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Abishag's Revenge

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- *Mortal Coil: A Short History of Living Longer* by David Boyd Haycock Buy this book

> Now King David was old and stricken in years; and they covered him with clothes, but he gat no heat. Wherefore his servants said unto him, Let there be sought for my lord the king a young virgin: and let her stand before the king, and let her cherish him, and let her lie in thy bosom, that my lord the king may get heat.

Her name was Abishag. She was of the tribe of Issachar, from the village of Shunem, and, for that reason, was known as a Shunammite. The writer of the Book of Kings is at pains to tell us that David did not, so to speak, 'have sexual relations with that woman': she 'cherished the king, and ministered to him: but the king knew her not.' Abishag's job was to keep the old man warm and moist, which the mere nearness of her youthful breath might do. She lay in his bosom to extend not his member but his life. Into modern times, doctors prescribed 'Shunamitism' for just that purpose. In the 17th century, Francis Bacon approved King David's practice, suggesting, however, that puppies might serve as well as young virgins. A bit later, the English physician Thomas Sydenham recommended Shunamitism to his patients, as did the Dutch medical professor Hermann Boerhaave and the German Christoph Wilhelm Hufeland in the 18th century. James Copeland, an English medical authority who was quoted as late as the 20th century on 'the transference of vital power', warned that young women married to old men suffered debilitation and shortened longevity: 'These facts are often well known to the aged themselves, who consider the indulgence favourable to longevity, and thereby often illustrate the selfishness which in some persons increases with their years.' Oddly, there do not seem to be any records of the medically supervised rejuvenescence of old women by the breath of boys in bed.

The Book of Psalms allows us 70 years, or maybe 80 if our constitution is especially strong, but that span was much diminished from what it once had been. The cause of this sad decline was bad diet. The fruit of the tree from which Adam and Eve were permitted to eat conferred immortality; the forbidden fruit gave knowledge of good and evil; and the price paid for dietary indiscretion was expulsion from paradise and,

therefore, from access to the Tree of Life. No more low-hanging fruit: from then on we had to hunt, farm and cook. The Earth itself was injured by original sin: it became less fertile and its produce less nourishing, taking a toll on human longevity. The patriarchs were not immortal, but they were built to last. Methuselah was out in the nervous 900s, and the Deluge further sapped the world's fertility and men's allotted years. Noah's offspring continued the unhappy decline: Abraham died at 175, but, by the psalmist's time, threescore years and ten was all we were meant to expect. Worse followed, and 17th-century Englishmen were generally convinced that they were less strongly made, less healthy and less long-lived than the heroes of Agincourt.

Despite the post-lapsarian decline, stories of remarkably aged specimens of humanity continued to circulate. In the early 17th century, there was said to be a troupe of 12 still spry Herefordshire morris dancers whose combined age was 1200 years. But the most celebrated early modern ancient was Old Tom Parr, who fascinated English physicians and natural philosophers by living to 152 – or so it was widely believed – having fathered a child at 100 and married for a second time at 122. The old man was famous enough to be presented to the king, who ordered the royal physician William Harvey to perform an autopsy on him when he died in 1635. He was buried at Westminster Abbey and a poem was written about him by a forerunner of William McGonagall:

> He is a Wonder, worthy Admiration,
> He's (in these times fill'd with Iniquity)
> No *Antiquary*, but *Antiquity*;
> For his Longevity's of such extent,
> That he's a living mortal Monument.

Old Parr has remained famous enough to have a whisky named after him – fittingly, since *uisge beatha* is Gaelic for 'water of life'.

How did Old Parr do it? Can we still learn something from him? What are the possibilities for extending our lives? Is immortality now finally, really round the corner? These days, dreams of eternal or vastly extended life bounce about between the worlds of Jewish jokes, genomics and the wilder shores of gerontology. Mel Brooks's '2000-year-old man' had a sharp memory. Did he know Joan of Arc? 'Know her? I went with her!' And Robin Hood? 'Lovely man. Ran around the forest. Took from everybody and kept it.' Dietary secrets of long life? 'Nectarines: a hell of a fruit. Not too cold, not too hot, you know. Just nice.'

Roy Walford, a gerontologist and immunologist in Los Angeles reckoned that both mice and men could substantially extend their lives – human beings to 120 years or more –

by reducing their caloric intake by 25-50 per cent. Dinner: 3 oz chicken breast (no skin, roasted), 1 baked potato (with skin), 1 cup spinach (steamed). Walford took his own 'Caloric Restriction' medicine, consuming only 1600 calories a day, but died in 2004, aged 79, of Lou Gehrig's disease. A few years ago, the Cambridge geneticist Aubrey de Grey announced that patriarchal longevity was already on the radar screen: 'I think the first person to live to 1000 might be 60 already.' We are well on our way, he says, to learning how to repair the molecular and cellular damage that causes decay and death. And when the science is sorted out, as it must soon be, 'the average age will be in the region of a few thousand years.'

