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TECHNOLOGY DEFEATING DEATH. FROM A METAPHYSICAL ISSUE TO AN ENGINEERING PROBLEM?

ABSTRACT

Contemporary Western research is increasingly characterised by the move from thinking of ageing and, consequently, death as metaphysical issues to thinking of them as engineering problems that can, and even must, be solved. And an increasing number of millionaires funds science and technology whose objective is the extreme extension of life, i.e. prolongevity, and possibly the defeat of death, as if winning over ageing and death is the highest success one can possibly achieve as a highly successful human being. From a philosophical perspective, the following two questions arise. First, what may be the meaning of the ever closer correlation between the idea of human (individual) success and (social) progress and the idea of defeating ageing and death? Second, what may be the meaning of the ever closer correlation between the idea of defeating ageing and death and the idea of (even ultimate) scientific and technological development? Their possible answers start with the following insights. First, that constitutively, and not by accident, we have a drive to transcend our humanity as it is. Second, that we have possible alternatives to transcending our humanity by transcending our ageing and death, i.e. trying to remove time from our ontology: indeed, ageing as moving from life to death may not be thought of as the worst kind of individual failure, but as a kind of individual success, i.e. the individual capability to think of it as one great existential experience of whose values and opportunities we would otherwise be deprived.

KEYWORDS

Ageing, Death, Longevity, Prolongevity, Emerging technologies, Artificial intelligence

Introduction

In 2023, "The Guardian" reported the following news about Bryan Johnson, who is a forty-eight-year-old millionaire spending around \$2 million a year to reverse ageing by using the most sophisticated technologies under the supervision of several scientists and physicians. According to "The Guardian",

Bryan Johnson [...] rises at 4.30am, eats all his meals before 11am and goes to bed – alone – at 8.30pm, without exception. In the intervening hours, he

ingests more than 100 pills, bathes his body in LED light and sits on a high-intensity electromagnetic device that he believes will strengthen his pelvic floor. This is all done in the service of slowing his rate of ageing until, he hopes, one year of chronological time can pass while his biological age stays the same. His ultimate goal? ‘Don’t die’. Oh, and, incidentally, he wants as many people as possible to join him. [...] Johnson refers to himself as ‘the world’s most measured human’. His team of doctors and health experts are constantly monitoring everything his body does, from his cholesterol levels to the length of his telomeres – DNA ‘caps’ that prevent our chromosomes from fraying, like the plastic tips on shoelaces, and are thought to play a key role in cell death and ageing. (Snape, 2023, no page number)

If we move from the journalist’s report to Bryan Johnson’s website¹, we find the following three sections. First and foremost, the section entitled ‘Don’t die community’, where, under the words ‘Join or die’², we can read that the community’s objective is ‘defeating all causes of human and planetary death’. The tool is technology, i.e. ‘an algorithm [...] that could better care for me than I can myself’ when it comes to ‘helping me not die’. For instance, ‘instead of my mind eating what it “was in the mood for” or “what sounded good”, I shifted decision authority to my body. We measured my 70+ organs, enabling them to speak via data what they needed to be in peak condition. My mind did not have the authority to override the algorithm’. Second, the section entitled ‘Protocol information’³, where we can read the minutest details of his ‘up-to-date protocol, daily routine and current therapies’. Third, the section entitled ‘Blueprint interventions’⁴, where objectives and tools translate into business, i.e. the sale of a variety of products, from food to pills.

Bryan Johnson is not an eccentric and isolated case. On the one hand, according to his website, in 60 days since the launch of his initiative in November 2023, about 13,000 people have joined it. On the other hand, an increasing number of millionaires funds science and technology whose objective is the extreme extension of life, i.e. *prolongevity*, and possibly the defeat of death (see Friend, 2017). Interestingly enough, what Bryan Johnson and the other millionaires share is not only the general objective of defeating ageing and death by using their wealth but also the particular tool to do it, i.e. technology, to the point that the phenomenon described above seems to be a kind of Silicon Valley thing – and, most interestingly, to the point that death seems to move from being a metaphysical issue to being a ‘merely [...] technical’ (Friend, 2017,

1 See <https://www.bryanjohnson.com/> (last accessed: September 16, 2024). It goes without saying that the kind of rhetoric used on the website, starting with the use of the imperative verb ‘[d]on’t die’, may undermine the credibility of science among citizens (see at least Collins and Evans, 2007, and Collins, 2014).

2 See, also for the following quotes, <https://dontdie.bryanjohnson.com/> (last accessed: September 16, 2024).

3 See, also for the following quote, <https://protocol.bryanjohnson.com/> (last accessed: September 16, 2024).

4 See <https://blueprint.bryanjohnson.com/> (last accessed: September 16, 2024).

no page number) problem to be solved (and solvable), i.e. an engineering problem to be solved (and solvable).

Thus, the following clues upon which to reflect emerge. First, it seems that the wealthier one is, the easier it is to set oneself the objective of defeating ageing and death – as if winning over ageing and death is the highest success one can possibly achieve as a highly successful human being. Second, it seems that the more powerful technology is, the more it faces ageing and death as its ultimate challenges to be won over – as if the post-Enlightenment challenge masterfully expressed by Shelley's *Frankenstein, or the modern Prometheus* can come to fruition through contemporary technology: 'if I could banish disease from the human frame and render man invulnerable to any but violent death!', Shelley's protagonist, who is a gifted scientist, exclaims (Shelley 1994 [1818 and 1831]: 37).

The two clues listed above lead to the following further clue: it seems that contemporary Western culture takes to the extremes one of the most distinctive ideas of its genesis between the Enlightenment and Romanticism, which is the idea of human progress – more precisely, the idea that human progress results first and foremost from scientific and technological development.

It is no coincidence that, even in the specific case of longevity, Western culture moves from the idea that it was possible in the (far) past, i.e. the antediluvian era (see Gruman, 1966), to the idea that it will be possible in the (near) future precisely because of scientific and technological development: 'because of the progress of science, the length of life may be extended beyond the antediluvian standard' (Gruman 1966: 83), to the point that, '[i]n a word, why may not man be one day immortal?' (Godwin 1946 [1793]: 224).

The question quoted above also gives me the opportunity to clarify from the outset the way in which I will approach the relationship between immortality, on the one hand, and geroscience, on the other hand. Even though they are distinct areas, in that the former addresses metaphysical issues and the latter addresses medical issues, they seem to increasingly converge in today's reality, from the case of Bryan Johnson to other cases I will analyse. Indeed, there is a meaningful sense in which geroscience seems to increasingly be to immortality as the means is to the end, as I will develop in what follows.

