

Lorenzo GASCÓN*

SHAPING THE WORLD AT AN ALMOST UNCONTROLLABLE SPEED

Abstract: The Middle Ages lasted 800 years, the Industrial revolution 200 and the digital era skips stages every two years.

— The space race, computing, biology, are shaping the world at an almost uncontrollable speed.

— Let's have a look at a recent discovery based on rat UT 2598. It is linked to human longevity and its unpredictable consequences.

— The 'Welfare State', healthcare and education for everybody and a retirement pension from 65 years old.

— At the time, life expectancy of Europeans was 67 years. Nowadays in Europe, the average is 80 years.

— The tests with rat UT 2598. At the Health Science Center of the University of Texas in San Antonio, an achievement due to the discovery of a compound named rapamycin.

— An average life expectancy of 142 years.

— Should the concept of working until 60/65 be extended, let's say, until 90?

— What about retirement economically sustainable?

— The USA and China invest in scientific research more than the European Union.

— Science is closely conditioned by what is happening beyond our limits.

We say that the Middle Ages lasted 800 years, the Industrial revolution 200 and the digital era skips stages every two years.

Nothing is more palpable than the staggering pace of scientific achievements in the past few years, which have been crucial in the hatching of worldwide globalisation.

Globalisation is the consequence of cutting-edge technology, in particular of computing.

Humanity has crawled forward in terms of technology for thousands of years.

* Vice President, Royal Academy of Economic, Sciences and Finance of Spain; WAAS Fellow

It wasn't, however, until two thousand years ago that we made a big leap forward. The Greeks in the Classic Era and later the Arabs in the Middle Ages, with their astonishing successes in the fields of mathematics, geometry, astronomy, architecture, philosophy, and literature, laid the foundations of our civilisation and the basis for modern technology.

However, it was not until a few decades ago that scientific investigation started to make advances that were unthinkable a century ago.

The space race, computing, biology, are shaping the world at an almost uncontrollable speed and they are making the future unpredictable. And we are starting to feel this unpredictability.

Let me, as an example, show you what is coming in the multiple fields of scientific investigation. Let's have a look at a recent discovery based on the famous rat UT 2598. It is quite an unknown subject. Only recently, have some publications appeared.

It is linked to human longevity and its unpredictable consequences from an economic, sociological, and also political perspective.

Keep in mind that in our western world during the Middle Ages, human life expectancy was of 35 years, 59 years in 1925, 70 years in 1955, 75 in 1985, and 80 years today. Just in the past 90 years, human life expectancy has increased by 20 years.

In 1946, the Labour Party in United Kingdom won the elections. British people did not re-elect Winston Churchill, the national hero who had led them towards victory.

The new government was mainly made up of intellectuals coming from the 'Fabian Society'. Prime Minister was Attlee who surrounded himself by a formidable group: Morrison, Bevin, Sir Stafford, Cripps, Barbara Castle, Callaghan, Wilson, and Lord Weaverbrook.

The last one was the promoter of the 'Welfare State', a pioneer in the world. Healthcare and education for everybody, and most importantly a retirement pension from 65 years old. A true revolution adopted in the following years by most European states.

But... at the time, life expectancy of Europeans was 67 years. The whole pension system covered only a period of two years.

Nowadays in Europe, the average is 80 years. The issue is how to finance these pensions. Germany is fighting to convince their citizens that it is necessary to work until the age of 70. At the beginning, and gradually till 2020, it should be 67. The electorate is not in favour.

Finally, we have the tests with rat UT 2598. At the Health Science Center of the University of Texas in San Antonio, they have increased the rats' life expectancy from two, three years up to four years.

Miracle or scientific breakthrough? Obviously, an achievement due to the discovery of a compound named rapamycin. By extrapolating the results to human beings, we obtain an average life expectancy of 142 years.

Rapamycin slows the aging process of cells. Liver and heart stay younger for longer. Tendons are stronger and more flexible than expected. It is definitely an achievement with unimaginable consequences.

Together with the trials performed with rat UT 2598, new discoveries appear, reducing the percentage of tumours related to aging, of cardiologic dysfunctions, and brain degradation such as Alzheimer. It all focuses on aging slower and in better conditions.

We are facing the challenge of how to convert a world conceived for young people into a society shaped around a population who will live over a hundred years on average.

Let's think about how transport, infrastructures, hospitals, education, designed for a society based on three generations, will cope with five generations. Great-grandfather, grandfather, father, son and grandson living at the same time.

Should the concept of working until 60/65 be extended, let's say, until 90? Will women's fertility, nowadays reaching 40/45 years old, be extended to 80 years old?

Science and technology are the root of this dramatic step forward in life expectancy. Science and medicine have opened the door to limits being pushed much further in the future.

How could a system of pensions that would spread out several decades be financed?

Will children be able to look ahead and see themselves in health and comfort in a hundred years' time?

What about retirement? The age until which we will have to work will have to be determined.

We will have to build a world where people will live for an additional 50 years or more in good physical and mental conditions, while continuing to be economically sustainable.

Originated in the USA, this simple exercise about the impact of science on longevity will certainly have unthinkable effects in Europe, cradle and epicentre of the Welfare State.

The world has become too small to say that science is a dimension of European identity. It is, but within a larger frame. This is a globalised world. We belong to it and are more interlinked with it every day. The USA and China already invest in scientific research more than the European Union.

So, we may assert that science is one of our dimensions but is closely conditioned by what is happening beyond our limits, and is so with an ever-increasing influence.