

ESSAYS ON SCIENCE AND SOCIETY

Intimations of Immortality

John Harris

Is it simply a design fault that we age and die? If cells were not programmed to age; if the telomeres, which govern the number of times a cell divides, did not shorten with each division; if our bodies could repair damage due to disease and aging, we would live much longer and healthier lives. New research now allows a glimpse into a world in which aging—and even death—may no longer be inevitable. Cloned human embryonic stem cells, appropriately reprogrammed, might be used for constant regeneration of organs and tissue. Injections of growth factors might put the body into a state of constant renewal. We may be able to switch off the genes in the early embryo that trigger aging, rendering it “immortal” (but not invulnerable). We do not know when, or even if, such techniques could be developed and made safe, but some scientists believe it is possible.

These scientific advances could lead to significantly extended life-spans, well beyond the maximum natural age of about 120 years. The development of these technologies may be far in the future, but the moral and social issues raised by them should be discussed now. Once a technology has been developed, it may be difficult to stop or control. Equally, fears provoked by technological developments may prove unfounded; acting precipitately on those fears may cut us off from real benefits. Scanning future horizons will enable us to choose and prepare for the futures that we want, or arm us against futures that, while undesired, we cannot prevent.

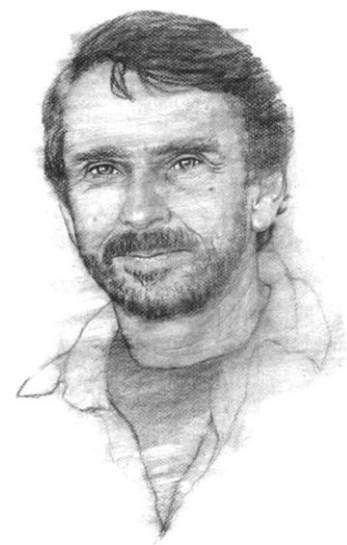
The technology required to enable extended life-spans is likely to be expensive. Increased life expectancy would therefore be confined, at least initially, to a small minority of the population even in technologically advanced countries. Globally, the divide between high-income and low-income countries would increase. Populations with increased life-spans would be unlike our aging populations. The new “immortals” would neither be old, nor frail, nor necessarily retired. We have, however, learned that ageism is a form of discrimination, and this may make it more difficult to resist the pressure for longevity.

We thus face the prospect of “mortals” and “immortals” existing alongside one another. Such parallel populations seem inherently undesirable, but it is not clear that we could, or should, do anything to prevent such a prospect for reasons of justice or morality. If increased life expectancy is a good, should we deny palpable goods to some people because we cannot provide them for everyone? We do not refuse kidney transplants to some patients because we cannot provide them for all, nor do we regard ourselves as wicked because we perform many such transplants, while low-income countries perform few or none at all.

Would substantially increased life expectancy be a benefit? Some people regard the prospect of “immortality” with distaste or even horror; others desire it above all else. Most people fear death, and the prospect of personal extended life-span is likely to be welcomed. But it is one thing to contemplate our own “immortality,” quite another to contemplate a world in which increasing numbers of people live indefinitely, and in which future children have to compete with previous generations for jobs, space, and everything else.

Such a prospect may make “immortality” seem unattractive, but we should remember that it is connected with preventing or curing a whole range of serious diseases. It is one thing to ask whether we should increase people's life-spans, and to answer no; it is quite another to ask whether we should make people immune to heart disease, cancer, dementia, and to decide that we should not. It might thus be appropriate to think of “immortality” as the, possibly unwanted, side effect of treating or preventing debilitating illness.

There are numerous reasons why we should not contemplate one everlasting generation but be in favor of the regular creation of new human individuals—such as the desire to procreate, the pleasures of having and rearing children, the advantages of fresh people and fresh ideas, and the possibility of continued evolution or at least development. If these reasons are powerful, we might be facing a future in which the most ethical course is a sort of generational cleansing. This would involve deciding collectively how long it is reasonable for people to live in each generation, and trying to ensure that as many as possible live healthy lives of that length. We would then have to ensure that, having



John Harris

holds the Sir David Alliance Chair of Bioethics at the University of Manchester, UK. He is the author of *Clones, Genes and Immortality* (Oxford University Press, Oxford, 1998) and editor, with Søren Holm, of *The Future of Human Reproduction* (Clarendon Press, Oxford, 1998). He is a member of the United Kingdom Human Genetics Commission.

lived a fair inning, they died—either by suicide or euthanasia, or by programming cells to switch the aging process on again after a certain time—to make way for future generations.

This might seem desirable, but it is difficult to imagine how it could be enforced, at least if our time-honored ethical principles remain unreformed. How could a society resolve deliberately to curtail healthy life, while maintaining a commitment to the sanctity of life? The contemplation of making sure that people who wish to go on living cannot do so is terrible indeed.

Faced with this problem, society might be tempted to offer people life-prolonging therapies only on condition that they did not reproduce, except perhaps posthumously, or that they agreed if they did reproduce to forfeit their right to subsequent therapies. However, reproductive liberty is a powerful right protected by international conventions. It would be difficult to justify curtailing it, and even more difficult to police any curtailment.

It is unlikely that we can stop the progression to increased life-spans and even “immortality,” and it is doubtful that we can produce coherent ethical objections. We should start thinking now about how we can live decently and creatively with the prospect of such lives.