Starting with the clues listed above, I will try to answer the following two questions from a philosophical perspective. First, what may be the meaning of the ever closer correlation between the idea of human (individual) success and (social) progress and the idea of defeating ageing and death (against, for instance, thinking of human individual success and social progress as the increasing capability to think of ageing and death as meaningful existential experiences)? Second, what may be the meaning of the ever closer correlation between the idea of defeating ageing and death and the idea of (even ultimate) scientific and technological development?

The proposal I will argue as a possible alternative to the two correlations described above is the following: if it is true that we, as humans, constitutively have a drive to transcend our humanity as it is, it is also true that we can do

it not only by transcending our ageing and death, i.e. trying to remove time from our ontology, but also by ageing and dying, i.e. trying to exploit our being temporal beings – which means that we can transcend our humanity as it is by thinking of ageing and death not as a kind of failure, but as a kind of success, in that they can be great existential experiences of whose values and opportunities we would otherwise be deprived.

Historical cornerstones of the idea of prolongevity

As we have partly seen, prolongevity as the extreme extension of life, and even as immortality, is especially an objective of contemporary Western culture, specifically science and technology. Conversely, ancient Western culture is especially characterised by the opposite idea, according to which ageing and death not only cannot be avoided but also should not be avoided, in that immortality is not better than mortality (see Gruman, 1966). For instance, if we go back to the ancient Prometheus, who inspires Shelley's masterpiece, we learn that ageing and death are constitutively human as a divine punishment to be accepted (see Hes. *Op.*).

Ancient philosophers emphasise the acceptability, and even the desirability, of ageing and death. According to Aristotle, death is the natural end of life (see Arist. *De An.*). According to the Epicureans, there is no reason to defeat ageing and death not only because they are nothing to us but also because existent pleasures are finite and cannot be increased by immortality (see especially Lucr. *De rer. nat.*). According to the Stoics, wisdom also means the capability to accept the rules of nature, including ageing and death, which make future generations possible (see especially M. Aur. *Med.*). Also, the intersection between ancient philosophy and Christian theology adds a further argument for ageing and death: if it is true that mortal (earthly) life is followed by immortal (heavenly) life, it is also true that ageing and death are the conditions under which the latter, i.e. humans' ultimate objective, is possible (see especially Aquinas *STh.*).

Thus, according to ancient Western culture, ageing and death are not thought of as something to be defeated. Conversely, in the worst case, they are considered not only as acceptable but also as desirable and, in the best case, they are considered as possible in unreachable spatiotemporal scenarios, from an out-of-reach past time (as in the case of the antediluvian era, as we have seen) to an out-of-reach future time (as in the case of the desperate search for the fountain of eternal youth, see Gruman, 1966), in addition to an out-of-reach space (as in the case of the Hyperboreans, see Gruman, 1966).

Something starts changing from the Middle Ages onwards, when, interestingly enough, the alchemists start strengthening the idea that science can exert a strong power over nature, including human nature and its limits. Doctor Mirabilis, i.e. Roger Bacon, especially emphasises that '[t]he possibility of the prolongation of life is confirmed by the consideration that the soul naturally is immortal and capable of not dying. So, after the fall, a man might live for

a thousand years [i.e., Methuselah]; and since that time the length of life has been gradually shortened. Therefore, it follows that this shortening is accidental and may be remedied wholly or in part' (Bacon 1923: 35).

The Renaissance is characterised by a further strengthening of prolongevity, especially through Cornaro, who even starts introducing ideas typical of contemporary Western culture. More precisely, human life starts being considered as successful not only in terms of exceptional feats but also, and especially, in terms of (healthy) longevity, no matter if immortal heavenly life follows mortal earthly life: 'Our Maker, having ordained that the life of man should last for many years, is desirous that everyone should attain the extreme limit [...]. Wherefore it is that God wishes we should all live to extreme age' (Cornaro 1905: 98). Typically contemporary practices, starting with calorie restriction, are also introduced as the conditions under which healthy longevity is possible: 'these two very important rules which I have always so carefully observed [are] relative to eating and drinking, namely, to take only the quantity which my stomach can easily digest and only the kinds that agree with it' (Cornaro 1905: 48).

Modern Western culture, as we have seen through the nod to the Enlightenment, continues to develop the idea that the scientific and technological defeat of ageing and death is an effective measure of human individual success and social progress. Specifically, according to Condorcet, '[w]ould it be absurd then to suppose that [...] the day will come when death will be due only to extraordinary accidents or to the decay of the vital forces, and that ultimately the average span between birth and decay will have no assignable value?' (Condorcet 1955 [1795]: 200).

The transition from Enlightenment to Romanticism contributes to prolongevity through the idea that humans' power can win over nature's power. The twentieth century also contributes through at least the following two phenomena. First, increasing secularisation emerges, which means that, if mortal earthly life is not followed by immortal heavenly life, ageing and death move from being the conditions under which the latter is possible to being the worst enemies of human life. Second, an increasing development of medicine emerges, especially when it comes to treating infections that affect humans from birth onwards, which means that ageing becomes something far more widespread and, consequently, death becomes something far more correlated with ageing, from fewer young women dying in childbirth to fewer babies dying immediately after birth. In other words, the older humans die, the more ageing and, consequently, death are thought of as their worst enemies.

It is worth noting that the history of Eastern culture does not document an analogous phenomenon. It is no coincidence that classical Chinese culture, starting with Taoism, is the first to translate prolongevity into a kind of discipline, i.e. respiratory, dietary, sexual, gymnastic and spiritual techniques, to the point that the Chinese word 'hsien', i.e. humans who achieve earthly immortality through discipline, has no translation in Western languages (see Giles, 1948. See also Gruman, 1966).

The idea of prolongevity in contemporary language

Yet, contemporary Western culture seems to take prolongevity to the extremes, which is a phenomenon emerging from both the kind of language we use and the kind of technology we design and use.

The following premise is necessary: speaking of prolongevity in contemporary Western culture means speaking of something complex, including both moderate and extreme positions. In the first case, there is an attempt to prolong lifespan, and especially healthspan. In the second case, there is an attempt to achieve immortality. And objectives vary accordingly, from slowing down ageing to stopping ageing to even reversing ageing.

In any case, the complex variety of positions seems to share the following binomial, which is symptomatic of contemporary Western culture in general: the noun “ageing” increasingly correlates with the adjective “successful” (see at least Baltes and Baltes, 1990, Rowe and Kahn, 1997, Charness and Schaie, 2003, Wykle, Whitehouse and Morris, 2005, Lamb, 2017, Levitin, 2020, and Howard *et al.*, 2022).

As far as the first point is concerned, i.e. the kind of language we use, we may analyse the contemporary debate on prolongevity starting with the following three sources: first, the websites of biotechnology companies, second, the websites of associations and, third, publications.

