

Testimony before the Senate Special Committee on Aging,
Hearing on "The Future of Human Longevity: How Important Are Markets and Innovation?"
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by

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Mr. Chairman and members of the Committee,

Is life expectancy approaching its limit? Many--including individuals planning their retirement and officials responsible for health and social policy--believe it is. The evidence suggests otherwise.

Consider an astonishing fact. Female life expectancy in the record-holding country has risen for 160 years at a steady pace of 3 months per year. In 1840 the record was held by Swedish women, who lived on average a little more than 45 years. Among nations today, the longest expectation of life--just over 85 years--is enjoyed by Japanese women. There is no evidence of any slowing of this long-term rise in best-practice life expectancy.

In the 19th century and the first half of the 20th century, the increase in life expectancy was driven by progress in reducing infant, childhood and early adult mortality. Since 1950 and especially since 1970 the continued rise in the expectation of life has been fueled by substantial declines in death rates at older ages. This progress has been accompanied by progress in extending the healthy, active period of life. The progress is due to the prosperity created by market economies and to innovation based on research.

From 1900 to 1950 life expectancy increased rapidly in the United States. At mid-century U.S. life expectancy was only a few months less than the highest life expectancy anywhere in the world. As recently as 1979 the U.S. disadvantage was only two years. Among people 80 years old or older, survival was better in the United States than anywhere else, a lead the U.S. held until 1992.

But health progress in the United States slowed in the second half of the 20th century and especially over the past decade or two. Other countries caught up and surpassed us. Today U.S. life expectancy at birth is more than six years behind the record. In many countries, including Japan and France, people of all ages, from the very young to the very old, enjoy better survival chances than in the United States. The United States is the world's leader in so many things that it is surprising and disturbing that the U.S. has fallen so far behind in the matter of life itself.

The Social Security Administration forecasts that improvements in U.S. life expectancy will continue to be slow. This implies that the life-expectancy gap between the United States and Japan, between the United States and France, between the United States and almost all other advanced countries in the world, will continue to widen by one or two months per year.

Consider the situation in 2050. A half-century may sound distant, but a majority of the people currently living in the United States, including nearly all children and young adults, will still be alive in 2050. The Social Security Administration's latest (2003) forecast is that

female life expectancy in the United States will gradually rise from 79.5 years today to 83.4 years in 2050. This level half a century from now is less than *current* female life expectancy in Japan and France and 13 or 14 years less than likely Japanese and French female life expectancy in 2050. The prediction for Japan and France is uncertain, but most of the uncertainty is on the up side--breakthroughs in biomedical research could lead to even higher life expectancies.

