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## From Strollers to Walkers

Old age isn't so bad when you consider the alternative.

—Maurice Chevalier

### The Demographic Tidal Wave

Like it or not, ready or not, everyone reading this book will experience the greatest demographic change in human history. In less than a century, the United States will move from being “forever young” to being “forever old.” The largest part of the change will happen in the next thirty years as the baby boomers retire. The most dramatic changes will be experienced outside the United States, throughout the entire industrialized world.

You can get a visceral idea of what we are facing by considering an extreme: the rising population of people at least 100 years old. By mid-century the U.S. centenarian population will exceed 600,000.<sup>1</sup> That's ten times the number of centenarians around today.

Housing them will require a city slightly larger than the current population of Washington, D.C. (567,000), slightly smaller than the current population of San Francisco (735,000), nearly four times the current size of Anaheim, California (165,000), and nearly equal to the combined populations of Abilene, Texas (110,000), Akron, Ohio (222,000), Albany, New York (105,000), Allentown Pennsylvania (113,000), and Amarillo, Texas (105,000). Indeed, if you check the long list of cities in America with populations of at least 100,000, only 18 are large enough to accommodate the advancing legion of centenarians.<sup>2</sup>

*Why is this happening?*

We can only remind you of the old proverb: “Be careful what you wish for. You may get it.”

Imagine that you were alive in 1900. Life expectancy at birth was 47 years. The median age of all Americans (half younger, half older) was only 22.9 years. Only 4.1 percent of the population was 65 or older. Life was a constant battle. It was a struggle to be born. It was a struggle to survive infancy, let alone survive childhood. It was still another struggle to survive adulthood. It was common for a father and mother to survive one or more of their children. A husband could lose both his wife and a newborn child during childbirth. The only certainty was that survival and longevity exacted a major toll in grief.

Presented with the magical Monkey’s Paw—the one with the power to grant three irreversible wishes—your first wish would have been obvious: *Let life be longer.*

And your wish would have come true.

Today, life expectancy at birth is about 76 years, a gain of 29 years. Life expectancy at 65 is now 17 years, up from 12 years in 1900. Better still, gains in life expectancy at 65 seem to be accelerating.

As a consequence, the population age 65 and over had reached 12.4 percent by 2000, nearly double the 6.8 percent of population under 5 years of age. In the course of 100 years, children had gone from outnumbering the elderly by three to one, to being rarely seen or heard (table 1.1).

By the 1950s and 1960s, the number of kids under age 5 still exceeded the number of oldsters. Kids were about 11 percent of the population in those years, while oldsters were less than 9 percent.<sup>3</sup> Fertility rates, however, were hitting their baby boom peaks—levels not seen since the 1920s. With the fertility rate surging toward four children per woman, a rate that would double the population in a generation, some started to worry about too much of a good thing.<sup>4</sup> From 76 million in 1900, our population had doubled to 151 million in 1950. Our population looked poised to double again by the millennium. In fact, it came close: 286 million. It would have exceeded 300 million without the baby bust that started in the 1970s. Today, Social Security’s actuaries project we’ll hit 300 million in 2006.<sup>5</sup>

Long lives are a great gift, but they can make a very crowded world. They can also make a very hungry world. While there was little worry

**Table 1.1**

Trading places: Youngsters decline, while oldsters rise

Decade	Population under age 5	Population age 65 and over (%)
1900	12.1%	4.1%
2000	6.8	12.4

Source: [www.infoplease.com/ipa/a0110384.html](http://www.infoplease.com/ipa/a0110384.html).

that America would starve, there had already been warnings that unlimited population growth could mean hunger and starvation in China, India, and Africa.

So you made a second wish on the Monkey's Paw: *Let us all have smaller families.*

And you got your wish.

From birthrates well over 2.1 children per couple, the long-term replacement rate for population, birthrates plummeted. In some countries, birthrates fell so far that many nations in Europe will experience population declines early in this century. In the United States, the decline in births was significant, but we're still hovering near the replacement rate.

Taken by itself, the change in birthrates isn't cataclysmic. Basically, it works to accentuate the effects of the first wish, for longevity. Until the population reaches a steady state, a transition that will be measured in generations, there will be an increase in the number of old people relative to the number of young people.

But this calculation doesn't consider the baby boomers. The proverbial "pig in the python" generation that has dominated American concerns since birth, they came of age as your wish for smaller families was coming true. They had smaller families than their parents. Soon they will be starting to retire. The bumper crop of boomers born in 1946 will be reaching the age at which most people start taking Social Security, 62, in 2008. That's just four years and one presidential election away.

Unfortunately, the number of children coming of age and joining the workforce won't be nearly as large. Basically, all the forces that can enlarge the retired elderly population are in overdrive. The forces that would expand the younger (and working) population paying Social

Security and Medicare taxes are in reverse. The result is a kind of perfect demographic storm.

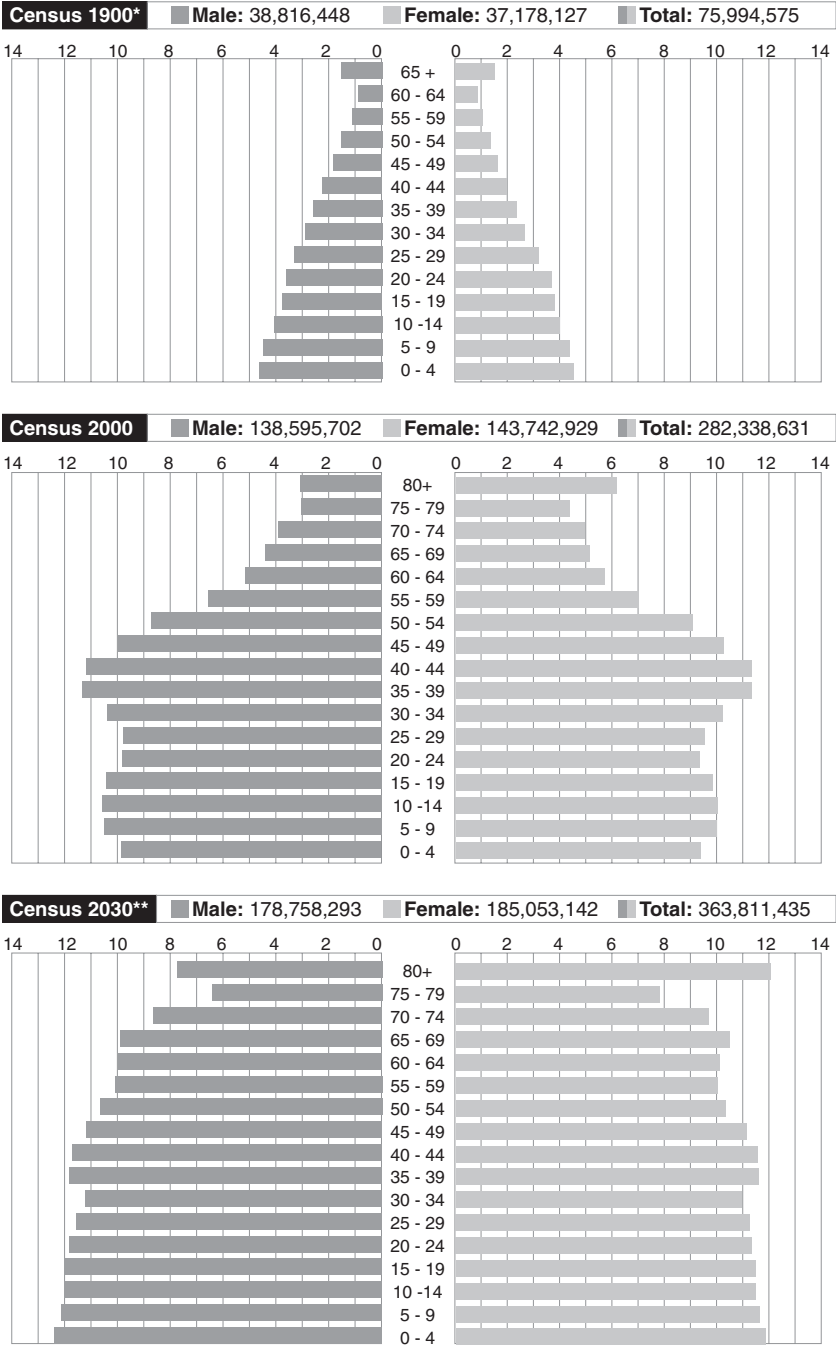
As we said earlier, we'll see the bulk of this change over the next thirty years, but it will continue quite a bit longer. The best way to understand the magnitude of the change is to visualize it in the form of graphs that divide the population in five-year bands from those under 5 years of age all the way to 80 and over (figure 1.1).

In 1900 the age distribution of our population was similar to what characterized all past human history. It was a pyramid—widest at the bottom and narrowing with each successive five-year interval. Only 4 percent of the population was 65 or older. There were no five-year bands beyond “65 or older.” Centenarians were rare. Retirement was short. There were plenty of adult children to sustain the elderly.