In the case of biotechnology companies, we can read, for instance, that the objective of Altos Labs, i.e. the 2022 biotechnology company also funded by Bezos, is ‘the battle against ageing and age-related disease’⁵ through ‘pushing the reset button on our cells’. Again, we can read that the objective of Calico Labs, i.e. the 2013 biotechnology company founded by Google, is ‘delay[ing] [ageing’s] start or reduce its speed’⁶. And, restricting ourselves to cases of relevant biotechnology companies founded between the former and the latter, we can read that the objectives are, in chronological order, to ‘[r]educe your biologic age and optimise your healthspan’⁷, ‘to extend healthy productive longevity’⁸, to produce ‘disruptive pharmaceuticals that slow, halt or reverse ageing’⁹, ‘to unlock cellular immortality and regenerative capacity to reverse age-related changes in the body’¹⁰, to develop ‘cellular rejuvenation therapies to reverse and prevent diseases of ageing’¹¹ and to ‘restore cell effectiveness by

5 See, also for the following quote, <https://www.inverse.com/science/the-cellular-reset> (last accessed: September 22, 2024).

6 See <https://www.calicolabs.com/> (last accessed: September 22, 2024).

7 See <https://www.humanlongevity.com/our-care-ecosystem/> (last accessed: September 22, 2024).

8 See <https://insilico.com/> (last accessed: September 22, 2024).

9 See <https://juvlabs.com/pages/our-story> (last accessed: September 22, 2024).

10 See <https://investors.agexinc.com/company-info/default.aspx> (last accessed: September 22, 2024).

11 See <https://www.lifebiosciences.com/> (last accessed: September 22, 2024).

“turning back the clock” on the epigenome¹². At least three issues are worth noting (and upon which I will reflect in what follows). First, that, sometimes explicitly and sometimes implicitly, the almost military rhetoric used implies that ageing is not a meaningful existential experience, but an enemy to be ‘battle[d] against’. Second, that, sometimes explicitly and sometimes implicitly, ‘the battle against ageing’ is driven by the typically Western idea of success, which implies the optimisation of one’s performance, from the particular objective of optimising one’s ‘healthspan’ to the general objective of optimising one’s ‘healthy productive longevity’. Third, that, more explicitly than implicitly, the optimisation of one’s performance and, finally, life coincides with the most ambitious objective of even ‘revers[ing] ageing’ through ‘rejuvenation therapies’, from the metaphors ‘pushing the reset button on our cells’ and “‘turning back the clock” on the epigenome’ to the metaphor ‘unlock[ing]’ ‘regenerative capacity’ and, finally, ‘cellular immortality’.

In the case of the websites of associations, we can read, for instance, that the Academy for Health and Lifespan Research, which defines itself as ‘the world’s leading ageing research unit’¹³, has the ‘mission’ to ‘[d]rive change among states and payers to recognise ageing as a treatable condition’ on the basis of the ‘vision’ that ‘breakthroughs in longevity research are not just accelerated but, more importantly, made accessible to all’. Among other analogous associations, there are, in chronological order, the International Longevity Alliance, whose ‘fight against degenerative ageing processes’¹⁴ is ‘for all’, the Longevity Science Foundation, whose ‘mission’¹⁵ is ‘making longevity medicine accessible to all’, and Healthy Longevity Medicine Society, whose ‘vision’ is ‘[t]o develop longevity medicine as a respected and independent medical speciality that extends the healthspan of ageing individuals, tackles ageing mechanisms and optimises an individual’s performance’¹⁶. Interestingly enough, the three issues emerging from the websites of biotechnology companies reappear, first, as the ‘fight against degenerative ageing processes’, second, as ‘optimis[ing] an individual’s performance’ and, third, as ‘breakthroughs’ that make ageing ‘a treatable condition’. Also, two further issues emerge. First, that the establishment of associations serves to give credibility to prolongevity, specifically ‘[t]o

12 See <https://www.turn.bio/the-science> (last accessed: September 22, 2024). It is worth noting that the word ‘epigenome’ increasingly becomes popular in today’s reality to emphasise the distinction between chronological age (for instance, Bryan Johnson’s forty-eight years) and biological age (for instance, Bryan Johnson’s younger age from a medical perspective.) See at least Horvath, 2013, Horvath and Raj, 2018, Levine *et al.*, 2018, Belsky *et al.*, 2020, and García-Barranquero *et al.*, 2024.

13 See, also for the following quotes, <https://www.ahlresearch.org/> (last accessed: September 22, 2024).

14 See, also for the following quote, <https://longevityalliance.org/manifesto/> (last accessed: September 22, 2024).

15 See, also for the following quote, <https://longevity.foundation/> (last accessed: September 22, 2024).

16 See <https://hlms.co/> (last accessed: September 22, 2024).

develop longevity medicine as a respected and independent medical speciality' (see also Hamzelou, 2024). Second, that, even though prolongevity is a wealthy thing, paradoxically enough, the rhetoric used is that it is 'made accessible to all', 'for all' and 'accessible to all' (which leads us to ask to what extent it is a matter of humanitarianism and to what extent it is a matter of marketing).

In the case of publications, restricting ourselves to cases of monographs written by advocates of prolongevity, we can read, for instance, the following titles and subtitles: *Ending ageing. The rejuvenation breakthroughs that could reverse human ageing in our lifetime* (see De Grey, 2008), *Life span. Why we age and why we don't have to* (see Sinclair, 2019), *Outlive. The science and art of longevity* (see Attia, 2023) and *Why we die. The new science of ageing and the quest for immortality* (see Ramakrishnan, 2024). The titles and subtitles quoted above are in themselves quite eloquent, but I will elaborate on their arguments in what follows.

From theory to practice: the idea of prolongevity and contemporary technology

If we move from the first point, i.e. the kind of language we use, to the second point, i.e. the kind of technology we design and use, we may say that, even though various kinds of technology are designed and used to pursue prolongevity, something quite specific seems to emerge as their essential core: the engineering of ageing and, consequently, death – the move from thinking of ageing and, consequently, death as metaphysical issues to thinking of them as engineering problems.

