



The background of the page is a bright, clear blue sky. There are several wispy, light blue clouds scattered across the upper and middle portions of the sky. In the lower-left corner, there is a large, prominent, fluffy white cumulus cloud. The overall scene is bright and airy, suggesting a clear, sunny day.

Chapter IV

The planet earth and man



Man is the only-begotten child of the universe. Man exists so that the universe may have a reason for being. Carl Sagan claims that humans are made of stardust. Yes!

Man has a cosmic identity and a universal soul. Man and the planet earth are composed of the same material that the entire universe is composed of. At the state-of-the-art Athens planetarium, the astrophysicist and director, Dionysis Simopoulos, is a good friend of mine. This restless scientist has devoted his entire life to the study of earth, the stars, the Galaxy, trips to other planets, space, time, and the future of the universe.

I visited him in the summer of 2004 at his office. I wanted him to inform me as to what contemporary science says about cosmic journeys and time travel.

How do you believe cosmic journeys will take place in the future, in the near and the distant future?

DR. SIMOPOULOS:

You know, the key word in your question is "believe". What I believe and what reality is are two different things. We can say the following: that cosmic journeys, as they are presented by science fiction writers, can take place in different ways. In any case, science fiction, especially in the last 30 or 40 years has familiarized us, has familiarized the broader public with time travel, space travel, through wormholes, through cosmic tunnels. In reality, however, these are nothing but science fiction. My view is that time travel to the past cannot take place. Time travel towards the future may



Carl Edward Sagan
1934 ñ 1996

Was an American astronomer, astrobiologist, and highly successful science popularizer. He pioneered exobiology and promoted the Search for Extra-Terrestrial Intelligence (SETI). He is world-famous for writing popular science books and for co-writing and presenting the award-winning television series *Cosmos*. *Cosmos* was the most watched television show on PBS of all time[1] and an accompanying book was published. He also wrote the novel *Contact*, upon which the 1997 film of the same name starring Jodie Foster was based. In his works, he frequently advocated the scientific method.

perhaps happen, so long as we are able to have a traveler who flies with a space craft that moves with a velocity tending to reach that of light. Then, according to the theory of relativity, such a person, such a traveler, could take a journey, which for him, for his clock, in other words, for his metabolism, would last perhaps several months, and then return to earth.

But on earth, a time interval would have passed that would be a multiple of the time on his clock. In that sense, naturally, that traveler will have been placed in the future, but a future from which there is no return.

You cannot, in other words, return to the time from which you departed. So in that sense, such a journey may perhaps be possible in a thousand or two thousand years from now.

I see that the story of mankind in relation to the earth will present large gaps in the future when the population of the earth reaches great proportions, for it is foreseen that after 40 or 50 years the population of the earth will have more than doubled, with the result that we are talking about twelve, or fifteen, and shortly about thirty billion people.

Such a population surely cannot be sustained by the earth.

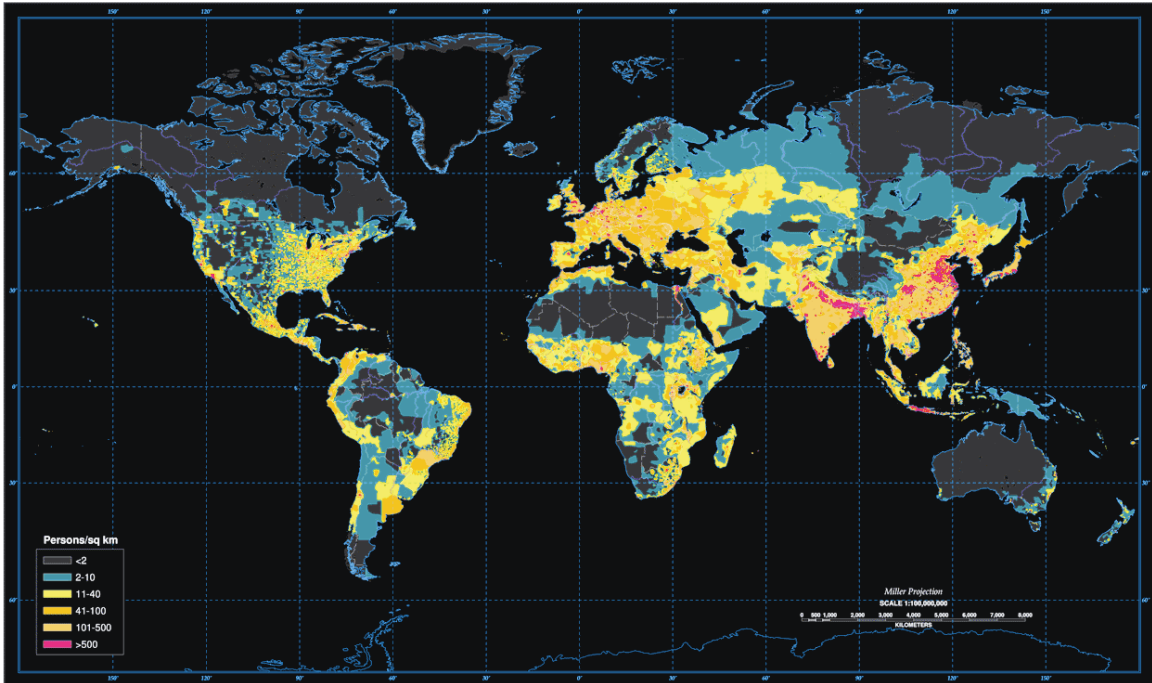
Thus science is identified with the history of man on earth, which seeks as a result the resettlement of man in another planetary system, which will be able to accommodate him as he increases in number.