By 2000 the age distribution was a very different shape. The pyramid is gone. Today the profile looks more like a house with a very tall roof. The Census Bureau has no bands beyond “80 and older.” But if it did, the very top would have a narrow lightning rod—the “100 and over” population—reaching for the heavens. Instead of being the largest group at the base of the pyramid, children under 5 are about the same in number as the other groups all the way up to those in their mid-30s. The 65 and older population is now 12.4 percent of the total.

By 2030 the age distribution has a different shape again. This time it is more like a barrel. It goes almost straight up, with only minor shrinkage to the 60–64 age group. The steady shrinkage from death that defined the traditional pyramid now appears to *begin* at age 65. The population age 65 and over will have grown to 19.4 percent of the population, a huge increase in thirty years. This figure, by the way, is the *intermediate projection* used by Social Security. Other projections, including some by Social Security, have higher figures. Basically, the portion of the population age 65 and over will nearly double over the next 30 years.

If the percentage of people age 65 and over nearly doubles in the next thirty years, another part of the population will have to shrink proportionately. And that's the rub: the shrinkage will be in the working-age population, the people who pay employment taxes. Back in 1950 (when we were still worried about runaway population growth), the number of



\*1900 Census does not provide information for ages over 65. \*\*Projection.

**Figure 1.1**  
Population profiles: U.S. population by age and sex, in millions. *Source:* U.S. Census Bureau

workers per Social Security beneficiary was 16.5. By 2000 the ratio had fallen to 3.4. In the process, most workers started paying more in employment taxes than they pay in income taxes. The employment tax rose fivefold.<sup>6</sup> The wages subject to the Social Security tax rose as well, rising from \$3,000 in 1950 to \$87,000 in 2003.

Between now and 2030 we'll have the last big surge: the retirement of the boomers. At the end, we'll be close to having only two covered workers per beneficiary. Instead of having sixteen workers chip in to support one senior citizen, we'll have only two. That's a gigantic promise-killing change for Social Security. In only eighty years, the intrinsic cost of supporting retirees will have increased eightfold. In the thirty years to 2030, the intrinsic cost of supporting retirees will rise 70 percent.

Many have seen the coming wave. It is not news. It has been the subject of books, articles, and academic studies for decades. One of the most popular books on the subject, Ken Dychtwald's *Age Wave: The Challenges and Opportunities of an Aging America*, was published in 1989.

Unfortunately, when it comes to action, we're paralyzed. It's as though, having seen the perverse results of the first two wishes on the Monkey's Paw, we're afraid to make the third wish. In fact, the problems we face won't go away. Inaction will make the problem worse, not better. This is a permanent problem, not a temporary one.

### Getting Old and Staying Old

The aging of America isn't a temporary event. We won't be getting older this year or this decade, and then turning back and getting younger. We are well into a change that is permanent, irreversible, and very long term.

Where we had 35.5 million people age 65 and older in 2000, we'll have 69.4 million in 2030. During those thirty years, the *dependency ratio*—the ratio of those 65 and older to those 20 to 64—will rise from 21.1 percent to 35.5 percent. That's a major increase.

Don't look around for evidence. You won't see it. We're in a quiet period. While the number of senior citizens rises each year, growth in the number of possible workers has been keeping pace since 1985. It will

continue to keep up until the boomers start to retire in 2008, just one presidential election in the future.

The dependency ratio, which has hovered around 20 percent since 1985, ranging from a low of 20.6 percent projected for 2005 to a high of 21.6 percent in 1995, will start a major rise around 2015 when it hits 23.8 percent (table 1.2). By 2030 it will hit 35.5 percent.

And it won't stop there.

The intermediate population projections from the Social Security Administration show the elderly population continuing to grow through 2080, rising from 69.4 million in 2030 to 96.5 million in 2080. During the same period the aged dependency ratio will continue to climb, reaching 43.2 percent by 2080.

The most dramatic way to see how rapidly the nation is aging is to compare the number of seniors—those age 65 and over—to the number of young people. In 2000 there were 82 million people under the age of 20 in the United States. Their numbers dwarfed the 35.5 million seniors.

By 2030, however, there will be 88.6 million young people and 69.4 million seniors, approaching parity. In 2080, only fifty years later, the

**Table 1.2**  
The dependency ratio takes off . . . and keeps going

Year	Ratio
1985	20.1%
1995	21.6
2005	20.6
2010	21.2
2015	23.8
2020	27.5
2025	31.9
2030	35.5
2040	36.8
2060	39.2
2080	43.2

Source: [www.ssa.gov/OACT/TR/TR02/V\\_demographic.html](http://www.ssa.gov/OACT/TR/TR02/V_demographic.html).

number of seniors, 96.5 million, will finally exceed the number of young people, 95.8 million.

These are, of course, only projections. They could be wrong. A deadly variant on the SARS virus could create a shortage of grandparents, restore the traditional population pyramid, and “solve” the entire problem. Hardly a year passes without a population collapse movie.

The likely future is less dramatic. That’s one reason the Social Security Administration regularly creates three sets of projections. There is a low-cost projection based on less positive (but not catastrophic) assumptions about future mortality rates. There is also a high-cost projection based on more positive (but well short of eternal life) assumptions about future mortality rates. The Social Security Administration characterizes the intermediate assumptions as their best bet on what will actually happen.

In fact, the Social Security Administration intermediate figures have historically tended to be on the low side, consistently underestimating advances in longevity (table 1.3). They have also been behind the curve on the decline in birthrates. If their high-cost (longer life expectancy) projections turn out to be the correct ones, the dependency ratio will almost double in thirty years and nearly triple in eighty years.

We’re not bringing this up to be rude or depressing. We’re just aware that few subjects attract more interest and energy than living a long and healthy life. Some may question motherhood, others may doubt apple pie, but everyone wants to live a long time.

One of the ongoing arguments in the scientific community is whether there is a natural limit to life expectancy. Some assert there is and cal-

**Table 1.3**  
The long-term difference assumptions make

Year	Intermediate elderly population	Intermediate dependency rate	High elderly population	High dependency rate
2000	35,516,000	21.1%	35,516,000	21.1%
2030	69,408,000	35.5	72,746,000	38.3
2080	96,545,000	43.2	106,636,000	59.7

Source: [www.ssa.gov/OACT/TR/TR02/V\\_demographic.html](http://www.ssa.gov/OACT/TR/TR02/V_demographic.html).

culate the natural limit. In 1928, for instance, Louis Dublin calculated that the ultimate life expectancy was just less than 65 years, seven years higher than actual life expectancy at that time. His calculation quickly proved wrong, as have similar calculations since then.

Based on actual rates of improvement, for instance, a recent article in *Science* calculates that female life expectancy in the United States might actually range from 92.5 to 101.5 by 2070.<sup>7</sup> That's quite a bit higher than the 85 years that are part of the intermediate figures from the Social Security Administration.

A secondary method used by the Social Security actuaries is called *cohort life expectancies*. While the commonly used expectancy calculations assume there is no improvement in health or medicine from birth, the cohort life expectancies attempt to incorporate year-to-year improvements. Using this method, the intermediate life expectancy of a woman is 89.4 years in 2070, and the high-cost series estimate is 96.7 years.

Which will it be?

No one knows. We can only be certain of one thing. The age wave coming toward us is probably much bigger than the conventionally used figures tell us.

## The Old and the Ancient

Not long ago you were considered "old" at 65. The last age category in most surveys was "65 and over." It was sufficient to hold all of the elderly, a small portion of the population. As labels go, it was perfectly adequate.

No more.

Today the taxonomy of aging is growing as fast as life expectancy. First, gerontologist Bernice Neugarten suggested that the old were really two groups: the "young-old" and the "old-old." She defined the young-old as people between 65 and 74 because they tended to be healthy, active, and functional. The old-old were closer to the elderly we imagined: frail, subject to infirmities, and likely to be suffering from physical or cognitive limitations.

The extension of life expectancy has been so great that we now have yet another category, the oldest-old. Although the definition varies a bit,

the Census Bureau considers the oldest-old to be people who are 80 and older. Today the Census Bureau divides the elderly population into three categories: ages 65 to 74, 75 to 84, and 85 and over. When they project our population in the future, they estimate the number in each of those categories.

Would you like to guess which group is growing fastest?

That's right, the 85-plus crew.

Between 2000 and 2050 the 85-plus population is expected to grow from 4.3 million to 18.2 million, a 323 percent increase. During the same period, the 75 to 84 year olds will grow in number from 12.3 million to 25.9 million, a mere doubling. Those 65 to 74 will grow in number from 18.1 million to 34.7 million, somewhat less than doubling.

Before you get too impressed with the 85-plus crew, remember that this is progressive. The older the group measured, the faster the growth rate. As we pointed out in chapter 1, the centenarian population, once a virtual trace element, is projected to rise tenfold, to 600,000, over the same period. Indeed, centenarians may be the only population group growing as fast as the number of Elvis imitators.