If we go back to what we have quoted above, we cannot help but note, first, that biotechnology companies lead the way, second, that associations are mostly made up of various kinds of technologists and, third, that, according to the authors of the monographs, 'the body is a machine, and [...] machines can [...] be kept going indefinitely' (De Grey 2008: 326), in that '[a]ging of the body, just like ageing of a car [...], is merely a maintenance problem' (De Grey 2008: 21). More precisely, we 'could stop thinking of ageing as a hopelessly complex theoretical problem to solve, and get on with attacking it head-on, as an engineering challenge that needed to be overcome [...] [in terms of] "[e]ngineered negligible senescence"' (De Grey 2008: 44), which means that 'the dark specter of the age plague [will be] driven away by the sunshine of perpetual youth' (De Grey 2008: 339). Also, an engineering approach emerges when '[a]ging, quite simply, is a loss of information' (Sinclair 2019: 20): if it is true that 'our cells retain their youthful digital information even when we are old [...] [and that, to] become young again, we just need to find some polish to remove the scratches' (Sinclair 2019: 23), it is also true that 'ageing can be reset' (Sinclair 2019: 161). Again, an engineering approach emerges when, 'subscrib[ing] to a kind of Silicon Valley approach to longevity and health [...] [and] believing that it is possible to hack our biology, and hack it, and hack it' (Attia 2023: 409), ageing and, consequently, death are 'basically an engineering problem' (Attia

2023: 409). Finally, an engineering approach emerges when we think of ageing and, consequently, death, in terms of '[r]esetting the biological clock' (as even the contents of Ramakrishnan's 2024 monograph introduce).

As a philosopher, the purpose of my article is not the review of the various kinds of technology designed and used to pursue longevity. Thus, before moving from basic information to a theoretical, specifically philosophical, perspective, I restrict myself to using one exemplary case, i.e. Altos Labs, whose biotechnology research is based on what follows¹⁷. First, the work of Nobel laureate Yamanaka (who is also Altos Labs' scientific advisor) on reprogramming cells 'to erase [...] [their] identity and age'. Second, the work of Izpisua Belmonte (who is also Altos Labs' founding scientist and director) on reprogramming cells 'to a state that is more resilient to stressors while retaining both their identity and the enhanced functions seen in young cells'. Third, Altos Labs hired researchers who have distinguished themselves in studies on ageing, including Horvath and Levine, who, according to the "MIT Technology Review" (see Hamzelou, 2022), lead the way when it comes to working on the so-called 'ageing clocks' (Hamzelou, 2022, no page number), which not only 'aim to predict how long you'll live' (Hamzelou, 2022, no page number) but also 'promise to measure biological age and help identify anti-ageing drugs' (Hamzelou, 2022, no page number). In any case, Altos Labs' keywords, which are also documented in their press release, result, again, from an engineering approach, which translates into 'unravelling the deep biology of cellular rejuvenation programming'¹⁸ – again, when it comes to ageing and death, contemporary Western research in particular, together with contemporary Western culture in general, is increasingly characterised by the move from thinking of ageing and, consequently, death as metaphysical issues to thinking of them as engineering problems (which, precisely as engineering problems, can, and even must, be solved).

The idea of longevity from a philosophical perspective

Thus, our starting questions arise. First, what may be the meaning of the ever closer correlation between the idea of human individual success and social progress and the idea of defeating ageing and death? Second, what may be the meaning of the ever closer correlation between the idea of defeating ageing and death and the idea of even ultimate scientific and technological development?

From a philosophical perspective, and for the purpose of my article, I will start with the seminal works of Nagel (1970, 1979 and 1986) and Williams (1973), in addition to Overall's philosophical work (2003) and Bauman's sociological

¹⁷ See, also for the following quotes, <https://www.altoslabs.com/science> (last accessed: September 24, 2024).

¹⁸ See https://www.prnewswire.com/news-releases/altos-labs-launches-with-the-goal-to-transform-medicine-through-cellular-rejuvenation-programming-301463541.html?tc=eml_cleartime (last accessed: September 24, 2024).

work (1992), which may also offer meaningful philosophical insights (as far as further philosophical publications are concerned, see at least Donnelly, 1978, Nussbaum, 1994, Malpas and Solomon, 1999, Hardwig, 2000, Luper, 2009 and 2014, Schumacher, 2010, Bradley, Feldman and Johansson, 2013, Taylor, 2013, Cholbi, 2015, Bruckner, 2021, and Cholbi and Timmerman, 2021).

According to the philosophical debate arising from the opposite positions of Nagel and Williams, on the one hand (following Nagel's argument), death (of old age) is legitimately considered as humans' enemy (to be possibly defeated), in that their lives are thought of as experiences worth prolonging indefinitely, and, on the other hand (following Williams' argument), death (of old age) is not legitimately considered as humans' enemy (to be possibly defeated), in that their lives are thought of as boring and meaningless experiences if prolonged indefinitely. More precisely, Williams' argument is inspired by the literary character of Elina Makropulos (see Čapek, 1922), who achieves immortality and, after having reached the age of 342, testifies that her indefinitely long life means boredom and meaninglessness, in that, at least after having reached old age, adding years does not mean adding a meaningful variety of experiences and, ultimately, meaning (see Williams, 1973). Nagel's opposite argument is that additional years mean additional meaning both in the case of good events and in the case of bad events (see especially Nagel, 1970). In other words, humans' lives are always experiences worth prolonging indefinitely, which is an argument that frequently serves as the basis for contemporary advocates of prolongevity, starting with transhumanists (see at least More, 1990, Bostrom, 2005 and 2008, Kurzweil, 2005, Kurzweil and Grossman, 2005, and More and Vita-More, 2013).

It is worth quoting at least Overall's elaborations on the opposite positions of Nagel and Williams, in addition to her elaborations on both past and present arguments (especially Nussbaum's arguments, according to which death 'does not only frustrate projects and desires that just happen to be there. It intrudes upon the value and beauty of temporally evolving activities and relations', Nussbaum 1994: 209). Overall, who states that she is 'no longer [...] sure [...] that immortality is a desirable state' (Overall 2003: 218), at least advocates what she defines as 'affirmative prolongevityism' (Overall 2003: 194), i.e., first, the need for 'directing resources, research and services toward boosting life expectancy' (Overall 2003: 194), second, the need for 'placing a special emphasis on improving the life expectancy of members of disadvantaged groups with current low life expectancy' (Overall 2003: 194) and, third, the need for 'recognis[ing] that young people have interests in supporting elderly people rather than regarding them as a "burden"' (Overall 2003: 194-195).

Overall's 'affirmative prolongevityism' is also an effective way of reviewing contemporary arguments against prolongevity. More precisely, her position results from her critical dialogue with the following four attacks on prolongevity. First, that prolongevity is caused by nothing more than the fear of death (which is a typically Epicurean argument). Second, that death is natural, and even necessary, both individually and socially (which is an argument advocated,

for instance, by Callahan 1998: 130 and 448: if it is true that the cycle of life is the ‘foundation for living within the boundaries of nature’, it is also true that ‘people [...] must accept the finitude of the body, the fragility of the mind and the fleeting nature of health’). Third, that humans already live long enough (which is an argument advocated both in the past, starting with the Epicureans, and in the present. See at least Callahan 1998: 82: ‘The average person in good health in the developed countries of the world [...] already lives long enough to accomplish most reasonable human ends’). Fourth, that prolongevity is not socially sustainable, which is an argument advocated, for instance, by Hardwig (who answers the question posed by the title of his 2000 monograph, i.e. *Is there a duty to die?*, in the affirmative) and Harris (who even goes so far as to call for a ‘generational cleansing [...] either by suicide or euthanasia, or by programming cells [...] to make way for future generations’, Harris 2000: 59). The last attack on prolongevity makes Overall write that she is ‘willing to acknowledge rare cases in which a duty to die may be incumbent [...] [, i.e.] when the continuation of my life is an immediate mortal threat to other persons’ (Overall 2003: 93). Yet, she continues to feel a ‘sense of the injustice of death’ (Overall 2003: 218) and, consequently, a need for thinking of prolongevity as an opportunity to ‘re-creat[e] one’s identity by adopting innovative life plans, different values and new goals’ (Overall 2003: 184).