Two thousand years is nothing: why not for ever? Ray Kurzweil became famous as a techno-guru by being right several times about technological futures. He made a lot of money in the 1970s with an early optical character-recognition system. Later, Kurzweil Music Systems sold electronic music synthesisers he had invented. And in 1990, *The Age of Intelligent Machines* made him a celebrity on the AI-nanotech-futurology circuit. His big idea from the 1990s was publicising what he saw as the underappreciated velocity of scientific and technological progress: 'Our paradigm-shift rate – the rate of technical progress – is doubling every decade.' What Kurzweil calls 'the singularity' is near – when technoscientific progress reaches a Gladwellian tipping point and we truly become masters of our bodily fate. What that means in biomedicine is that if you can arrange to hang on long enough, using the dietary and lifestyle means that are already available, the 'paradigm-shift rate' will deliver immortality: 'We are becoming cyborgs.' Human Body Version 3.0 is nigh. The idea, as Kurzweil says, is to 'live long enough to live for ever'; it would be 'a shame to die in the interim'.

Fantastic Voyage (2004), co-authored by Kurzweil, is a manual on how to do that. It involves some blandly sensible stuff like keeping your weight down and taking exercise, but also Caloric Restriction, meditation, and a stunning array of dietary supplements – which he prefers to call 'nutritionals'. Kurzweil himself takes 250 'nutritional' pills every day (plus weekly intravenous shots), including n-acetyl-cysteine, evening primrose oil and resveratrol, the much touted miracle ingredient in red wine (for antioxidant boosting); chromium (for reducing insulin resistance – Kurzweil is a type-2 diabetic); lumbrokinase (for reducing blood viscosity); acetyl-l-carnitine (for brain health); alpha lipoic acid (to inhibit the creation of bad things called advanced glycosylated end products); huge doses of all sorts of vitamins; plus eight to ten glasses a day of alkalinated water (there are machines you can buy to make this), since your body needs alkaline reserves to neutralise such harmfully acidic foods as oranges and such caffeinated drinks as coke and coffee.

Of all the hopes that spring eternal in the human breast, the longest lasting is the hope for eternity itself – ideally, on this earth, alive and embodied, with faculties in good working order; if necessary, Somewhere Else, with mortal faculties beside the point. The latter possibility is in the care of the priests; the former has historically been the speciality of the more hubristic physicians and scientists. David Boyd Haycock's *Mortal Coil* is a breezy and well-read survey of thinking about the possibilities of extending human life – 'prolongevity' – from the early 17th century to the present. It is a more substantial effort than Lucian Boia's *Forever Young: A Cultural History of Longevity* (2004), and a successor to the late Gerald Gruman's *A History of Ideas about the Prolongation of Life* (1966). Haycock's study is more limited than Gruman's in omitting the traditions of antiquity and the non-Western world, but makes up for it by taking the story up to the present, while Gruman wound up at 1800. *Mortal Coil* is a poignant history of fears and follies, of hubris and hope, of science and common sense: necessary reading for anyone who thinks that hugely extended life has never been promised before and that those promises have never before been underwritten by wondrous advances in science and medicine. Yet Haycock concludes his historical survey by expressing confidence that there is now, finally, 'a real chance' that our dreams of vastly extended life will be fulfilled: 'We are inching closer to this miracle of science,' he writes, and some of us perhaps 'will get out of here alive'. The end of death is yet another version of the end of history.

There have always been a limited number of basic ideas as to how you might go about living a lot longer than whatever the norm then was. In traditional medical and vernacular thinking, there were two ways of explaining how you got old and eventually died: getting old was getting cold and dying was drying. Both these theories called on evidence accessible to anyone. The young were moist and warm; the aged dried out and became less warm to the touch. And in the end, we crumbled to dust and became 'cold as the grave'. So the question was what, if anything, could be done to preserve both bodily moisture and warmth.