The growth of centenarians is a worldwide phenomenon. Japan, which now holds the record for female life expectancy, has seen enormous changes in the postwar period. In 1950 a 65-year-old Japanese woman could expect to live another thirteen years. Today she can expect to live another twenty-two years. In 1950 her chances of living to 100 were only one in a thousand. Today the odds are one in twenty, a 5 percent chance.

We are looking at a major population boom. The difference is the unit of measure. While past population booms were measured in babies, this one is measured in septuagenarians, octogenarians, and nonagenarians. While their numbers are growing (in total) from 34.7 million to 78.9 million, the number of 5-and-under children in our society will rise only from 18.9 million to 27.1 million. The figures are shown in table 1.4.

Like the projections made by the actuaries at the Social Security Administration, these Census Bureau estimates are intermediate figures—the actual numbers could be higher or lower. Using different assump-

**Table 1.4**  
Plenty of seniors, not many kids

Year	Age 5 and under	Age 65–74	Ages 75–84	Ages 85 and over	Total old	Senior-to-kid ratio
2000	18,987	18,136	12,315	4,259	34,710	1.8
2010	20,012	21,057	12,680	5,671	39,408	2.0
2020	21,967	31,385	15,375	6,460	53,220	2.4
2030	23,066	37,406	23,517	8,455	69,378	3.0
2040	24,980	33,014	28,668	13,552	75,234	3.0
2050	27,106	34,731	25,905	18,223	78,859	2.9

*Source:* Bureau of the Census, *Current Population Reports*, P25–1130.

*Note:* Population figures in thousands.

tions, two independent researchers have come up with dramatically different figures. While the Census Bureau intermediate figures project 13.5 million seniors age 85 and over, one independent researcher uses lower mortality rate figures and projects 16.8 million. Another researcher projects 23.5 million.<sup>8</sup>

The rising population of the old-old and oldest-old is usually credited to a dramatic and continuing decline in the expected death rates for people of that age. Between 1985 and 1995, for instance, death rates for those ages 70 to 74 in the United States fell 6 percent. Death rates for those 80 to 84 fell by 8 percent.

Barring a major resurgence of disease, we think the official figures are on the low side. Each older person, regardless of age, represents a call on Social Security and Medicare. And the longer people live, the more likely they are to outlive their assets. This means rising calls on Medicaid, which helps the poor, regardless of age, get medical care.

“More likely” isn’t the same as “inevitable.” While virtually everyone can tell an old-age horror story, a growing body of work suggests that there is a near “second wind” for many seniors. If they don’t succumb to heart disease and cancer in their 60s and 70s, evidence suggests that those in their 80s and 90s may experience lower death rates and greater health.<sup>9</sup> The picture of old age that emerges from the MacArthur Foundation Study of Successful Aging is far brighter than the one presented by a long-term-care insurance sales rep.

Unfortunately, whether an older person is healthy and functional or unhealthy and nonfunctional only changes the *level* of expense they present to our economy. That expense, even at the lowest levels (Social Security retirement benefits and Medicare), is far higher than our spending on children. One indicator is the amount the federal government spends on a child compared to the amount it spends on an elderly person. In 1995 federal spending per child under age 18 was \$1,693, about one-tenth of the \$15,636 the federal government spent on each person age 65 and over.

Why are we bringing this up?

Simple. One of the tranquilizing arguments used to reduce concern about the coming age wave is the broad dependency ratio. Defined as the total number of children under age 20 *and* seniors 65 and over divided by the working-age population (20 to 64), the broad dependency ratio will be about the same in 2030 as it was in 1960.

No one was worried about being overwhelmed by the cost of supporting dependents in 1960. No one was talking about a “dependency crisis.”

The difference, of course, is that adults—whether 65, 75, or 105 years old—cost a lot more to support than young children. In 1960, most of the dependents were children. In the future, most of the dependents will be adults.

### **To Die Like the Japanese!**

Although women have always won the Longevity Olympics, the nationality of the winners has changed. In 1840 it was Sweden that held the female life expectancy record, clocking in at 45 years. They quickly lost it to Norwegian women, who held the title until late in the nineteenth century, having raised the record to about 52 years.

The non-Maori women of New Zealand then took the record and held it until 1940, moving the record up to about 67 years. Then it went back to Norwegian women, who traded it back and forth with Icelandic women until sometime in the 1980s, when the record hit 80 years.

That's when the women of Japan took the lead. They came out of nowhere. A Japanese woman born in 1947 could expect to live only 54 years. American women at that time had a life expectancy of 68.4 years. Japanese women surpassed them in 1970, at 75.7 years.

American women were passed as if they were standing still. Japanese women have added another ten years to their life expectancies since 1980, clocking in for 2000 at 84.6 years.

And it hasn't stopped. In August 2002, when the Japanese Health and Welfare Ministry released figures for 2001, the expectancy of Japanese women rose again, to 84.93 years. They kept the longevity record and, significantly, left America in the dust. A newborn Japanese female can expect to outlive her American counterpart by over 5 years. With an expectancy of 78 years, a newborn Japanese male can expect to outlive his American counterpart by 4.2 years.

In fact, while the women of France, Canada, and Hong Kong are pushing the women of Japan for the life expectancy record, the United States isn't even on the list of the top ten competitors. Ditto the secondary contest for male life expectancy: the Japanese are regularly challenged by Iceland, Sweden, Canada, and Hong Kong—but the United States isn't on that top ten list either.

In a book of global statistics, the *Economist* magazine ranked every nation in the world for life expectancy by averaging each country's figures for the period from 1995 through 2000.<sup>10</sup> Japan was first at 80 years, followed closely by Iceland (79.3 years) and Canada (78.9). France (78.8) and Hong Kong (78.8) tied for fourth place.

Where was the United States?

We tied Germany for twenty-fifth place, clocking in at 76.7 years. If you think that isn't a big difference—80 versus 76.7—you're probably less than 76 years old. Among the unlikely nations that beat us are Greece (78.1), Israel (77.7), Martinique (77.1), and Costa Rica (76.8). Indeed, we barely beat Puerto Rico (76.5), Barbados (76.4), and Cuba (76.0).

Life expectancy at birth figures are powerfully influenced by infant mortality and public health issues such as availability of clean water, so we might also examine life expectancies at age 65. There we find the same story, if somewhat less dramatic. Japanese men and women at

65 both had shorter expectancies than their American counterparts in 1970. Japanese men could expect 12.5 years of life, while American men could expect 13.1 years. Japanese women could expect 15.3 years, while American women could expect 17 years. Only ten years later Japanese men had pulled ahead. They led American men 14.6 to 14.1 years. Japanese women still trailed American women 17.7 years to 18.3. By 1998 Japanese men and women were well ahead of Americans, with men leading 17.1 years to 16 years and women leading 22 years to 19.2 years.

Now let's ask a perverse question: How long do the actuaries at the Social Security Administration think it will take for American life expectancies to catch up with Japanese life expectancies? How much of a lead do they think the Japanese have?

According to their intermediate series figures, life expectancy for American women at birth will reach 85 in 2070, giving Japanese women a 69-year lead. American men will catch up with Japanese men in 2040, giving Japanese men a lead of "only" 39 years. The life expectancy of American women at 65 will catch up with their Japanese counterparts in 2055. The life expectancy of American men at 65 will catch up with current Japanese men around 2020.

The catch-up date, of course, assumes that nothing will happen in Japan for nearly seventy years, which isn't very likely. If the established trend simply continues, the longest life expectancies in the world will continue to advance about 2.5 years per decade, a rate they have maintained for 150 years. That would bring the leading life expectancy (for women) to 92 by 2030 and 100 by around 2060.

If expectancies for women in the United States trail by their current five years, they will rise to 87 years by 2030 and 95 years by 2060. That's *five years* over the 82-year expectancy estimated by the actuaries at the Social Security Administration by 2030 and *eleven years* over the 84-year expectancy estimated for 2060.

No one can "prove" the future. But we think the evidence strongly suggests that we're being institutionally low-balled. The future U.S. population of people 65 and over is likely to be much closer to the Social Security high-cost estimates than the intermediate estimates. The age wave coming our way is larger than anyone wants to admit.

## Where Have All the Children Gone?

As years go, 1957 was notable, if primitive.

Remote control for television sets had yet to be invented. This meant the 47.2 million sets in 39.5 million American households had their channels changed *by hand*, if you can imagine that. The sets were also relatively small and offered pictures only in black and white.

Elvis Presley dominated popular music with songs like “Love Me,” “Too Much,” “All Shook Up,” and “Let Me Be Your Teddy Bear.” Jack Kerouac’s *On the Road* was published, introducing us to drugs and karma at the same time. Velcro was patented, General Foods introduced Tang, Ford introduced the Edsel, and a domestic first-class postage stamp cost only 3 cents.

The Soviet Union, flexing its technological muscles, successfully tested its first intercontinental ballistic missile, which grabbed our attention. Then they put the first satellite in space, *Sputnik*, which *really* grabbed our attention.

Oliver Hardy of Laurel and Hardy fame died, but Lyle Lovett was born. Lyle’s birth was not much noticed at the time because 1957 was the year we produced the most babies ever born in America in a single year. We did it at the rate of one baby every seven seconds, closing the year with 4.3 million newborns, from a total population of only 172 million.