Thus, reviewing contemporary arguments against prolongevity, together with their counterarguments, especially means reflecting upon our starting questions against the background of at least the following issue, not only as what most challenges Overall’s ‘affirmative prolongevityism’ but also as what most characterises the recent debate: the divergence between the drive towards sustainability, including the best interest from a social perspective, and the drive towards what we may define as individualism, i.e. the best interest from an individual perspective. To put it as Kant would have put it, what if we universalise, for instance, the idea that (my) individual success, including ‘adopting innovative life plans, different values and new goals’, correlates with (my) defeat of ageing and death, which correlates with (my) use of even ultimate scientific and technological development? In other words, what if we universalise, for instance, Bryan Johnson’s spending around \$2 million a year to reverse ageing by using the most sophisticated technologies?

If it is true that the question posed above makes most of us answer that the universalisation of prolongevity is not socially sustainable, especially in its extreme version, it is also true that, from a philosophical perspective, what we should ask ourselves most is not why it is not socially sustainable, but why it is an increasingly widespread drive, to the point that, as we have seen, it is described as ‘made accessible to all’, ‘for all’ and ‘accessible to all’ – from a philosophical perspective, what we should ask ourselves most is not about the effects of (extreme) prolongevity, but about the causes of (extreme) prolongevity, starting with the kind of culture from which it results.

Philosophical questions (and first steps towards their possible answers)

Bauman, i.e. the last author identified above as especially relevant when it comes to our starting questions, may offer us meaningful philosophical insights, even though he is a sociologist. According to his farsighted vision, '[e]schatology has been successfully dissolved in technology' (Bauman 1992: 141).

We may translate his position into the following logical steps. First, the fear of death makes us use culture as a privileged way of overcoming it by transcending our (finite) lives through our (possibly infinite) cultural artefacts, both material and immaterial. Second, our (possibly infinite) cultural artefacts prove our most important success: 'Mortality is ours without asking – but immortality is something we must build ourselves', i.e. 'a heroic feat' (Bauman 1992: 7 and 67). Third, the present time seems to show that we especially pursue immortality through the following kind of cultural artefacts: science and technology applied to health, which means that we use the former to translate their solutionism into the latter – and, finally, to solve and dissolve death in science and technology. For instance, '[k]eeping fit, taking exercise, "balancing the diet", eating fibres and not eating fat, avoiding smokers or fighting the pollution of drinking water are all feasible tasks, tasks that can be performed and that redefine the unmanageable problem (or, rather, non-problem) of death (which one can do nothing about) as a series of utterly manageable problems (which one can do something about; indeed, which one can do a lot about)' (Bauman 1992: 130). In other words, science and technology are our privileged ways of deconstructing death by making us move from our (unmanageable) problem of mortality to our (manageable) health problems: 'The doctors who stand between me and my death do not fight mortality; but they do fight [...] each and any of its particular cases. They fight mortal diseases. Quite often they win [...] [on the basis of] a world-view that splits mortality into a multitude of individual occurrences, each with its own cause, each with a principally preventable cause' (Bauman 1992: 139 and 142). Fourth, death is sometimes unspeakable and sometimes our worst failure, precisely because science and technology make it 'preventable': 'Death is [...] the consequence of personal neglect [...]. Death is a defeat, a business lost' (Bauman 1992: 135 and 137). Fifth, we deconstruct not only mortality but also immortality though its 'democratisation [...] [by] levelling up (or down) [...] the value of events and their performers' (Bauman 1992: 171): no matter what our social class is, if it is true that '[s]kills, jobs, occupations, residences, marriage partners – they all come and go, and tend to annoy or bore or embarrass when they stay too long' (Bauman 1992: 188-189), it is also true that 'permanence is nothing but the sequence of evanescences' (Bauman 1992: 190). Sixth, even though Bauman's monograph was published in 1992, it may also offer a meaningful philosophical insight into the most recent kind of prolongevity, which, as we have seen, is based on extremely expensive technology: 'The allurements of survival offered by advancing medicine [...] become more and more selective

– socially selective. The condition of survival offered by contemporary medicine is an explicit or implicit refusal of solidarity. When translated into life policy, it results in the deconstruction of sociality’ (Bauman 1992: 192). Yet, as we have also seen, the pursue of immortality is described as ‘made accessible to all’, ‘for all’ and ‘accessible to all’.

What may we learn from Bauman that can help us read the present time? And what further logical step may we add to his farsighted vision to best read the present time? The answers I propose, and upon which I will reflect through further cases in what follows, are the following:

1. as far as what we may learn is concerned, the most important thing when it comes to the issue at stake is that, if it is true that immortality is something we do not possess by nature, it is also true not only that science and technology as cultural artefacts are our privileged ways of trying to achieve it but also that, paradoxically enough, its achievement is thought of as the best measure of our success as humans – we may say that, paradoxically enough, the achievement of something that is not human by nature is thought of as the best measure of human success. (It is no coincidence that both the ancient Prometheus and the modern Prometheus symbolise something analogous: the former by representing the idea that humans can overcome their fragile existential status through the achievement of something divine, i.e. divine fire as the symbol of technology, and the latter, as we have seen, by representing the idea that humans can even overcome their mortal existential status through technology.¹⁹) Also, we may learn that, if it is true that we cannot achieve immortality (at least as things stand at present), it is also true that we manage the resulting frustration by deconstructing it.

2. As far as what further logical step we may add is concerned, the most important thing when it comes to the issue at stake is that technological solutionism is a great symptom to understand the present time. It seems that the more complex and uncertain the present time is, the more technologically solutionist we are, to the point that, as we have seen, we ‘hack our biology, and hack it, and hack it’, and ageing and, consequently, death are ‘basically an engineering problem’. As I will argue in what follows, technological solutionism is challenging from a philosophical perspective, in that it means trading human autonomy for technological automation in an extreme way²⁰. More precisely, the application of technological solutionism to ageing and, consequently, death means their automation, i.e. engineering, which, after having been automated, i.e. engineered, move from an autonomous sphere (for which we are totally, i.e. even existentially, responsible) to a heteronomous sphere (for which we are not totally, i.e. even existentially, responsible). In other words, even though Bryan Johnson’s routine requires strict discipline, it is easier to

19 I especially worked on the philosophical issues described above in Chiodo, 2020.

20 I especially worked on the philosophical issues described above in Chiodo, 2023 and 2024.

observe strict discipline, especially if it is automated, i.e. engineered, than autonomously facing death from an existential perspective.