Here the candle metaphor was often invoked to explain life and to suggest how one might extend it. Animate living things were warm: their warmth was fuelled by food and drink in the way that a candle's flame was fed by tallow or wax. And all living things were moist, drying out when what was called their 'radical moisture' – that with which we are born – was lost, just as the candle's wick crumbled into ash when the moisture whose ultimate source was in the tallow or wax was burned off. When that happened, when the wick's access to oily moisture was cut off, the 'thread of life' came to an end. Your life was longer or shorter for the same reasons that a candle might last different

lengths of time depending on how it was treated. So Edna St Vincent Millay's candle that burned at both ends and did not last the night was a well-understood way of saying that metaphorical flames that burned too vigorously and too fast might give a lovely light, but only briefly – just like a candle in the wind. 'The whole secret of health', Tristram Shandy's philosophical father, Walter, said, gesturing at classical, medieval and early modern physiological theories, depends 'evidently upon the due contention betwixt the radical heat and radical moisture within us'. Heat and moisture were both essential to life, but life was a tension between them, and, when heat won out, life was finished. Into the late 19th century, writers used the image of the candle to caution moderation in the service of longevity, as when, in *Phineas Redux*, Trollope wrote: 'Late hours, nocturnal cigars, and midnight drinkings, pleasurable though they may be, consume too quickly the free-flowing lamps of youth, and are fatal at once to the husbanded candle-ends of age.'

No traditional scientific writer failed to deal with both heat and moisture, but Bacon's work on life and death – with which Haycock opens his account – laid greater stress on the preservation of moisture. Some medical writers thought that health and long life depended on the circulation of volatile spirits – 'insensible perspiration' – across the body's surfaces, and, therefore, that the trick was to keep the pores completely unobstructed, but Bacon reckoned it was important to retain as much bodily moisture as you could. That meant not taking too many hot baths, making sure that the garments worn next to your skin were greasy, and smearing your body with honey, olive or sweet almond oil, or painting yourself with woad – like the ancient Britons – to prevent perspiration through the pores. Northern people lived longer than southerners, Bacon believed, and that was because cold air contracted the pores and prevented the loss of bodily moisture.

Anointing yourself with olive oil may have aesthetic implications, but few, if any, moral ones. That isn't so with advice to moderate the candle's flame: not to burn the midnight oil, to consume food and drink that are less rich, and to consume less altogether. Here the aesthetic is far less pertinent than the ascetic: if you want to live long, then live morally, deny the flesh, don't – as the proverb has it – 'dig your grave with your teeth'. Even Bacon, who, as lord chancellor, acted on a public stage and acknowledged the advisability of occasional dietary excess, accepted historical evidence of a causal link between asceticism and longevity. The holy ascetic got longevity as a bonus.

Almost without exception, medieval and early modern physicians prescribed dietary moderation to promote health, but asceticism was the preferred regimen if you were aiming at seriously long life. On the one hand, there was the solid evidence provided by

the longevity of the early Christian desert fathers – hunger artists who were supposed to eat only enough to keep life going – while, on the other, the 'theory' implied by the image of the candle was that the lower the flame, the longer the candle lasted. And so Caloric Restriction – avant la lettre – was the most popular recipe for long life. The Scottish diet doctor George Cheyne was one of many in the 18th century who thought that the secret of achieving great longevity was to consume only enough food to permit the body to run on its innate heat, adding as little external fuel as possible. And in the last years of the century, Hufeland's *Macrobiotics, or the Art of Prolonging Life* asserted that 'in consuming, we are ourselves consumed.' Fast living made for short living. Chew your food deliberately. Don't drink alcohol, which is 'liquid fire'; spirits 'accelerate vital consumption in a dreadful manner; and make life, in the properest sense, a process of burning'. The 'sacred flame' of life was what Hufeland called the 'vital power' – *die Lebenskraft* – and, if you felt it ebbing, you should, as we now say, slow down and smell the roses. Take it easy; avoid entrepreneurialism – that 'unfortunate spirit of restless enterprise'. Be happy: laughter is the best medicine; living in fear of death not only decreases your enjoyment of life but increases your risk of early death. Hufeland sent a copy of his book to Kant, who liked it very much. The third part of *The Conflict of the Faculties* (1798) was based on his reply to Hufeland, congratulating the doctor for taking a 'philosophical' view of medicine, viz that life would be extended by moderation and the rational control of the emotions. (Kant added his own medical findings about the wholesomeness of learning to breathe only through your nose.)

The terms of debate over human longevity began to change in the Enlightenment and its aftermath. Some of the sources of that change had to do with science and medicine; others did not. By the late 18th and early 19th centuries, a number of writers saw little reason to take scripture neat. Both Hufeland and the Scottish political statistician John Sinclair reckoned the patriarchal 'year' to be three months, making the oldest man who ever lived only 240. Human beings were still thought to live less long than they once did, but Old Tom Parr and a few others of his sort continued to be cited as examples of what was possible, given right living and scrupulous attention to medical advice. The search was on for the causes of premature death, and the conditions that killed you at 70 or 80 were increasingly thought of not as the historical wages of sin but as diseases of advancing civilisation: the result of excess, luxury, sophistication and fast living. 'The anomaly,' as Haycock puts it, 'was not in those few who lived long, but rather in those many who did not.' The remedies prescribed by experts of the time included dietary moderation (of course), wholegrain bread, vegetarianism and the increasingly hard to attain simple life. So into the 19th century there persisted much of the old pessimism

about historically declining longevity and much of the old optimism about the possibility, in principle, of extended life, or even immortality. In the 1870s, British chemists and anthropologists speculated that the vaccines and new medicines then being developed might extend our lives to patriarchal lengths – if not to a thousand years, then surely to a double century or more.