You can get an idea of what a staggering feat that was by doing a modern comparison. In spite of having 100 million more Americans today, we produced fewer than 4 million newborns a year through the late 1990s.

The difference is the birthrate. Often measured by total fertility rate—the number of expected lifetime births per woman—this figure also tells us if we can expect a growing or shrinking population in the future. If the total fertility rate is 2.1, population will stabilize after a number of decades. This is the birthrate sought by ZPG (Zero Population Growth) and other organizations interested in population control.

In 1957 our total fertility rate hit a record, 3.68, a figure that approaches the fertility rates of underdeveloped nations. The rate (not to mention the 4.3 million babies) frightened those concerned with

population growth and set in motion Malthusian fears of global starvation. In fact, neither the number of babies born nor the total fertility rate has been that high since.

After 1957 the total fertility rate declined. It hit 2.48 in 1970 and dropped to 2.27 in 1971. And it was well below replacement rate through most of the 1970s and early 1980s. It bottomed at 1.74 in 1976. The baby bust of the seventies and the Birth Dearth of the eighties replaced the baby boom of the fifties (see figure 1.2).

If longer life expectancies and lower birthrates can radically reshape the age distribution of a population, causing major changes in the number of retirees depending on younger workers, the juxtaposition of a baby boom with a period of baby bust works to accentuate the change still further.

Today, we teeter around the replacement rate, surrounded by ominous portents of lower birthrates in the future. As we'll show shortly, a combination of higher education, later marriages, and delays in the birth of the first child may reduce future total fertility rates below the 2.1 replacement rate. If that happens, our future will have the stresses currently being faced in Europe, Japan, and China.

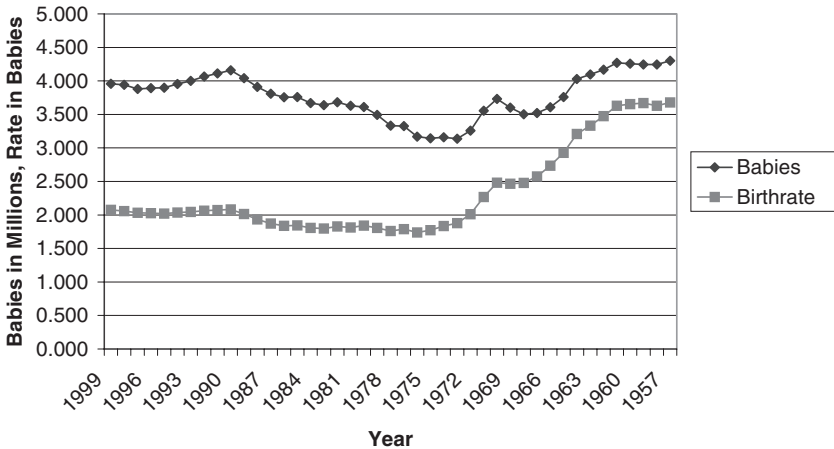
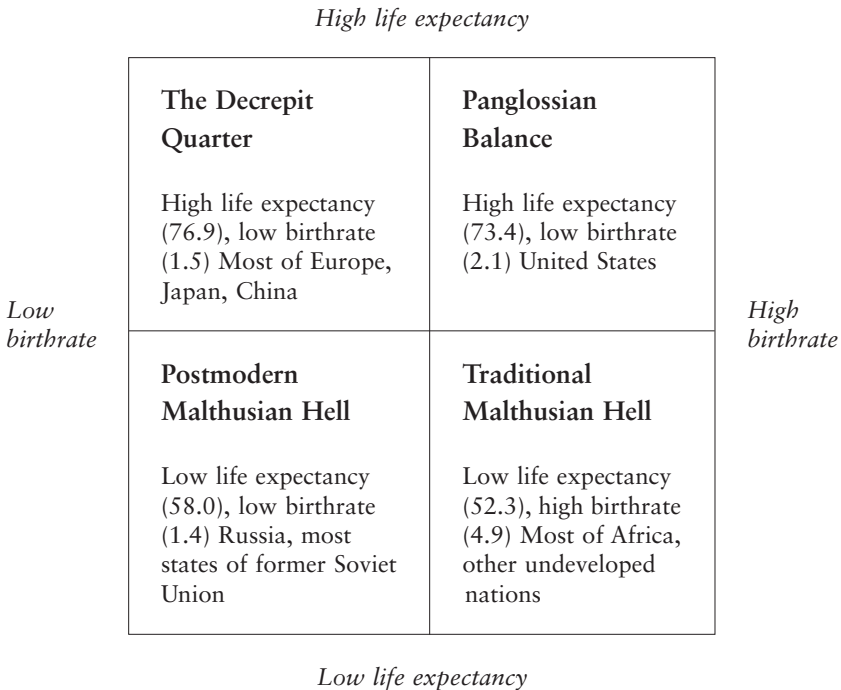


Figure 1.2  
From boom to near bust. Source: Population Reference Bureau  
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However, the operative word here is *may*. Whatever problems we face due to the rising number of elderly people, the only certainty is that we can't expect much sympathy from the rest of the world. Elsewhere, the problems are far worse. If we don't adapt and cope, there will be no one to bail us out.

You can understand this if you divide the nations of the world in two dimensions: life expectancy and birthrate. Let's make life expectancy the vertical axis and birthrate the horizontal axis, creating four quadrants (figure 1.3). Setting the cross-hairs at a life expectancy of 60 and a birthrate of 2.1 we find two quadrants of disaster, one of major upheaval, and one of possible Panglossian balance. In the United States, we're on the tattered edge of Panglossian balance—and still face a future with gigantic generational imbalances.



**Figure 1.3**  
The four quadrants of demography

Like Sisyphus, most of the world plugs on in a traditional Malthusian Hell. Life expectancies are low because public health efforts are limited, incomes are low, and starvation is a daily possibility. Birthrates are high to cope with the losses.

The starkest picture of the future comes from Postmodern Malthusian Hell, dominated by the states of the former Soviet Union. There, *both* life expectancies and birthrates have plummeted. The total fertility rate has fallen to 1.3, and life expectancies for men dropped to 57 years. As a consequence, the population of Russia could fall from its current 148 million to only 58 million by 2040—less than forty years off. This is a decline of 60 percent. That's what happened during the plague years of fourteenth-century Europe. The only difference is that Russia, with forty years, will have time to bury its dead. Cities hit by the plague lost so many people in such a short time that burying the dead became impossible.<sup>11</sup>

### Waiting for Mr./Ms. Perfect

The funniest and most demographically telling section in David Brooks's *BoBos in Paradise: The New Upper Class and How They Got There* is his comparison of current and past wedding announcements in the *New York Times*. Thirty years ago the wedding announcements were as much about the bride and groom's parents as the bride and groom. Today, Brooks observes, the wedding announcements read more like résumés:

When America had a pedigreed elite, the page emphasized noble birth and breeding. But in America today it is genius and geniality that enable you to join the elect. And when you look at the *Times* weddings page, you can almost feel the force of the mingling SAT scores. It's Dartmouth marries Berkeley, MBA weds Ph.D., Fulbright hitches with Rhodes, Lazard Freres joins CBS, and summa cum laude embraces summa cum laude (you rarely see a summa settling for a magna—the tension in such a marriage would be too great). The *Times* emphasizes four things about a person—college degrees, graduate degrees, career path, and parents' professions—for these are the markers of upscale Americans today.<sup>12</sup>

Thirty years ago the education of the bride was somewhat important (it gave strong signals about the quality of the match) but her employment wasn't. Today, her résumé is as important as the groom's:

“These two awesome résumés collided at a wedding ceremony in Manhattan, and given all the school chums who must have attended, the combined tuition bills in that room must have been staggering,” Brooks wrote.<sup>13</sup>

One reason for this shift is that both the bride and groom are older—much older. Another reason is that both the bride and groom work. Both expect to work after marriage as well as before. For women, the job-as-way-station to marriage is history. The June wedding following college graduation is history. Today, marriage can be delayed for graduate school, first job, and longer. As a consequence, today’s wedding bells are accompanied by the loud chiming of a biological clock.

Between 1950 and 1960, the peak years of the baby boom, the median age at first marriage for women was a tender 20.3 years. The corresponding age for men was only 22.8 years. Age at first marriage had barely advanced by 1970, the beginnings of the birth dearth. In 1970 the median age at first marriage for women was 20.8 years, only half a year greater. The median age at first marriage for men was 23.2 years. Again, it was only half a year greater.

But that was the end of young marriages.

By 1980 the median age for women was 22 years; by 1990 it was 23.9, and by 2000 it was 25.1. In only thirty years, median age at first marriage advanced 4.3 years.<sup>14</sup>

Grooms aged nearly as much. By 1980 the median age at first marriage for men was at 24.7 years; by 1990 it was 26.1; and by 2000 it was 26.8—a 3.6-year advance in thirty years.