Before developing the philosophical meaning of technological solutionism, we may add at least what follows: the present time seems to take individualism to extremes, to the point that the kinds of words we have quoted above, i.e. ‘made accessible to all’, ‘for all’ and ‘accessible to all’, seem to result more from marketing than from humanitarianism. Theoretically speaking, if it is true that achieving immortality is the best measure of human success, it is also true that human success is by definition something elitist in Western, extremely competitive societies. Practically speaking, even though prolongevity requires substantial funding and, thus, invites ‘all’ not only to achieve immortality but also to donate money, it is hard to imagine a reality of more than eight billion immortals (despite the motto that invites ‘all’ to ‘[e]at well, exercise, and support the Methuselah Foundation’, De Grey, 2008, p. 339).

To develop the philosophical meaning of technological solutionism, I will use further (real and imaginary) cases.

Let us start with a real case, which is offered by the words of one of the advocates of prolongevity:

And for the first time in history, that [real-time monitoring of our bodies] will permit us to make data-driven day-to-day health decisions. The most critical daily decisions that affect how long we live are centred around the foods we eat. If your blood sugar is high at breakfast, you’ll know how to avoid sugar in your morning coffee. If your body is low on iron at lunch, you’ll know it and can order a spinach salad to compensate. When you get home from work, if you’ve failed to go outside for your daily dose of vitamin D from the sun, you’ll know that, too, and you’ll be able to mix up a smoothie that will address that deficiency. If you’re on the road and you need X vitamin or Y mineral, you’ll know not only what you need but where to get it. Your personal virtual assistant – the same AI-driven being who answers your internet search queries and reminds you about your next meeting – will point you to the nearest restaurant that has what you need or offer to have it delivered by a drone to wherever you are. It could, quite literally, be dropped into your hands from the sky. Biometrics and analytics already tell us when and how much to exercise, but increasingly they will also help us monitor the effects of our exercise – or lack thereof. And our levels of stress. And even how the fluids we drink and the air we’re breathing are impacting our body’s chemistry and functionality. Increasingly, our devices will offer recommendations on what to do to mitigate suboptimal blood biomarkers: to take a walk, meditate, drink a green tea, or change the filter on the air conditioner. (Sinclair 2019: 190)

The scenario described above is a kind of cheaper version of Bryan Johnson’s routine. Are we among the individuals whose ‘levels of stress’ increase, and do not decrease, after having read the words quoted above? If yes, the following argument may be more meaningful. If no, it may not be totally meaningless.

From a philosophical perspective, the point is that we should decide what is essential for the definition of our identity. For instance, we may decide that

memory is not essential and, thus, externalise it by using a ‘personal virtual assistant’ that ‘reminds [...] [us] about [...] [our] next meeting’. But externalising our ‘most critical daily decisions’ means externalising our self-perception, starting with the scenario described above – which means that we decide that both the capability of self-perception and, consequently, the capability of decision-making are not essential for the definition of our identity, to the point that ‘[j]ust as I now wonder how I ever managed to drive without a GPS, I wonder how I ever made decisions about what I should be eating and how much I should be exercising before I received regular updates from my biosensor ring and blood biomarker reports’ (Sinclair 2019: 199).

The extreme externalisation of capabilities from ourselves, i.e. human autonomy, to technology, i.e. technological automation, characterises not only the equally extreme positions on prolongevity but also the far more widespread positions on the use of self-tracking technology monitoring health. For instance, in the case of a self-tracker, it may happen that, ‘[o]n a crisp Tuesday morning / after 40 measurements a day for 1,5 years / I. Stopped. Tracking. / Why? / [...] I had stopped trusting myself / letting the numbers drown out / my intuition / my instincts[.] / Each day / my self-worth was tied to the data[.] / One pound heavier this morning? / You’re fat. / 2 g too much fat ingested? / You’re out of control. / Skipped a day of running? / You’re lazy’²¹. In other words, it may happen that self-perception and decision-making are replaced by self-tracking technology even when the former (according to which today we feel good) are truer than the latter (according to which today we do not feel good), as in the case of another self-tracker: ‘The feedback from that digital model often took precedence over how I physically felt. When I didn’t eat “enough” protein I felt weaker, and when I had too much sugar I felt fatter’ (Williams 2013: 3) – which means not only that we trade essential autonomous capabilities for automated technology even when the former perform better than the latter but also that we trade something properly complex (i.e. the concepts of being ‘out of control’ and ‘lazy’) for something embarrassingly simplistic (i.e. ‘2 g too much fat ingested’ and ‘[s]kipped a day of running’).

If we move from the real cases described above to at least one imaginary case, we may try the following thought experiment to further reflect upon the issues at stake. Let us imagine that we have absolute certainty that, if today we start one of the daily routines described above (from Bryan Johnson’s as the strictest to the self-trackers’ as the least strict), we will achieve immortality by defeating even death (in the case of the strictest daily routine) and prolongevity by defeating at least standard ageing, i.e. living a healthy life of at least 150 years (in the case of the least strict daily routine)²². First, would we be willing to achieve immortality, and why? Second, would we be willing to achieve

21 See <https://quantifiedself.com/blog/why-i-stopped-tracking/> (last accessed: September 30, 2024).

22 The longest living human being should be Jeanne Louise Calment, who died at the age of 122.

prolongevity, and why? As far as their possible answers are concerned, I can do no more than share my logical steps as intellectually honest as possible²³.

In the case of the first question, i.e. defeating even death, two sets of issues would deter me:

1. First, the issue of social sustainability (which has already been discussed in the literature: in addition to Hardwig, 2000, and Harris, 2000, see at least Jebari, 2014), which also extends to natural, infrastructural and economic resources. I restrict myself to adding that speaking of social sustainability also means speaking of societies in which, on the one hand, the old, i.e. the immortals, would become by far the social majority and, on the other hand, the young would become by far the social minority – which also means that, on the one hand, older visions and modes would become by far the majority and, on the other hand, younger visions and modes would become by far the minority. And, if I translate the scenario described above into my reality, i.e. academia, I may honestly say that ‘active people over 70 still in the workforce’ (Sinclair 2019: 259) may be a gerontocratic nightmare also characterised by power monopolies rather than ‘experiences that could be shared, [...] institutional knowledge that could be relied upon [...] and [...] wise leadership that would emerge’ (Sinclair 2019: 259).

