

crease, then society found a way to bring birth rates and death rates into balance. But each one of these transients resulted in a big increase in population. This was true when agriculture was invented. It was true in northern Europe when the horse collar was invented and the three-field farming system. It was true in the industrial revolution in the Western World.

The population of Europeans and European descendants overseas increased from 100 million to 500 million from the year 1600 to the year 1900. Now the European populations everywhere are bringing their birth rates down pretty close to this level of 15 per thousand. Our rate now, for example, is 18 per thousand; Japanese, about 17; Hungarian, about 13.

The reason why we have to do something about this now—there are two reasons. One of them is it takes a long time to get results.

Dr. Bennett and I have been involved with a study which shows that over the next 20 years almost nothing that you can do within what seem to us likely possibilities will make much difference in the size of the population in the underdeveloped countries in 1980 or 1985. Maybe about a 10-percent difference. But beyond that time it will make a much bigger difference.

The other important consideration is that rapid rates of population growth themselves, quite apart from the ultimate total size of the population, have a seriously deleterious effect on economic growth because of the disproportion between children and adults, and because the per capita income does not go up very fast.

I am not sure if I am quite answering your question, but I myself am completely convinced that we will have to bring birth rates down below a level that they have ever been before on a worldwide basis; and this is a scientifically cautious statement.

Mr. YEAGER. I think that is very responsive. It just seems to me that there must be some point where, if the trend is not altered rather dramatically, you might go beyond the point of no return.

Dr. REVELLE. That is correct, just simply because we will have so many people that the resources will not really give a chance for raising standards of living.

Mr. YEAGER. Thank you, Mr. Chairman.

Dr. CARLSON. Mr. Chairman, I am the chairman of the Interagency Coordinating Committee of the IBP, and I have a brief statement I would like to have permission to insert into the record.

We have discussed throughout the conservations here everything that I had included in it, so I do not think I need to say anything further.

Mr. DADDARIO. Thank you.

(The prepared statement submitted by Dr. Carlson is as follows:)

PREPARED STATEMENT OF DR. HARVE J. CARLSON, DIVISION DIRECTOR, BIOLOGICAL AND MEDICAL SCIENCES, NATIONAL SCIENCE FOUNDATION

My name is Harve J. Carlson and I am representing the National Science Foundation and the Interagency Coordinating Committee for the International Biological Program.

In November 1965 the National Science Foundation was designated as coordinating agency for Federal participation in the International Biological Program by Dr. Donald Hornig. In the authorizing letter, Dr. Hornig states that