that the Christian faith can accommodate a variety of positions on slowing human ageing. Those who argue against slowing ageing on a popular level typically do so either by appealing to God's sovereignty in determining the boundaries of human existence or the promise of a better life in eternity, free from death and disease. More sophisticated objections see ageing as theologically normative, arguing that our finitude and mortality are a gift of God that should be graciously received. Radner, for instance, offers a penetrating analysis of how life extension threatens to distort the God-given shape and trajectory of earthly life, potentially distorting family relationships, the meaning of maturity and work, gender roles, and the meaning of embodiment. Ultimately however, his objections are grounded in the transcendent reality of the judgment seat of Christ. Bacon and Barth, on the other hand, respectively promote and in principle allow for life extension, recognising the theological tension between our unlimited desires and our limited bodies, by referring to the first Adam (Bacon) or the second Adam, Jesus Christ (Barth).

These competing arguments underscore the ambivalent nature of slowing ageing from a Christian perspective. Certainly, while the claims of those who reject life extension warrant careful consideration, we might wonder how a moderate extension in healthy life—5 to 10 years— would so radically reshape life so as to warrant its complete dismissal. It would seem that the tension between the goodness of embodied finitude and the possibility of significantly longer life invite deeper moral questions along the lines of those asked by both Radner and Barth, questions concerning the nature and purposes of embodiment, and how life extension might impact desire and a well-lived life (doesn't our limited span require us to

consider and rightly order our desires?). The ethicist Gilbert Meilaender raises an important point here, when he says that Christians cannot really know what to think of attempts to slow ageing unless we know what a human being is, and what flourishing means.<sup>28</sup> We might also inquire how Christians discern whether engaging in life extension is the product of care and anxiety (Barth). Other questions come to mind, such as considering how living under the assumption of a longer lifespan impacts the cultivation of certain virtues, like patience, forbearance, forgiveness, courage, and fortitude. And what of the theological virtues of faith, hope, and love? Moreover, there is ample room to consider how a theology of contentment which respects the 'givenness' of existence might considerably delimit the project of life extension, though these are complex questions, especially within a Christian narrative that recognises both the goodness and fallenness of the created order, both the finitude of embodied existence and our limitless desires that can only, ultimately, find their fulfillment in God. Further inquiry into slowing aging must certainly account for the tensions that have been highlighted here, but will hopefully give us a deeper understanding of God and ourselves, even if no final answer to the life extension challenge can, from a Christian perspective, be given.

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