

James Vaupel's speech at the first European Demography Forum in Brussels

How Should We Spend the Time of Our Lives?

Talk on 30 October 2006 by James W. Vaupel

--MPIDR overhead

--title overhead

Most young children in the European Union today, the children born this century, will probably survive to celebrate their 100th birthdays-in the 22nd century. Most people in their 20s and 30s will probably live into their 90s and most people in their 40s, 50s and 60s will probably become octogenarians, living well into their 80s. Very long lives are not the distant privilege of remote future generations. Very long lives are the probable destiny of most people alive in the European Union today.

Demographers at the Max Planck Institute for Demographic Research in Rostock, Germany, have been pioneers in the research that demonstrates this. Let me show you one strand of evidence.

--Record overhead: Sweden in 1840

In 1840 Swedish women enjoyed the world's longest life expectancy-they lived 45 years on average.

--Other countries

Since then various countries have been the world's leader-and best-practice life expectancy has steadily risen.

--Japan

Today Japanese women hold the record-their life expectancy is almost 86 years.

--Line

Progress has been linear, with an increase of two and a half years per decade. This may be the most remarkable regularity of mass human endeavor ever observed.

The graph for any particular country is more complicated than the straight line. A good example is Germany.

--Germany

Germany used to lag well behind but it largely caught up by 1950 and since then life expectancy in Germany has gone up at the same pace as in the countries with the longest life expectancy, namely by about three months per year.

This is also true for the European Union as a whole. Every year our life chances increase by three months-we live 12 months but only pay for nine. October, November and December are free. So you can enjoy the celebration today without worrying about it taking a day off your life.

Life expectancy is a measure of current health conditions. It is calculated by assuming that death rates in the future will remain at the same level as today. But it is clear that great progress is being made in reducing mortality. Assuming that the pace of future progress is about the same as the pace over past decades, we can calculate that most children in the European Union today will reach age 100.

How will this future progress be achieved? There will be breakthroughs that reduce the scourges of cancer, heart disease, and dementia. Medicine will begin to exploit knowledge about genetics. We deteriorate with age because damage to our bodies exceeds our ability to repair the damage-the net damage gradually builds up. Great progress has been made in reducing the rate of damage-through healthier food, cleaner air and water, better housing, safer cars, less cigarette smoking, etc. And great progress has been made in developing medical and surgical interventions that reduce disease and mitigate damage. In the future, such progress will continue. One exciting prospect is the development of stem-cell therapies and regenerative medicine.

Longer lives are one aspect of the new demography that is transforming Europe. A second key aspect is low fertility.

--Fertility overhead

As you can see, fertility has been below replacement level in Germany since 1970. Today in every country in the European Union this is the case. Fertility in Europe is very low. A key fact is that Europeans are having fewer children than they would like to have. The problem is that child-rearing is expensive and difficult to combine with employment. Children are an asset for all Europeans, but the burdens of child-rearing are imposed on parents, especially mothers. To raise fertility, the burdens have to be reduced. One way to do so would be to provide more free-time for younger people and more opportunities for part-time work and for flexible working hours.

To understand the options for reform, it is useful to begin by considering population age-structure. I will use Germany to provide an example. Demographers summarize population structure by graphing population pyramids.

--1910 pyramid

The one for Germany in 1910 looks like a pyramid.

--2005 pyramid

But the shape is very different today.

--2025 pyramid

The bulge of baby-boomers in their 30s and 40s in 2005 will become a bulge of people in their 50s and 60s in 2025. Because few Germans work past 60 and many retire in their 50s, this will pose serious challenges for the labor market and for the German pension system. Two indicators of this challenge were developed by Elke Loichinger and me as part of our work for the Rostocker Zentrum for the Study of Demographic Change, a joint venture between the Max Planck Institute and the University of Rostock.

Our first Rostock indicator is R, the ratio of nonworkers to workers.

--R in 2005 for Germany

In Germany in 2005 R was 1.27. There were about five people who were not working for every four people who were.

--R in 2025

In 2025 the ratio will increase to 1.47 if current employment patterns continue. That means that there will be about three nonworkers for every two workers.

--R change

The ratio will worsen by 16%. This would require substantial increases in taxes and other levies on working people in order to support the nonworkers.