2. Second, the issue of what may be defined as individual sustainability (which has not already been discussed in the literature, at least to my knowledge), which means not only the widely discussed issues of boredom and meaninglessness, as we have seen, but also what follows: if it is true that infinite lives means equally infinite existential experiences, as the advocates of prolongevity state, it is also true that infinite lives exclude at least one great existential experience, i.e. ageing and death – more precisely, ageing as moving from life to death. The kind of individual sustainability I propose results from the following argument: ageing as moving from life to death may not be thought of as the worst kind of individual failure – conversely, it may be thought of as a kind of individual success, i.e. the individual capability, which may increase precisely with ageing, to think of it as one great existential experience: for instance, the (meaningful) existential experience of overcoming one’s individualism by accepting both one’s old skin, physical and cognitive impairment, more dependence on others and inexorable fall and others’ young skin, physical and cognitive development, less dependence on others and inexorable rise.

In the case of the second question, i.e. defeating at least standard ageing, analogous sets of issues would deter me, but with the following specifications.

1. First, as far as the issue of social sustainability is concerned, I would not say that I am not at all interested in living a healthy life of at least 150 years. But I would argue that, if its condition is an extreme social divide, which means

23 As the title of the section specifies, what I can propose in the necessarily limited space of an article are the first steps towards the possible answers to the philosophical questions I have posed above, which I will extensively address in my forthcoming monograph *Hacking Death. Life-Extension Technologies and the Fate of Western Culture*.

that the longer my life is, the shorter others' lives are, I would not be willing to achieve prolongevity – more precisely, I would want to be capable of living up to the kind of human being I would ideally want to be, who is, again, a human being capable of overcoming individualism in its various articulations.

2. Second, as far as the issue of individual sustainability is concerned, I would not say that I am not at all interested in living a healthy life of at least 150 years. But I would argue that, if its condition is that today I start one of the self-trackers' daily routines, which means that I trade my autonomy, i.e. capabilities I decide are essential for the definition of my identity, for technological automation, I would not be willing to achieve prolongevity – more precisely, I would want to be capable of living up to the kind of human being I would ideally want to be, who is, again, a human being capable of autonomy, starting with autonomous self-perception and decision-making (and who is also a human being capable of autonomously facing death from an existential perspective as the meaningful existential experience of accepting old skin, physical and cognitive impairment, more dependence on others and inexorable fall).

Further philosophical steps (towards their possible conclusion)

In other words, my proposal is a kind of thoughtful reaction to prolongevity as a phenomenon characterising the present time in an increasingly extreme way. More precisely, I have the following two objectives. First, a contribution to the understanding of the extreme version of prolongevity as a promising way to understand the present time through the possible philosophical meaning of its scientific and technological development. Second, a contribution to possible insights to better decide what to do with the extreme version of prolongevity and what its possible alternatives may be.

On the one hand, the present time seems to embody a kind of contemporary Prometheus as an extreme version of both the ancient one and the modern one. Science and technology are not only our best ways of surviving nature (as the ancient Prometheus symbolises) and challenging diseases and natural death (as the modern Prometheus symbolises, even though the challenge is unsuccessfully lost) but also our best ways of trying to successfully win the challenge against natural death by fighting ageing even more than diseases – which is most interesting from a philosophical perspective. From a more superficial perspective, fighting ageing even more than diseases may mean making more money by extending the health market to the old who do not suffer from serious diseases. From a philosophical perspective, thinking of ageing as the most 'deadly pandemic disease' (De Grey 2008: 78) than which '[t]here is nothing more dangerous to us' (Sinclair 2019: 75), and which should be fought even more than other diseases, is meaningful: paradoxically enough, ageing moves from being our best symptom of life, i.e. longevity, to being our best symptom of death – ageing moves from being what we should hopefully be to being what we should hopefully not be.

The overturning of the meaning of ageing is rather revolutionary from an ontological perspective. It seems that we increasingly try to live an eternal present without the signs of our past as anticipations of the signs of our future, from ageing to death – it seems that we increasingly try to remove time from our ontology. It is not a matter of reflecting upon the difference between languages in which age is attributed through the verb ‘to be’ (for instance, English) and languages in which age is attributed through the verb ‘to have’ (for instance, Italian). Conversely, it is a matter of reflecting upon the difference between including and excluding time, i.e. age, ageing and death, from our ontology – the more powerful technology is, the more it faces time, specifically its removal from our ontology, as its ultimate challenge to be won over.

On the other hand, the extreme version of prolongevity, which may be thought of as the attempt to remove time from our ontology, may have the possible alternatives argued above, starting with individual sustainability. First, individual sustainability means thinking of ageing as a kind of individual success, i.e. the individual capability to think of it as one great existential experience. Second, individual sustainability means being capable of autonomy, from autonomous self-perception and decision-making to autonomously facing death from an existential perspective.

Thus, and finally, what may be the possible answers to our starting questions from a philosophical perspective?

Let us start from the second question, which is on the possible meaning of the ever closer correlation between the idea of defeating ageing and death and the idea of even ultimate scientific and technological development. We may start with the insight that the present time seems to embody a kind of contemporary Prometheus symbolising our best ways of trying to successfully win the challenge against natural death by fighting ageing even more than diseases. If it is true that the overturning of the meaning of ageing (from what we should hopefully be to what we should hopefully not be) may mean that we increasingly try to remove time from our ontology, it is also true that we seem to think of science and, especially, technology as our best escape route from our ontology, i.e. ourselves. Thus, on the one hand, technology is constitutively human, as we learn even from the ancient Prometheus (see not only Hes. *Op.* but also Aesch. *PB*), and, on the other hand, the more it develops, the more it seems to become our best escape route from our own constitution as humans – paradoxically enough, technology seems to be what makes us humans (see especially Aesch. *PB* B 436-470) and, at the same time, what makes us transcend our own humanity (see especially Ovid *Met.* I 77-87, whose Prometheus, most interestingly, gives humans a constitutive drive to transcend their own humanity: ‘And while other animals look on all fours at the ground he gave to humans an upturned face, and told them to lift their eyes to the stars’).

Is there a way to solve the paradox described above? I think that it may be solved starting with the following insight: even according to the cradle of Western culture, constitutively, and not by accident, we have a drive to transcend

our own humanity – constitutively, and not by accident, we, as humans, are beings who are (also) their own ontological transcendence.