For earth at some point will not hold him. On this point, do you have an answer?

DR. SIMOPOULOS:

If, as you said, we look at the history of humanity, we will see that such problems of overpopulation existed also in ancient

Ο πληθυσμός της Γής μέχρι το 2000

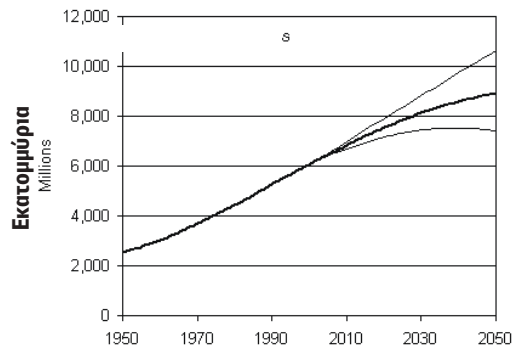


Athens, in ancient Corinth, even in ancient Sparta, and the various societies of that period tried to solve this sort of problem.

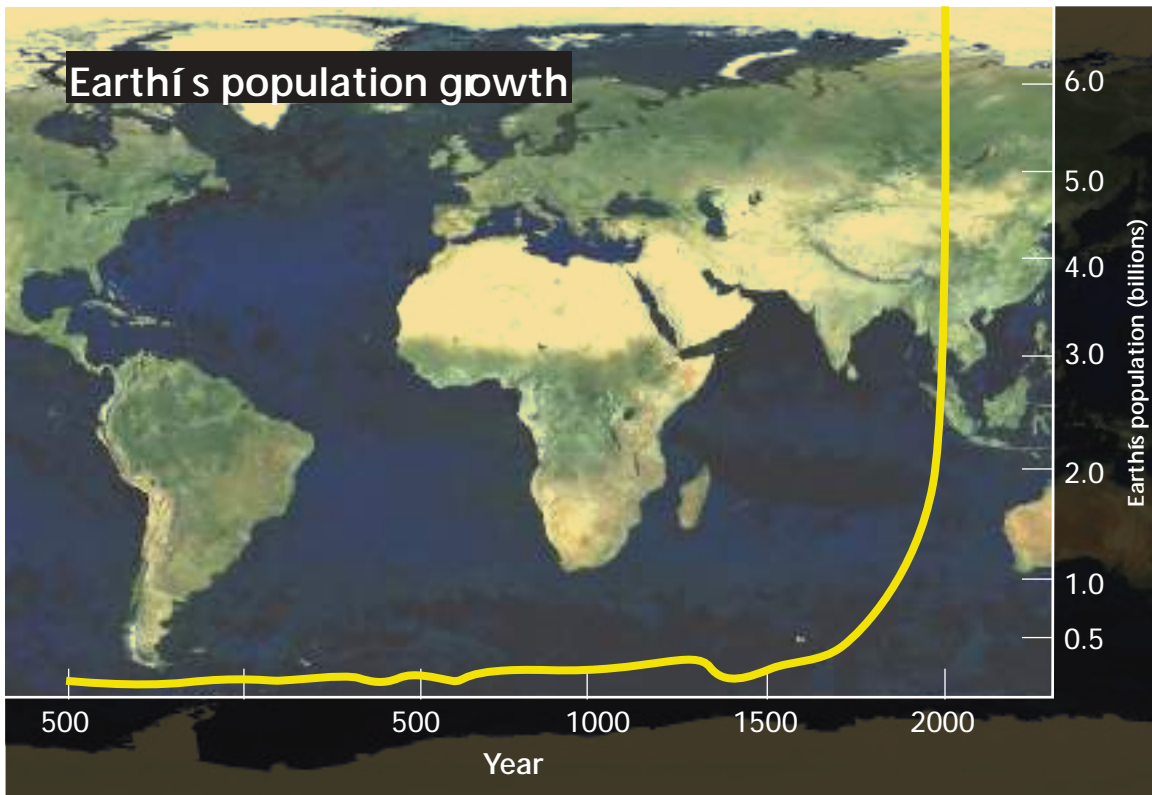
I am certain that if civilization, human civilization, will continue without catastrophic consequences, with the irrational use of science and technology in the future, a migratory wave from earth to the other planets and satellites of our solar system will happen at some point.

