

Demographic Transition and Age of the Elderly

Leonardo Palombi, MD, Ph.D.

Professor

Institute of Hygiene, Public Health and Epidemiology

University of Rome Tor Vergata

Rome, Italy

Good morning, everyone. I'll join your discussion about old age by briefly talking about that significant epochal phenomenon we can define as demographic transition.

Demographic transition is that phenomenon which generates the world, the planet, as we know it today, that is, populated by a great number of older people. It has not always been so, that's why I talk about an old age era.

If we consider its essential aspects, demographic transition can be defined as the breaking of a historical millenary balance between a high birth rate and a high mortality rate. Many people were born, and many people died, and it went on until the 19th century. The transition goes from a balance based on high birth and death rate to a new balance based on low birth rate and low mortality. During this transformation, which lasted approximately two centuries, the first phenomenon we notice is that of population growth.

Why does this demographic transition start? Essentially for two reasons. The first reason is related to nutritional improvements resulting from the industrial revolution and the economic benefits it brought. The second reason was the introduction of some major hygiene measures like sewage or water systems in large European cities, or greater attention to hygiene during childbirth and a better knowledge of microbiology introduced measures to combat infectious diseases. So, nutrition and hygiene reduced infant mortality rate dramatically.

Think about this. In 19th century Europe, as many as 200 children, out of 1,000 live births, died within the first year of life, and the average age of death was around four or five years, meaning that half of all deaths occurred before the age of four or five. What was Europe, the Western world, like in the 1800s? It was a world populated by children. Fifty percent of the population were children under the age of 15. People in old age were an extremely rare phenomenon. It is estimated that in Rome, for example, in 1864, the elderly were only 3% of the population. You can see that after the decline in overall infant mortality, the birth rate, that is the green line, remains high for a while and there is a range within which we can observe dramatic population growth, and this is the second aspect of the demographic transition. Over time, birth rates also end up decreasing and you see that at the threshold of the year 2000 we go back, at least in the developed countries, Europe and the United States, to a new demographic balance.

Why do I say it is an epochal phenomenon? Because you can see that human population from 10000 B.C. remains more or less stable until 1800 when we were only one billion inhabitants. Between 1800 and 2020, the population has grown to 7.7 billion.

It is estimated that 80% of the growth of human population occurred within two centuries, so it had an absolutely vertical increase.

As you can see, the increase has almost completely occurred in the big cities, and this is the second change. The population in the cities exceeds the rural population and this is also an extremely important epochal change. Will this phenomenon go on forever? Absolutely not. You can see in the graph on the right how the population growth that reaches 2% around the 1960s begins to decline. We think that the world population will stabilize around 2100. In fact, for many European countries, stabilization is underway, and in some cases, we can even observe a decrease in the population.

Of course, as the population grows and the infant mortality rate decreases, life expectancy increases, that is, the number of years that a child can expect to live during his or her lifetime. Back in the days of the Roman Empire, life expectancy was around 22 years, while today, in many cases, it is 80 years in developed countries. But globally, life expectancy today is 71 years, so it is an absolutely general growth. In this chart, you can see how the world where the elderly were a rare occurrence, which represented only a few percentage points of the population, they have already grown between 10 and 30% in 2015. In Europe, we are well around 20%, and you can see that in 2050, one out of three people will be over 60, so one out of three persons will be an older adult. In this other slide, you can also see how the number of those who reach the age of 70 doubles very rapidly. In Sweden, for example, elderly people reached 20% in 1970 and in 2015 in the United States and so on, which means population's doubling rate is very rapid and significant. At this point, as we were saying, each person can expect to live 71 years, but those who have already reached the age of 60 have a life expectancy of 20 years.

It's as if a continent is rising up, a continent that didn't exist in the history, in the culture, and in the tradition. The elderly were only a few survivors who reached a certain age in their life. What do we do with these 20 years? How do we interpret them? How do we live them? This is a big question, it's an important question. Pope Francis says, "We cannot consider it the age of discarding". It would be absurd, in fact, that so much progress, so much development, that has brought us so many years of life, ends up becoming a time to be spent sadly, in solitude, in nursing homes, or in institutions. We must know how to interpret this age together. We receive two suggestions from the Catholic tradition, on the one hand, and from contemporary experience on the other.

Certainly, old age is the age of weakness, but weakness, when it is supported, when it is loved, when it is assisted, is not something negative, on the contrary, weakness creates aggregation around itself. Young people really love elderly people.

Intergenerationality is something we must not lose. We live in a world that is progressively becoming more lonely. The number of people we can confide in is continuously decreasing. About half of the people think that they are alone, that they have no one. The number of cohabitants is also decreasing. In a time of great individualism, perhaps, we can rebuild around the elderly, around weakness, a

significant human and social fabric.

I'd like to say one more thing. Being elderly, perhaps, is also a time for gratuitousness and generosity. We have struggled all our lives. We created our careers, our families. We looked for money, we looked for wealth, we fought our battles; now we can take care of others, and this is great. It's a wonderful freedom, the freedom of altruism, the freedom of generosity, the freedom of being able to help those who are younger than us and need a hand. Living together and being together, perhaps, is the key though which we can interpret what it means being elderly today. Thank you.