To be sure, they still seem like kids to anyone who is over 40. But the rude fact is they have lost four of their best reproductive years, and the result is showing up in the total fertility rate. Another way to see the same shift is to examine how old the average American woman is at the birth of her first child. In 1970 the average age was 21.4 years, only slightly older than the median age at first marriage. (Given the indelicate difference of only 0.6 years—a tad more than seven months—we hasten to point out that one figure is an average, the other a median. In addition, as many proud grandparents will tell you, many first grandchildren are born prematurely.)

Table 1.5

Births per thousand women of all races

Year	15–19	20–24	25–29	30–34	35–39	40–44	15–44
1970	53.7	78.2	31.2	7.3	2.1	0.4	34.2
1980	41.4	57.3	38.2	12.8	2.6	0.3	29.5
1990	45.1	55.2	44.1	21.2	6.7	1.0	29.0
1999	38.9	50.9	43.1	25.6	8.5	1.6	26.6
Change	–27.6%	–34.9%	38.1%	350.7%	404.8%	400.0%	–22.2%

Source: National Center for Health Statistics [www.cdc.gov/nchs/data/](http://www.cdc.gov/nchs/data/)

Thirty years later the average age at the birth of the first child was 24.6 years, an increase of 3.2 years from 1970. While first births have increased in women 25 and older, the increase has not offset the decrease in first births in women under 25. When the rate at which first children are born declines, the overall birthrate also declines. You can see the shift in the figures in table 1.5, which represent the number of live births for every thousand women (of all races) in different age groups over the past 30 years.

First births to teenagers have declined. So have first births to women in their early twenties. Meanwhile, there has been a boom in first children born to women over 30—the increase from the 1970s is over 350 percent! The first child boom for women over 30, however, started from such a small base that it completely fails to offset the decline in first babies born to women under 25.

Another effect of later marriages and childbearing doesn't even show up in the age-at-first-birth figures. For some women, the long wait means they won't have any children *at all*. Between 1980 and 1998, for instance, the proportion of women who were 40 to 44 years old and childless virtually doubled, rising from 10 percent to 19 percent. Today, nearly one woman in five can expect to be childless. Madelyn Caens's book *The Childless Revolution* lets us know this is not an obscure event. Popular medical miracles and fanatical exercise notwithstanding, there is no "catching up" on motherhood at age 45.

This isn't a quirky statistical footnote. What we're seeing here is a change in reproduction that is without precedent: *the willing deferral of*

*childbearing raises the odds of being childless.* Combine this with rapid advances in life expectancy, and you have the formula for the generational storm coming our way. Basically, we made a massive societal bet on the ability of our children to support the elderly. Then, like the well-known slogan emblazoned on T-shirts in the 1980s, we forgot to have children.

Why is this happening?

The subject is rich in speculation. We see three major forces at work: the increasing education of women, their growing role in the workplace, and the crucial role women play in creating the affluent two-income household.

### Education, Work, and Condoms

It would be difficult to overestimate the economic contribution of women. Of the 118.9 million people employed in 2000, women accounted for 55.6 million. In the last half-century the proportion of men who are employed has declined. The proportion of women who are employed has soared. Indeed, most affluent households—perhaps even the *idea* of affluent households (think “yuppies,” “DINKS”)—would not exist today if women had not become major contributors to the world of paid work.

We could also argue that women are the secret heroines of Social Security. If they had not joined the labor force in droves, the financial condition of the Social Security system would be materially worse than it is today. As we show by examples in chapter 6, women pay the full burden of employment taxes but have received only a marginal increase in benefits.

The growing strength of women in the workplace has not been without cost. The most measurable human cost is quite easy to see: fewer children. Rising levels of education have increased the economic value of women in the marketplace. The same education has brought more and more women into the workplace. But it has also reduced the total fertility rate. Women who are educated and working have fewer children than women who are less educated and not working.

A 1997 study, for instance, found that education level was the single best predictor of how many children a woman would have.<sup>15</sup> Women

educated no further than eighth grade have an average of 3.2 children, women who are high school graduates average 2.7 children, and women college graduates average 1.6 to 2.0 children, depending on their race. Among college graduates, non-Hispanic white women average 1.7, non-Hispanic black women average 1.6, and Hispanic women average 2.0.

College-educated women, in other words, don't have enough children to sustain current population levels. If all women had college educations, the birthrate in the United States would be close to the very low rates being experienced in Europe, where population is expected to shrink over the next thirty years.

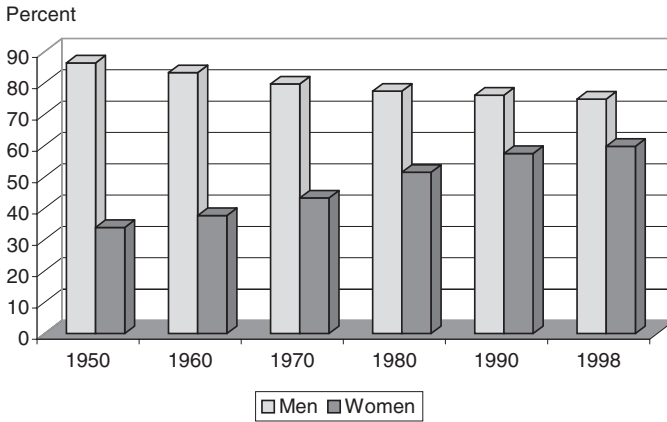
Now consider the trend in education. In 1960 men earned 66 percent of all degrees beyond high school. In that year 254,000 men, but only 138,000 women, received bachelor's degrees. It was the same for master's degrees: men received 51,000 while women received 24,000. Raise the ante to the doctorate level, and the disproportion was even more extreme: 9,000 for men, 1,000 for women.

The educational gender imbalance was even more striking for recipients of professional degrees. In 1960 only 5.5 percent of M.D. degrees went to women; a bare trace element of D.D.S. or D.M.D. degrees, 0.8 percent, were conferred on women; only 2.5 percent of all new law degrees went to women. Women earned only 2.3 percent of all theological degrees.

No more.

The number of associate's degrees earned by women exceeded the number of associate's degrees earned by men before 1980; the number of bachelor's degrees earned by women exceeded the number earned by men by 1985. Ditto the number of master's degrees.

The advance has been slower (and tougher) for Ph.D. degrees and professional degrees, but the numbers are changing rapidly. By 1994 women were receiving 38 percent of all M.D. degrees, 38 percent of all dentistry degrees, 43 percent of all law degrees, and 25 percent of all theology degrees. Recent projections indicate that women should achieve near parity in Ph.D. degrees early in this decade but will have slowed their advance in professional degrees. But those are only projections. In fact, the number of women enrolled in medical school is already greater than the number of men in medical school.



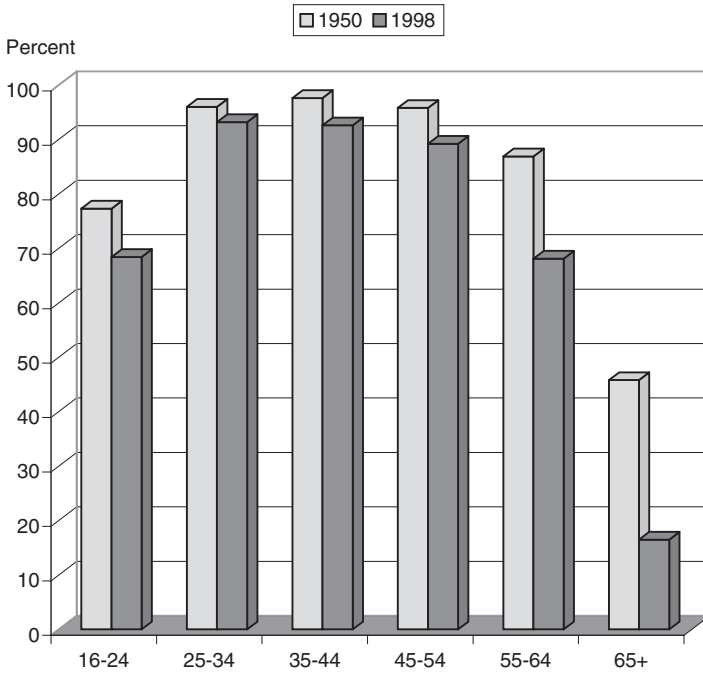
**Figure 1.4**

Women rising, men falling (labor force participation rates). *Source:* Adapted from Howard N. Fullerton, Jr., “Labor Force Participation: 75 Years of Change, 1950–1998 and 1998–2025,” *Monthly Labor Review*, December 1999. [www.bls.gov.opub/mlr/1999/12/art1full.pdf](http://www.bls.gov.opub/mlr/1999/12/art1full.pdf)

Glass ceilings notwithstanding, the forty-year surge to educational parity (and then some) allowed women to expand their share of the job market. Between 1950 and 1999 the number of people in the labor force grew from 62.2 million to 139.4 million, an increase of 77.2 million. Of that number, women were 46.5 million or 60 percent.<sup>16</sup> If men and women were products, we’d have to say women were gaining market share and men were losing it.