Scepticism began to emerge concerning traditionally credited 'facts' about longevity. Had there been careful checks of the birth records of alleged 17th and 18th-century sesquicentenarians? In the 1860s, a British antiquary wrote that he had found no 'well-authenticated case of a life exceeding 100 years'; others, using birth, baptismal, marriage and death records, allowed cases of 103 and thereabouts; while the claims of several celebrated Old Toms were demolished by not very laborious searches of parish records. At least among those receptive to scepticism, belief in Old Tomism did not survive the transition to a culture which kept better records and demanded authenticated records as a condition of credibility. The human lifespan – that is, the maximum length of time that human beings might survive, and had in fact survived – was decreasing.

At the same time, longevity – that is, the average length of time that human beings did live – was increasing. If record-keeping and the rise of social statistics eroded general faith in the reality of 150 or 200-year-old moderns, they also helped to undermine belief in historical decline. *Mortal Coil* draws attention to the role of life annuities in mobilising statistics on human life expectancy. These had been marketed by the state as a way of raising funds, and purchased by individuals as a form of pension planning. The annuity, Haycock writes, is, 'in effect, a gamble: the recipient of the lump sum' – typically a government, but, later, a life insurance company – 'hopes the donor will die before the full sum of the loan has been paid back, whilst the recipient of the annuity hopes that they will outlive the value of the loan.' The business of annuities, and other forms of life insurance, called for solid statistics on human life expectancy, not just in general but for specific age groups. Bad statistics could lead to financial ruin. Through the 18th and 19th centuries, mortality statistics were accumulated in metropolitan centres, and in the 1820s, evidence-based mathematical models showed that our chance of dying doubles for every eight years we live. One consequence of this model was drastically to reduce the probability that anyone could live, or could ever have lived, to Old Tom years.

But the mass of statistics that subverted belief in living to 150 or 200 also began to convince segments of the culture that life expectancy had in fact been rising over recent history, that the general trend was up, and that – as one writer observed in 1837 – it

was 'a vulgar error to suppose that men are . . . shorter lived, now, than in former times'. Mr Gradgrind in *Hard Times* (1854) noted that 'the average duration of human life is proved to have increased of late years. The calculations of various life assurance and annuity offices, among other figures which cannot go wrong, have established the fact.' By the late 19th century, medical scientists publicly took much of the credit for the by then established increase in longevity, and held out new hopes that further scientific progress would extend it still more. A dominant strand of present-day epidemiology, however, would argue that improved diet, housing, sanitation and changes in behaviour were the most important factors.

As the 20th century began, thinking about human longevity and its possibilities pushed in different directions. Belief in patriarchal longevity and in Edenic immortality has now declined, even if religiosity and hopes for eternal life in Another World have not. Better statistics, combined with secular tendencies, make it hard for the educated classes to believe that human beings have ever lived any longer than about 115 or 120 years. If we're going to manage 150 or more, we now face up to the fact that we'd be the first who ever have. Yet religious hopes for eternal embodied life have been supplanted by faith in the miraculous powers of biomedicine. If we knock out all the diseases that kill us, one by one, what's left to keep us from immortality? And if we believe the fantastic visions of Kurzweil and colleagues, then 'the paradigm-shift rate' and the approaching technoscientific 'singularity' will take care of bodily repair and renewal. Not just for ever but forever young.

It may happen, but not if history is any guide. There are reasons not to hope, or at least not to invest very much in hopes of immortality. The rational response to current hype is to take it with a grain of salt (blood-pressure permitting), to keep paying the life insurance premiums, to take life (and death) on their own terms, maybe (just maybe) helping yourself to a few more years by supporting extra funding for biomedical research, eating next to nothing (if you think that game is worth the candle), popping the resveratrol pills (since the claret has too many calories), and arranging to have long-lived grandparents. And if hopes for vastly extended life are realised, there may still be things left to worry about: *Groundhog Day* worry about endless boredom; worry about an increasingly wrecked social security system; worry about an ever more out-of-control global population; worry about the nature of a society in which even worse, and more consequential, decisions would be made by doctors and politicians about who will live and who will die; worry about the meaninglessness of life in a world without death; worry about soldiering on and on as a 2000-year-old man – cold and dry after all – in a culture in which Shunamitism is frowned on and not reimbursed even by private health

insurance. Immortality would then be Abishag's revenge.

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