

On Dying After Your Time

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New York Times 12/1/13

http://www.nytimes.com/2013/12/01/opinion/sunday/on-dying-after-your-time.html?_r=0

HASTINGS-ON-HUDSON, N.Y. — THIS fall Google announced that it would venture into territory far removed from Internet search. Through a new company, Calico, it will be “tackling” the “challenge” of aging.

The announcement, though, was vague about what exactly the challenge is and how exactly Google means to tackle it. Calico may, with the aid of Big Data, simply intensify present efforts to treat the usual chronic diseases that afflict the elderly, like cancer, heart disease and Alzheimer’s. But there is a more ambitious possibility: to “treat” the aging process itself, in an attempt to slow it.

Of course, the dream of beating back time is an old one. Shakespeare had King Lear lament the tortures of aging, while the myth of Ponce de Leon’s Fountain of Youth in Florida and the eternal life of the Struldbrugs in “Gulliver’s Travels” both fed the notion of overcoming aging.

For some scientists, recent anti-aging research — on gene therapy, body-part replacement by regeneration and nanotechnology for repairing aging cells — has breathed new life into this dream. Optimists about average life expectancy’s surpassing 100 years in the coming century, like James W. Vaupel, the founder and director of the Max Planck Institute for Demographic Research in Germany, cite promising animal studies in which the lives of mice have been extended through genetic manipulation and low-calorie diets. They also point to the many life-extending medical advances of the past century as precedents, with no end in sight, and note that average life expectancy in the United States has long been rising, from 47.3 in 1900 to 78.7 in 2010. Others are less sanguine. S. Jay Olshansky, a research associate at the Center on Aging at the University of Chicago, has pointed out that sharp reductions in infant mortality explain most of that rise. Even if some people lived well into old age, the death of 50 percent or more of infants and children for most of history kept the average life expectancy down. As those deaths fell drastically over the past century, life expectancy increased, helped by improvements in nutrition, a decline in infectious disease and advances in medicine. But there is no reason to think another sharp drop of that sort is in the cards.

Even if anti-aging research could give us radically longer lives someday, though, should we even be seeking them? Regardless of what science makes possible, or what individual people want, aging is a public issue with social consequences, and these must be thought through.

Consider how dire the cost projections for Medicare already are. In 2010 more than 40 million Americans were over 65. In 2030 there will be slightly more than 72 million, and in 2050 more than 83 million. The Congressional Budget Office has projected a rise of Medicare expenditures to 5.8 percent of gross domestic product in 2038 from 3.5 percent today, a burden often declared unsustainable.

MODERN medicine is very good at keeping elderly people with chronic diseases expensively alive. At 83, I'm a good example. I'm on oxygen at night for emphysema, and three years ago I needed a seven-hour emergency heart operation to save my life. Just 10 percent of the population — mainly the elderly — consumes about 65 percent of health care expenditures, primarily on expensive chronic illnesses and end-of-life costs. Historically, the longer lives that medical advances have given us have run exactly parallel to the increase in chronic illness and the explosion in costs. Can we possibly afford to live even longer — much less radically longer?

This rise in chronic illness should also give us pause about the idea, common to proponents of radical life extension, that we can slow aging in a way that leaves us in perfectly good health. As Dr. Olshansky has tartly observed, "The evolutionary theory of senescence can be stated as follows: while bodies are not designed to fail, neither are they designed for extended operation." Nature itself seems to be resisting our efforts. (Swift's *Struldbrugs*, it is often forgotten, had immortal life but with it all the afflictions of aging, and so were declared legally dead at 80.)

What's more, an important and liberating part of modern life has been upward social and economic mobility. The old retire from work and their place is taken by the young. A society where the aged stay in place for many more years would surely throw that fruitful passing of the generations into chaos.

The fundamental difficulty here is that we cannot proceed in the usual way with this medical research, taking small steps, seeing the results and then, if they are positive, moving further. It will take decades for the changes in length of life to play out to allow assessment of their benefits and harms. By then it may be too late to reverse the damage. One likelihood, even in just a few years, is that older people who stay longer in the work force, as many are now forced to do, will close out opportunities for younger workers coming in.

And exactly what are the potential social benefits? Is there any evidence that more old people will make special contributions now lacking with an average life expectancy close to 80? I am flattered, at my age, by the commonplace that the years bring us wisdom — but I have not noticed much of it in myself or my peers. If we weren't especially wise earlier in life, we are not likely to be that way later.

I have often been struck, at funerals of the elderly, of the common phrase that while the deceased will be missed, he or she led a "full life." Adding years to a life doesn't necessarily make it any fuller.

We may properly hope that scientific advances help ensure, with ever greater reliability, that young people manage to become old people. We are not, however, obliged to help the old become indefinitely older. Indeed, our duty may be just the reverse: to let death have its day.

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