You can see this reality most directly in the labor force participation rate figures developed by the Labor Department (figure 1.4). From 1950 to the present, the male labor force participation rate has declined steadily, from 86.4 percent to 74.9 percent. The same figures for women have shown a steady increase. While only 33.9 percent of women were labor force participants in 1950, 59.8 percent are participants today.

Most striking is that fact that male participation rates have fallen for every age group (figure 1.5). The largest declines, as many would suspect from newspaper reporting over the past twenty years, have been among men 55 and over. For them, the participation rate has fallen from 86.9 percent in 1950 to 68.1 percent in 1998. For men 65 and over,



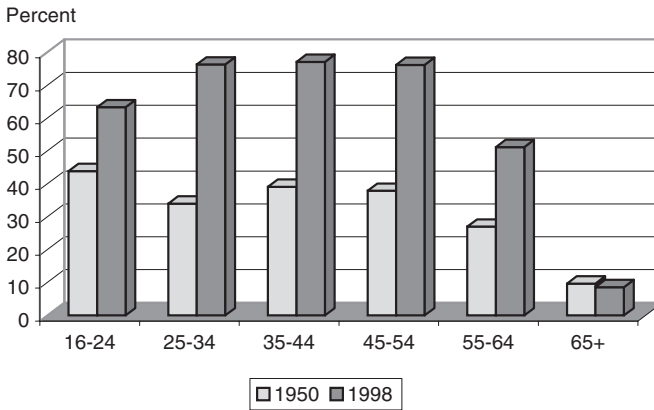
**Figure 1.5**

Men in the work force, 1950–1998. *Source:* Adapted from Howard N. Fullerton, Jr., “Labor Force Participation: 75 Years of Change, 1950–1998 and 1998–2025,” *Monthly Labor Review*, December 1999. [www.bls.gov/opub/mlr/1999/12/art1full.pdf](http://www.bls.gov/opub/mlr/1999/12/art1full.pdf)

the decline has been even steeper: from 45.8 percent in 1950 to 16.5 percent in 1998.

Female participation rates have risen for every age group, with the single exception of those 65 and older (figure 1.6). There, the rate has fallen from 9.7 percent to only 8.7 percent.

At first glance it would seem that the choice being made is simple and direct: Women can seek an opportunity for education and the employment that follows, or they can seek an opportunity for motherhood. But a closer look at the figures tells us that women are trying very hard to do both. In 1975 the labor force participation rate for women with children under 3 years of age was 32.7 percent. For women with children under age 1, the rate was only 30.8 percent.



**Figure 1.6**

Women in the work force, 1950–1998. *Source:* Adapted from Howard N. Fullerton, Jr., “Labor Force Participation: 75 Years of Change, 1950–1998 and 1998–2025,” *Monthly Labor Review*, December 1999. [www.bls.gov/opub/mlr/1999/12/art1full.pdf](http://www.bls.gov/opub/mlr/1999/12/art1full.pdf)

By 1998 there were 3.7 million women with infants under the age of 1. An amazing 59 percent were in the labor force with 36 percent employed full time, 17 percent part time, and 6 percent seeking employment. The same research found that an incredible 73 percent of the 31.3 million mothers without infants were in the workforce, with 52 percent working full time, 17 percent working part time, and 4 percent seeking employment.<sup>17</sup>

Small wonder that we see articles on “Having It All” and great concern with the availability and quality of child care. What it all comes down to, regardless of effort, is that the third child is never conceived, and some women have fewer than two children.

As a society, we’ve been remarkably inattentive to these extraordinary changes. We’ve been even less attentive to how women are doing it—dancing backward and on high heels, like Ginger Rogers. The idea that “having it all” may not be such a good deal for women has been stewing for a long time; witness Sylvia Ann Hewitt’s 2002 book, *Creating a Life: Professional Women and the Quest for Children*.<sup>18</sup> We experience the price in one of the most painful experiences a person can endure: divorce.

## Divorce American Style

Modern weddings can be disorienting. At one wedding not many years ago, a reporter watched the bride and groom exchange vows in a Catholic and deeply death-do-us-part ceremony. Nothing in their family histories, however, offered encouragement. The mother of the bride, who had been divorced from the father for many years, was unaccompanied. The father of the bride brought his most recent girlfriend. The bride's brother arrived with his wife. Her parents had divorced many years earlier. The father of the groom, who had remarried, arrived with his second wife. The mother of the groom, who had also remarried after divorcing the groom's father, arrived with her new husband. He brought his two sons by his first marriage. The groom's sister, who had married a few months earlier, brought her husband. His parents were also divorced.

While this may sound like the basic ingredients for a play that combines *Who's Afraid of Virginia Woolf?* and *Three Weddings and a Funeral*, it is, in fact, fairly typical of conjugal gatherings in America. Small wonder that people like to quote Rita Rudner: "When I meet a man I ask myself: Is this the man I want my children to spend their weekends with?"<sup>19</sup>

While no one ever said marriage was easy, it seems to be particularly difficult in the United States, a reality with long-term consequences as we become an older country. Many Americans now live in familial isolation, an isolation that will worsen as they age.

Is our situation extreme?

Very. In the divorce Olympics, we win the bronze medal. With 4.34 divorces per thousand inhabitants per year, we trail only Maldives (10.97) and Belarus (4.63). While it is unlikely we'll ever capture the gold (given the Maldives record), we're positioned to move up to silver and unlikely to be challenged by any of the also-rans. Cuba, which placed fourth at 3.72 divorces per 1,000 inhabitants per year, is well behind us. So are Estonia (3.65), Panama (3.61), and Puerto Rico (3.61).<sup>20</sup>

Compared to other industrialized nations, we're the Demolition Derby; they're the Grand Prix of Monaco. The divorce rate in Sweden, once reported to be the home of free love, is 2.4 per thousand inhabitants. That's only a tad lower than the 2.6 rate for Great Britain.

Germany scores a modest 2.3, France 2.0, and Italy a mere 0.6. In Japan the rate is 2.3. Barring some major change, marriage will continue to be nearly twice as difficult in the United States as in the rest of the industrialized world.<sup>21</sup>

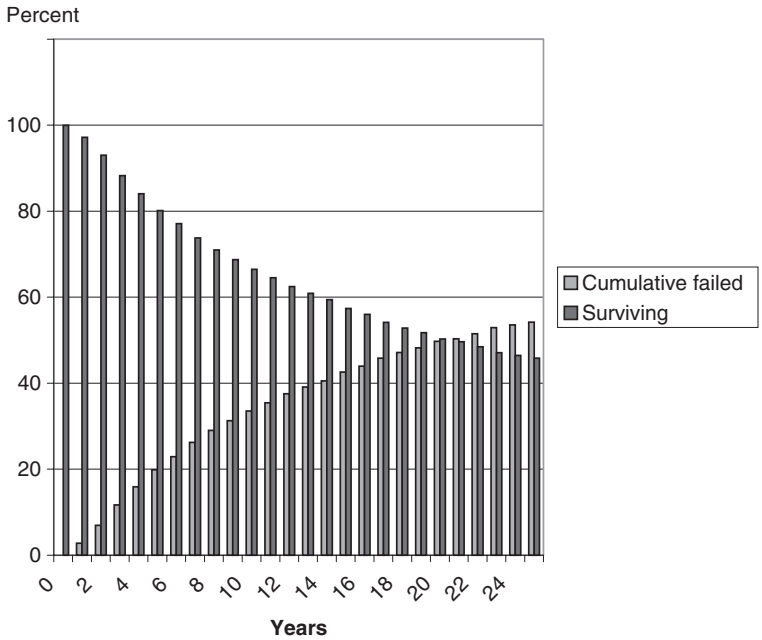
Indeed, examining the statistics of marriage, we could easily conclude that marriage in America is much like Thomas Hobbes's description of preindustrial life—"nasty, brutish, and short."

Knowledge of the difficulty of marriage doesn't keep us from trying. At one time or another in our lives, usually sooner than later, about 95 percent of us try matrimony. Some keep trying with a second and third marriage. Only 1 percent of us, however, are game for four or more marriages.

The most recent complete examination of our mating habits was published in 2002 based on data collected from several very large surveys in 1995. Romantically titled *Cohabitation, Marriage, Divorce, and Remarriage in the United States*, it tells us how everything from race to generalized anxiety disorder affects the odds a marriage will survive. On first marriages, it notes they are "less likely to break up, and more likely to succeed, if the wife grew up in a two-parent home, is Asian, was 20 years of age or over at marriage, did not have any children when she got married, is college-educated, has more income, or has any religious affiliation."<sup>22</sup>

As you can see in figure 1.7, for women between 15 and 44 years of age in 1995, half of all first marriages were likely to fail by the twenty-second year.

The same study also shows the flux of marital status as women age and the enduring drive to live as couples (table 1.6). At age 20 to 24, for instance, 11.2 percent of women are cohabitating, 56.1 percent have never been married, 5.5 percent are "formerly married," and 27.2 percent are married. Twenty years later, by age 40 to 44, cohabitation has declined to 4.1 percent, only 8.8 percent have never been married, 18.1 percent are formerly married, and 68.6 percent are married. The positive story here is that if marriage is a major social goal, more than two-thirds of all women eventually succeed. The other figures simply show that it isn't easy. (Sadly, the study offers no information at all on women over age 44.)