Our second Rostock indicator is H, the average number of hours worked per week per capita.

--H in 2005 for Germany

In Germany in 2005, H was 16.28. Isn't that astounding? Germans on average only work a bit more than 16 hours per week. The value is so low because there are so many people who are not working-five Germans out of nine, as I mentioned a minute ago. Some are too young to work and some are too elderly, but many could work but don't.

--H in 2025

If current employment practices remain the same, in 2025 H will fall to 14.95 hours.

--Change in H

This is an 8% decline. Other things equal, it implies that the German economy will shrink by 8%.

--Other countries

The prognosis for other continental European countries is about as dire as for Germany. The United Kingdom fares a bit better and the United States considerably better.

To keep dependency ratios and hours worked per week per capita at current levels, it is necessary for age-specific patterns of work to change.

--Age pattern in 2005

The hours worked per week per capita in Germany can be broken down by age. If average effort is to be maintained at its current value of a bit more than 16 hours per week, then one option would be to increase work by people in their 50s and early 60s,

--Red line

as shown by the red line. Not everyone at these ages will be healthy enough to work, but an encouraging research finding is that as people live longer they tend to have a longer span of health. To productively use older workers, research is needed on better work environments and on lifelong learning. To function effectively, people have to be stimulated with new ideas and educated about new knowledge and technology.

These prospects may seem too optimistic. As the proportion grows of voters who are older than 50, it may become more difficult to increase the age of retirement. As costs of supporting the elderly rise, expenditures on everything else, including research, education and childcare, may be threatened. This dismal future has received much press, but there is little evidence to either support or refute it. In the United States and several European countries, intelligent discussion of policy alternatives has created, to varying degrees, a climate of public opinion that recognizes, reluctantly, the need for an increase in the typical age of retirement. In contrast, in France and Italy public discourse about retirement age (and other economic reforms) is woefully deficient. In Germany constructive public discussion and debate is beginning.

Many older workers may prefer part-time work: studies are needed on how to organize 20 and 30 hour work weeks so that they are profitable to organizations and satisfying to individuals. If part-time work becomes common for workers above 50 or 60, then more opportunities for part-time work may open up for younger people.

--Green line

As shown by the green line, if people in their 60s and early 70s worked considerably more than today, then work effort could be evenly distributed at a level of about 25 hours per week across ages 20 through 64. This level of effort

could be achieved if a few percent were unemployed, a few percent worked 40 hours per week, and the rest worked either 20 or 30 hours per week.

The 20th century was a century of redistribution of income. The 21st century may be a century of redistribution of work. Such redistribution would spread work more evenly across people and over the ages of life. Individuals could combine work, education, leisure and child-rearing in varying amounts at different ages.

Future generations may think we were irrational about the way we spend the time of our lives. We concentrate work in those ages of life when we can have children and when children need the time and energy of their parents. Then, when we are in our late fifties or early sixties, we retire, enjoying decades of leisure, largely paid for by levies on younger adults who are also taking care of children. We concentrate the leisure of our lives in the years when we can no longer have children and when any children we did have no longer need the care they once required.

This disjuncture leads to the speculation that a redistribution of work might make it easier for younger people to have the number of children they would like to have. How, however, could working-age people support themselves and their children if they worked only 20 or 30 hours per week? By reducing the need for transfer payments from workers to nonworkers, taxes and other levies could be reduced. Furthermore, a greater fraction of women, at both younger and older ages, would be in the work force. In principle it should be possible to redistribute work while maintaining standards of living. The specifics of how to do this, however, have to be worked out.

--MPIDR overhead

Longer and longer lifespans make life-course flexibility more desirable for individuals and societies. Research is needed on how to achieve this. What is also needed is informed public discussion about the challenges and opportunities opened up by demographic change. It is demographic ignorance, not demographic change, that poses the main threat to Europe. Longer life is not a problem: longer life is a crowning achievement of modern civilization. Longer life will, however, require radical changes in social policies and programs. This reform could make people better off by giving them more choice about how to spend the time of their lives. So demographic change presents an opportunity for Europe. Much discussion today about demographic change is filled with angst. More discussion is needed about the opportunities.

Thank you.