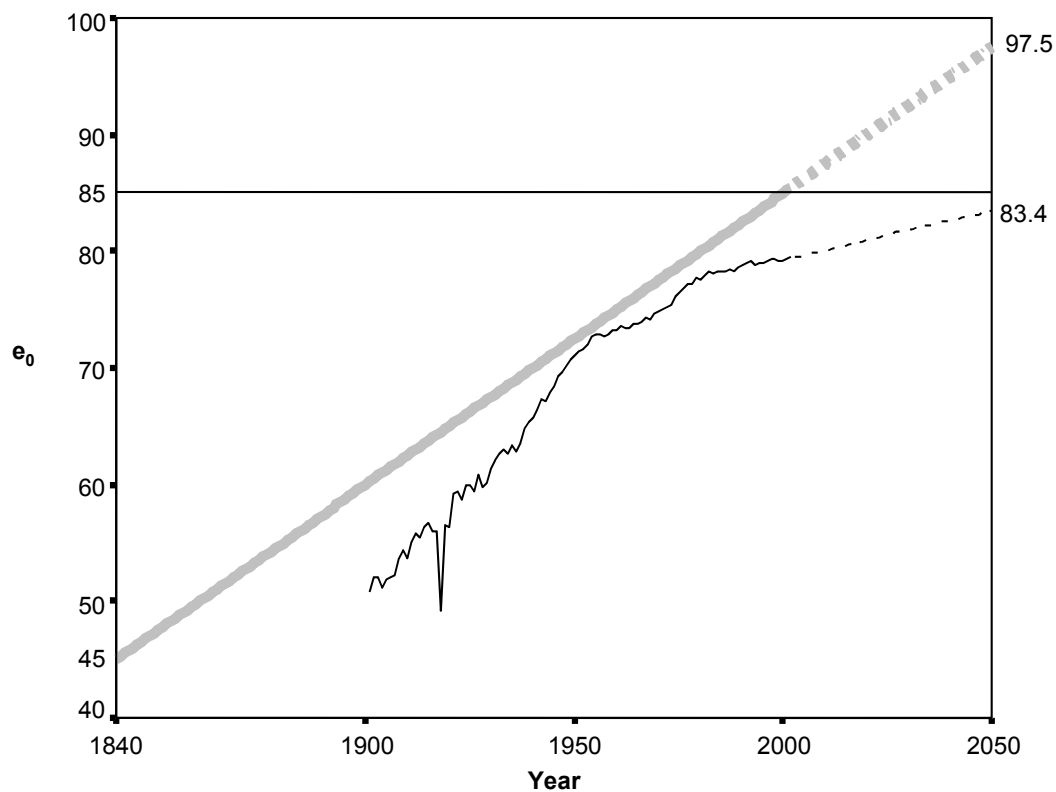


FIGURE: Female life expectancy at birth (e_0) from 1840 to 2050. The thick gray line shows the trend in female life expectancy in the national population with the highest life expectancy. The thin black line shows the trend in female life expectancy in the United States. The broken gray line extrapolates the long-term trend in best-practice life expectancy. The dashed black line shows the Social Security Administration's "intermediate" forecast.

Is it realistic to assume that the United States will fail to catch up in half a century with expectations of life already exceeded in Japan and France? Is it realistic to assume that the United States will fall more than a decade behind Japan and France? I do not think so. Market economies around the world are tightly interconnected. Research ideas and innovations quickly spring across national boundaries. The United States will, I am confident, reduce the health disparities, implement the health-care and health-promoting innovations, and make the research investments needed to halt the widening life-expectancy gap--and then to reduce it.

A crucial first step is to figure out why the U.S. is falling behind. There are guesses and assertions but no persuasive findings. Research by demographers, epidemiologists and

economists could uncover the answers. The National Institute on Aging is funding some pertinent research; a larger, concerted, more focused effort is needed.

Many people believe that little or nothing can be done about health at older ages. This is nonsense. Mortality and many kinds of morbidity at older ages have declined remarkably over the past half-century.

East Germany offers a dramatic example of how much can be done to improve the health of the elderly. Under communist rule, older East Germans suffered poor health and short lives. Today, a mere decade after the fall of communism, older East Germans enjoy almost the same high level of health and longevity as West Germans. The number of centenarians in East Germany has tripled. These people were in their late 80s or early 90s when communism fell. Even at their advanced ages, they were able to benefit from a Western economy and health-care system.

In sum, given intelligent economic and social policy and continued investment in research, longevity and healthy longevity will dramatically increase in coming decades. This is not a problem--it is a great achievement--but it will result in challenges for policymakers, especially concerning Social Security.

The United States was once a longevity leader, especially at older ages, but the U.S. has fallen further and further behind, particularly over the past twenty years. The Social Security Administration assumes that the US's recent mediocre performance will persist. I doubt this. At the very least, the Social Security Administration should systematically assess the possibility that the United States will not fall further behind--and perhaps even catch up with--France, Japan and other advanced countries.

Because of markets and innovation, because of the research funded by the U.S. National Institute on Aging and other organizations, human longevity is going to rise substantially--not only elsewhere but for Americans as well.

Thank you.

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For other online publications, see <http://www.demogr.mpg.de> or the "supplemental data" and "search for similar articles" sites accessible at <http://www.demogr.mpg.de/publications/files/brokenlimits.htm>. In particular, excellent articles have been written in *Science*, *Nature*, and other journals by Ronald D. Lee, Shripad Tuljapurkar, John R. Wilmoth and colleagues.