**Figure 1.7**  
 First marriage life table. *Source:* Adapted from Rose M. Kreider and Jason M. Fields, “Number, Timing, and Duration of Marriages and Divorces: 1996,” *Current Population Reports*, February 2002.

**Table 1.6**  
 The long drive to marriage—more than two-thirds of women succeed

Age at interview	Currently cohabitating	Not cohabitating		
		Never married	Formerly married	Currently married
15–19	4.1	91.5	0.6	3.8
20–24	11.2	56.1	5.5	27.2
25–29	9.8	28.9	8.8	52.5
30–34	7.5	16.2	11.6	64.7
35–39	5.3	11.9	15.0	67.9
40–44	4.4	8.8	18.1	68.6

*Source:* Matthew D. Bramlett and William D. Mosher, “Cohabitation, Marriage, Divorce, and Remarriage in the United States,” *CDC Vital and Health Statistics*, July 2002.

While it is commonly observed that it is the destiny of most women to live alone late in their lives, these figures make it clear that a substantial minority of women live without a significant other most of their lives: nearly 27 percent of women 40 to 44 had either never married or were formerly married (table 1.6). This means a substantial minority of women doesn't have the economic or health benefits of marriage. They are likely to enter their old age in a more vulnerable position than those who are married.

Unfortunately, these figures don't show the decline in marital success for women who came of age more recently. Another study, which analyzes marriages by year in which the marriage occurred, shows that women who first married in 1945 to 1949 had a 95 percent chance of reaching their fifth anniversary and a 90 percent chance of reaching their tenth anniversary.<sup>23</sup> The marital longevity figures decline year by year. Women who first married in 1980 to 1984, for instance, had only an 86 percent of reaching their fifth anniversary and a 73 percent chance of reaching their tenth anniversary.

The study also examines the marital status of women over the entire life cycle, revealing that widowhood supplants divorce after age 60. Examined by age group, we learn that women are most likely to be in a marriage from the age of 30 through 59. In that period roughly two-thirds are married. Before age 30 women are looking for mates (sometimes a second or third mate). At 60 and older, raw mortality struts on stage. The higher mortality rate of men begins to expose an increasing number of women to living alone. At 60 and older, 54.5 percent of women are currently widowed, and 58.3 percent have been widowed at one time.

The corresponding figures for men are dramatically lower: only 18.6 percent are currently widowed at 70 and older and only 25.1 percent have ever been widowed. If we look from the other side, 73.9 percent of men 70 and older have married only once, 55.5 percent are still married to the same woman, and 71.3 percent are currently married, though some have married three times to get there.

Will these figures hold? We doubt it. Divorce is more accepted, more common, and much easier today than it was in 1950, 1960, or 1970.

Dividing all women into different age groups tells us how each age group is doing now (table 1.7). It tells us much less about how they will be doing in the future. We can't, for instance, blithely assume that women now ages 30 to 34 will age forty years and simply replace the current group of 70-and-older women. There are several reasons for this, but we'll name just the big ones. The first is a pure numbers game: higher divorce rates for everyone and lower death rates for women. Like a morbid game of musical chairs from which male "chairs" are removed in increasing numbers, some women will simply lose their "place." Raw mortality will make replacement impossible. There is a reason women outnumber men in nursing homes: men don't live long enough to get there.

The second reason has to do with choice. Fifty years ago, marriage was a social and material necessity for women. Today, glass ceilings notwithstanding, an increasing proportion of all women earn more than their husbands. With more women earning undergraduate degrees than men, that proportion is likely to increase. Indeed, men of all colors could become the "super masculine menials" that Eldridge Cleaver described long ago.

For women today, marriage is a social choice and a material convenience. In the poker game of life, it no longer takes "a pair or better" to open.

What does this mean for the elderly of the future? Their only non-institutional source of help and support in their old age, whether it is physical or financial, may be their children—if they have any. As we've already seen, the supply of children—and the working adults they become—is shrinking.

### **Empty Nests**

Robert Schroeder died an enviable death.

Widowed at 82, he spent the last two years of his life in active contact with his children, grandchildren, and great grandchildren. All lived in the same city, less than an hour from him, and all loved his company. He worked part time, drove his car, enjoyed the security of living independently in a continuing care community, and embraced every day as a new opportunity.

**Table 1.7**  
Women and marriage through life, by age group

Marital status	15-19	20-24	25-29	30-34	35-39	40-49	50-59	60-69	70 and over
Never married	96.6	67.0	35.3	18.7	14.1	8.6	5.0	3.7	4.2
Married once, still married	3.0	27.4	48.9	57.0	53.3	49.2	50.3	48.4	28.1
Married twice, still married	×	1.1	4.6	9.6	12.0	15.5	13.2	10.5	6.0
Married three times or more, still married	×	×	0.3	1.1	2.3	3.4	3.9	2.4	0.9
Currently divorced	×	2.1	7.1	9.5	12.8	17.2	16.6	11.5	5.6
Currently widowed	×	0.2	0.2	0.3	1.0	2.6	8.2	21.6	54.5
Total married	3.0	28.5	53.8	67.7	67.6	68.1	67.4	61.3	35.0
Total unattached	96.6	69.3	42.6	28.5	27.9	28.4	29.8	36.8	64.3

*Source:* Rose M. Kreider and Jason M. Fields “Number, Timing, and Duration of Marriages and Divorces: 1996,” *Current Population Reports*, February 2002.

On the morning of a party to celebrate his eighty-fourth birthday, he had a mild stroke and inhaled some material into his lungs, starting an infection. Within four days the infection was overwhelming his body. No amount of antibiotic could stop it. Three days after that, conscious to the very last, he looked silently at each of the eleven family members gathered around him. Each was touching him. And then he was gone.

George Blasius followed him only a few months later. After George married his third wife, they moved to Sarasota. When she had a stroke and had to stay in a nursing home, he visited every day, rolling the oxygen tank he needed to cope with his emphysema. Finally, he fell in the night and was hospitalized for exhaustion. With a son from his first marriage, a stepson and three sons from his second marriage, and a near-son from his third marriage, he was not without support or help. “The boys” (who ranged in age from 38 to 62) were spread around the country—Maine, New Jersey, Texas, Colorado, and California.

They flew in, one after another. The ones with air miles contributed tickets, and they rotated their visits. In the final months they pooled enough money so that one of the brothers could stay in Florida. On Father’s Day three boys went to lunch with him. The next day two boys and a grandson helped him in a physical therapy session. He died that night.

Several months later, to escape the conflict over where he should be buried, the boys gathered again. This time they took a yacht volunteered by a family friend into the Gulf of Mexico. They shared straight shots of George’s beloved Canadian Club and anointed the water. Then, one by one, they shared the task of dropping his ashes into the glassy swells of the gulf.

These are two of our stories. If you don’t have a story about the death of a parent, you are either very young or very lucky. Like it or not, these stories are destiny: each of us will have a story about how our mother and father died.

The hard part is that the stories are changing. As marriages shorten, as mothers have fewer children, and as we become geographically dispersed around the country, the care and support elderly people could hope for—no, expect—from their children is shrinking. Sometimes it simply isn’t there. They are old and alone.

**Table 1.8**  
Women alone

Marital status	50–59	60–69	70 and over
Never married	5.0	3.7	4.2
Currently divorced	16.6	11.5	5.6
Currently widowed	8.2	21.6	54.5
Total unattached	29.8	36.8	64.3
Total married	67.4	61.3	35.0

*Source:* Rose M. Kreider and Jason M. Fields, “Number, Timing, and Duration of Marriages and Divorces: 1996,” *Current Population Reports*, February 2002.

We’ve worried about social connection for a long time. David Reisman did it in *The Lonely Crowd* in 1950; Philip Slater did it in *The Pursuit of Loneliness* in 1970. Most recently, Robert Putnam did it in *Bowling Alone* (2000). These concerns were rooted in observation of broad social change. They could always be dismissed as dour speculation or the inevitable social nagging of the intellectual community.

Today our worry has hard demographic roots. Table 1.8 examines the marital status of women in later life. While two-thirds of women in their 50s are married, the odds drop precipitously when they are 70 and older. Then, only one woman in three is still married. With higher divorce rates among younger women, the proportion is likely to grow in the future.

Most men escape this fate. But they do it the hard way, by dying.

After spouses, the next measure of connection is children. In traditional societies, adults had children to care and provide for them in their old age. Today, we have fewer children, they are geographically mobile, and their sense of obligation may have been reduced by divorce.