The proposed solution to the paradox described above may explain the extreme version of prolongevity, from the drive ‘to hack our biology, and hack it, and hack it’, to being ‘the world’s most measured human’, i.e. Bryan Johnson, to even getting to the following point:

When you began to see and feel the effects of ageing, likely sometime in your mid-40s, you would be prescribed a month’s course of doxycycline. With that, the reprogramming genes would be switched on. During the process, you’d likely place a drop of blood in a home biotracker or pay a visit to the doctor to make sure the system was working as expected [...]. Over the next month, your body would undergo a rejuvenation process [...]. Grey hair would disappear. Wounds would heal faster. Wrinkles would fade. Organs would regenerate. You would think faster, hear higher-pitched sounds, and no longer need glasses to read a menu. Your body would feel young again. Like Benjamin Button, you would feel 35 again. Then 30. Then 25. But unlike Benjamin Button, that’s where you would stop. [...] Then, a few more decades down the road, when those grey hairs begin showing up again, you’d start another cycle of the prescribed trigger. (Sinclair 2019: 165-166)

In other words, ‘[w]hat if we didn’t have to worry that the clock was ticking?’ (Sinclair, 2019: XVIII) – which means, again (and more literally than figuratively), the attempt to remove time from our ontology.

Yet, we may have possible alternatives – and our possible alternatives may be constitutively human ways of transcending ourselves as the extreme version of prolongevity is: indeed, they may be other ways of transcending ourselves.

The move from the second question to the first question (which is on the possible meaning of the ever closer correlation between the idea of human individual success and social progress and the idea of defeating ageing and death) is a promising way of addressing precisely other constitutively human ways of transcending ourselves. For instance, we may replace the words ‘[y]our body would feel young again’ and ‘[g]rey hair would disappear’, first, with the existential experience of feeling our bodies getting old, specifically less performing, and, second, with the existential experience of seeing our hair turning white. The first case may coincide, for instance, with the meaningful existential experience of learning that slowness can also be valuable, especially after decades of speed, in that it may offer us opportunities to pause, stop, reflect and act without being under pressure and, thus, to enjoy the pleasure of not being subjected to the rhythm of others, but of finding our own rhythm, whatever it may be. The second case may coincide, for instance, with the meaningful existential experience of learning that our identity can unfold over different life stages, which can increase values and opportunities precisely because of their difference from our previous life stages, in which we could not experience what it means to judge our own adulthood, starting with our own choices, from the perspective of our old age and what it means to be ourselves, i.e. what truly

makes us who we are, even through profound identity changes, from the literal colour of our hair to the figurative colour of our character.

If it makes sense, we may argue what follows:

1. first, that, if it is true that we constitutively have a drive to transcend our own humanity (as the founding myth of Prometheus shows us from antiquity to modernity, as we have seen), it is also true that, even within the typically Western idea of success, we have possible alternatives to the idea of success coinciding with defeating ageing and death;

2. second, that we can think of success, from individual success to social progress, as the increasing capability to think of ageing and death as meaningful existential experiences in the ways argued above – in other words, ageing and death can be thought of as successful even if they are not a matter of defeating the most ‘deadly pandemic disease’ than which ‘[t]here is nothing more dangerous to us’, but a matter of meaningful existential experiences of whose values and opportunities we would otherwise be deprived.

If it makes sense, my proposal is that we may learn to think of time, i.e. our being temporal beings, not only as something we should remove from our ontology (precisely to transcend it) but also, and especially, as something we should exploit as great existential experiences of whose values and opportunities we would otherwise be deprived (again, precisely to transcend our ontology), starting with the evolutionary values of learning to pause, stop, reflect and contemplate, honestly and courageously understanding and judging ourselves from the perspective of our old age, depending on others, accepting reality, trusting others, relying on others, relinquishing control and command, passing the baton and being less individualistic and narcissistic.

And, if we happen to be interested in the kind of proposal argued above, a promising first step may be offered by an insight rooted, again, in the cradle of Western culture, where Plato’s Socrates may be read as teaching us to exploit our death as a way to learn to pass the baton and be less individualistic and narcissistic not only towards others (by opposing our death to their life²⁴) but also, and especially, towards ourselves (by accepting death as a mystery that wisdom would advise us not to solve at all²⁵).

24 “But now the time has come to go away. I go to die, and you to live” (Plat. *Apol.* 42 a).

25 “[B]ut which of us goes to the better lot, is known to none but God” (Plat. *Apol.* 42 a), “[f]or to fear death [...] is thinking one knows what one does not know. For no one knows whether death be not even the greatest of all blessings to man, but they fear it as if they knew that it is the greatest of evils. And is not this the most reprehensible form of ignorance, that of thinking one knows what one does not know? Perhaps, gentlemen, in this matter also I differ from other men in this way, and if I were to say that I am wiser in anything, it would be in this, that not knowing very much about the other world, I do not think I know. [...] So I shall never fear or avoid those things concerning which I do not know whether they are good or bad” (Plat. *Apol.* 29 a-b).

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Simona Kiodo

Tehnologija koja pobeđuje smrt. Od metafizičkog pitanja do inženjerskog problema?

Apstrakt

Savremena Zapadna istraživanja sve više karakteriše pomeranje od razumevanja starenja i, posledično, smrti kao metafizičkih pitanja ka njihovom razumevanju kao inženjerskih problema koji se mogu, pa čak i moraju rešiti. Sve veći broj milionera finansira nauku i tehnologiju čiji je cilj radikalno produženje života, odnosno produženje dugovečnosti, a potencijalno i pobjeda nad smrću, kao da je trijumf nad starenjem i smrću najveći uspeh koji jedno izuzetno uspešno ljudsko biće može postići. Iz filozofske perspektive nameću se sledeća dva pitanja. Prvo, kakvo bi moglo biti značenje sve bliže povezanosti između ideje ljudskog (individualnog) uspeha i (društvenog) napretka i ideje prevazilaženja starenja i smrti? Drugo, kakvo bi moglo biti značenje sve bliže povezanosti između ideje prevazilaženja starenja i smrti i ideje naučnog i tehnološkog razvoja (pa čak i njegovih krajnjih dometa)? Mogući odgovori na ova pitanja polaze od sledećih uvida. Prvo, da u nama konstitutivno, a ne slučajno, postoji težnja da prevazidemo svoju ljudskost onakvu kakva jeste. Drugo, da postoje moguće alternative

prevazilaženju naše ljudskosti putem prevazilaženja starenja i smrti, odnosno pokušaja da se vreme ukloni iz naše ontologije: naime, starenje kao kretanje od života ka smrti možda ne treba posmatrati kao najgoru vrstu individualnog neuspeha, već kao oblik individualnog uspeha, odnosno sposobnost pojedinca da ga razume kao veliko egzistencijalno iskustvo čijih bismo vrednosti i mogućnosti inače bili lišeni.

Ključne reči: starenje, smrt, dugovečnost, produženje dugovečnosti, tehnologije u razvoju, veštačka inteligencija