How far we can go in a hundred or one thousand years from now, I don't know, but I am certain that such a migratory movement will occur some day. But I am even more optimistic about this planet of ours. You said that the population will increase, will double.

Earth Population 1950-2050



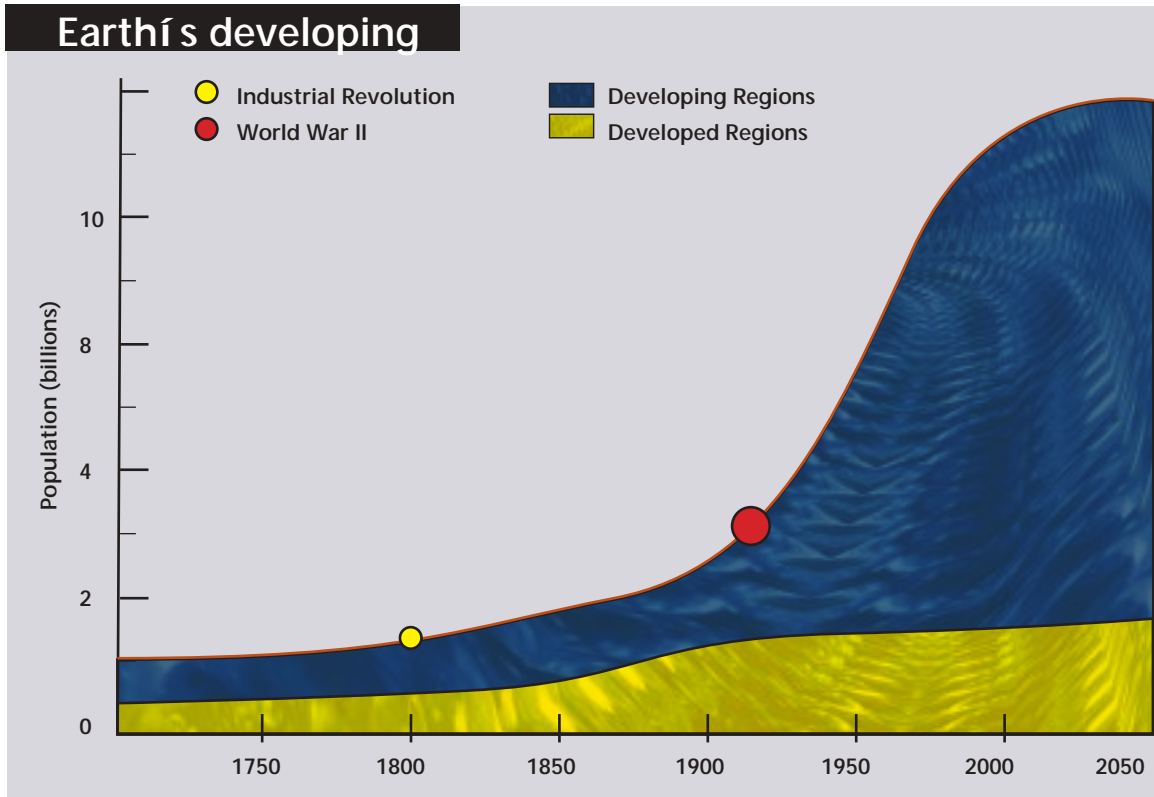
During 2004, 133 million people were born and 57 million died, expanding world population by 76 million. This excess of births over deaths was concentrated in the developing countries, which added 73 million people compared with only 3 million in the industrial countries. World population, growing by 1.2 percent annually, is projected to reach 6.4 billion in 2005.



If it keeps increasing at the present rate.

Yes, clearly, how will we be able to feed so many people? You know, in the 19th century, there were also such fears and hesitations as to what extent our planet could nourish a great number of people; there were, in other words, large theoretical estimates to the effect that we had reached the limits of development.

And yet, science and technology permitted the development of cereal production, rice, and so on, with the result that nutrition today is much superior to that of one hundred years ago. Industry, for example, which is still in an infant stage, I believe will provide this sort of answer, even though many fear that biotechnology is dangerous for human population. I am optimistic.



On this basis, I believe that overpopulation can be addressed; I believe, likewise, that the ability to feed this greater population can be developed, provided we respect the planet. For, if there is no respect for the planet, for the spaceship that has been sustaining us all these years and for our fellow man with whom we cohabit and journey through space together, then we will not be able to accomplish anything.

This table shows earth's developing and developed regions for the years 1750 - 2050