You can get some idea about the odds against family care by considering the findings of a study. In “How Much Care Do the Aged Receive from Their Children?” the lives of 5,000 elderly people were examined.<sup>24</sup> In addition to considering whether they were single or married, the study examined the number of children, the number of daughters, how many lived less than an hour away, and the amount of time their children spent with them on a weekly basis. The researchers learned:

- That 22.4 percent of the elderly have no children
- That another 19.8 percent had only one child
- That 40.5 percent have no daughters
- That most of the single elderly live by themselves
- That 10 percent of those with children had no children within an hour's distance
- That over 40 percent of the “vulnerable” elderly lived by themselves
- That less than 20 percent of the elderly live with their children
- That institutionalized elderly have less contact with children, not more
- That transfers of money from child to parent (or vice versa) were rare, regardless of income

It's not a pretty picture—and that's the way things were over ten years ago. As Phyllis Diller once joked, “Always be nice to your children because they are the ones who will choose your rest home.”<sup>25</sup>

What will familial care and support look like in 2030? That's a matter of speculation. One optimistic speculation is that the relatively high number of siblings that baby boomers have may offset their smaller number of children. Others have speculated that definitions of “family” or “kin” might include the stepchildren as well as natural children. The counter-argument is that siblings, however willing, may not be capable of providing care and support because they will be relatively old themselves. How many newspaper stories have you read about a 60- or 70-year-old daughter being exhausted by caring for her 90-year-old mother? Similarly, while the number of people we are connected to may expand through two or more marriages, multiple marriages also work to expand the number of aging people children and stepchildren may be called on to help. Call it a wash.

Kenneth W. Wachter, a researcher at the University of California at Berkeley, examined the issue using computer simulations of family patterns.<sup>26</sup> The results offered some hope: the increasing number of stepchildren and step-grandchildren will offset most of the anticipated decline of close biological kin. Numbers, however, aren't the same as actual support. Unless the kinship ties with stepchildren become stronger in the future, they won't be a substitute for biological kin.

What we are heading toward is a nation in which familial and institutional caring will be strained and reduced at the same time. The natural

caring of family is strained and reduced by the same demographic change that will put the nonfamily substitutes—Social Security and Medicare—under extreme financial pressure.

### Big, Blue, and Wrinkled All Over

America is getting older. But it isn't alone.

The entire planet is aging, much of it faster than we are. Most of the developed world is aging faster for two reasons. First, Americans aren't contenders in the Life Expectancy Olympics, so we're not increasing our elderly population as fast as other countries. Second, our birthrate, while flagging, isn't so low that our population will shrink over the next fifty years.

In most of Europe, it will. The problems we face are mild compared to those of many other nations.

You won't see much about this on TV. There, the cardinal rule is, "If it bleeds, it leads." You won't read much about this in most newspapers either. Stories about population, life expectancy, and birthrates tend to get put in the Sunday "think piece" bin.

In fact, virtually nothing in the daily news will change how we live and what we do more than the global population shift now under way. No story is more newsworthy. We are heading toward a planet that is big, blue, and wrinkled all over.

How old? How wrinkled?

Very. At the Second World Assembly on Ageing in Madrid in 2002, those attending heard astounding figures. By 2050 the number of older persons *in the world* would exceed the number of young people *for the first time in history*. The number of children is expected to grow by only 140 million, but the number of people in their 60s is expected to grow by 600 million. The number of people in their 70s will grow by 448 million. The number of people in their 80s will grow by 253 million. And the number of people at least age 90 will grow by 56 million. While children worldwide outnumber older people by three to one today, the ratio will be one to one by 2050. This is a gigantic change.

Another way to see the shift is to examine the changes in median age between 2000 and 2050. As you can see from table 1.9, we're going from

**Table 1.9**  
The advancing median age in years

Country or area	2000	2025	2050	Change 2000/2050
World	26.5	32.0	36.2	9.7
United States	35.5	39.3	40.7	5.2
China	30.0	39.0	43.8	13.8
More developed regions	37.4	44.1	46.4	9.0
Europe	37.7	45.4	49.5	11.8
Japan	41.2	50.0	53.1	11.9

*Source:* United Nations, *World Population Ageing: 1950–2050* (New York: United Nations, 2002).

a world in its 20s to a world in its 30s—and that includes the entire less developed world. The developed world will age much more. By 2050 the median age in Japan will be 53. The entire developed world will be in its 40s.

The world of 2050 is how the developed nations of the world could be described in 1998. Over the next fifty years, nations like Mexico, Peru, Brazil, and India will catch up. Currently, Mexico has nearly eight children (those under 15) for every elderly person (those 65 and over). In India, the ratio is seven; in Brazil, six; and in Peru, eight. After centuries where few people were old and nurturing children was the primary social concern, children will become a small minority around the globe. The primary social concern will be caring for the elderly.

Meanwhile, the developed nations will continue to age. In Europe, there will be 2.1 old people *per child* by 2025, increasing to 2.6 by 2050. Europe will definitely be “the old country.”

This will not be a phase. We will be older forever.

Two powerful forces, rising life expectancy and declining birthrates, drive the aging of the planet.

While the population of the United States will still be rising in 2050, the population of the *entire developed world* will be slightly lower than it is today (table 1.10). Some areas and countries will experience sharp declines. The population of Europe (as defined in the U.N. report), for instance, will shrink by 124 million, an amount greater than the current population of France and Italy combined.<sup>27</sup> The only way both countries

**Table 1.10**  
The aging world and coming population decline

Country or area	2000	2025	2050	%60+ in 2050
United States	283.2	346.8	397.1	26.9
More developed regions	1,191.4	<b>1,218.8</b>	1,181.1	33.5
Europe	<b>727.3</b>	683.5	603.3	36.6
France	<b>59.2</b>	62.7	61.8	32.7
Germany	<b>82</b>	78.9	70.8	38.1
Italy	<b>57.5</b>	52.4	43	42.3
Russia	<b>145.5</b>	125.7	104.3	37.2
Japan	<b>127.1</b>	123.8	109.2	42.3
China	1,275.1	<b>1,470.8</b>	1,462.1	29.9

*Source:* United Nations, *World Population Ageing: 1950–2050* (New York: United Nations, 2002).

*Notes:* The peak period is in bold type; population figures are in millions.

will avoid an increasingly quaint (and abandoned) countryside is to sell their homes and towns to wealthy foreigners seeking a second or third home.

The population of Russia will fall by 41.2 million, or 28 percent—and some consider that estimate wildly optimistic. Lacking a Tuscany or Provence, Russia could develop whole areas like the “Buffalo Commons” that some American environmentalists dream of for the mountain states.<sup>28</sup> They would like to see large areas of New Mexico, Colorado, Wyoming, and Montana return to vast, unfenced grazing areas unpopulated by humans. The difference is that Russia will be an ecological disaster area.

Japan will likely be the oldest nation in the world, with 42 percent of its population 60 or older. Fifteen percent will be 80 and over. The centenarian population will be approaching 1 million—even though Japan’s population will be down to 109 million. In a single century Japan will have gone from a nation with 4.6 children for every old person to a nation with 3.4 old people per child.

One of the most dramatic changes will be in the most populous nation in the world, China. While its population will continue to grow in the early part of this century, it will be declining by 2050. It will also be

getting older fast, with the median age rising from 30 in 2000 to 39.0 in 2025 and 43.8 in 2050. By 2025 China will have 287.6 million people who are at least 60 years old, a number that exceeds the entire current population of the United States. By 2050 China will have 437 million people who are at least 60 years old. Ranked as a subnation, Old China will be larger than the total population of any nation in the world, except India.

In addition, China's population will be profoundly unbalanced because males will continue to outnumber females at all ages through the early 60s. Referred to as the "missing girls problem," the imbalance has its roots in a long-standing cultural preference for male children, a preference that was exacerbated by a government edict limiting the number of children a woman could have. Today, males age 15 to 59 outnumber females in the same age range by 25.4 million. By 2025 the mismatch will reach 30.7 million, 31.3 million by 2050.

Examining the gender gap closely, one demographer noted that "by 2020, for example, the surplus of China's males in their 20s will likely exceed the entire female population of the island of Taiwan!" The demographer calculates that about one in six Chinese men will either have to find a bride outside China or remain unmarried.

Will we see population growth anywhere?

Perhaps. While most of us read or hear the news of HIV prevalence in Africa and envision a complete population collapse, the United Nations researchers have projected that the current devastation will recede and that high birthrates will lead to major population growth there. A United Nations report from 2000 says, "Even in Botswana, where HIV prevalence is 36 percent or in Swaziland and Zimbabwe, where it is above 25 percent, the population is projected to increase significantly between 2000 and 2050: by 37 percent in Botswana, 148 percent in Swaziland and 86 percent in Zimbabwe."<sup>29</sup>

Similarly, less developed nations not burdened with major HIV incidence are likely to continue their high birthrates. Basically, while the less developed world will continue to be a Malthusian nightmare of high birthrates, the developed world will be plunging into a new demography: inescapable old age.

Is it the end of the world?

No. History and life are full of surprises. But the raw numbers tell us two important things. The first is that human demography, driven by simple changes in life expectancy and childbearing, is about to trump the power of economic growth. The second is that the shift in the United States may be major, but it's minor compared to what the rest of the developed world will experience.

If we get into trouble, there will be no rescue. We're on our own.