

Statement on Demographically Conditioned Problems in the 21st Century From the Problem of Carrying Capacity to the Problem of Intergenerational Equity

Population data are more than just neutral statements of fact: beyond their particular message in the field defined for them, they have an added dimension which we might term the "excess significance" of demography. A good example of this is the simple observation that Germany's population, net of migration, will shrink from 82 million to just 50 to 60 million by the middle of the coming century if the fertility rate of 1.4 children per woman (now almost constant for more than two decades) is maintained. This generally triggers off psychological reflexes that make it difficult to discuss the topic on an objective basis. When they first become aware of this threat of population decline, people's responses are usually pessimistically rather than optimistically coloured, since few of them seriously believe that the industrialised countries' natural habitats and environments will benefit from smaller human populations.

Demographers too, tend either to be optimists or pessimists, no matter how objective they try to be. It is in the nature of things that, the further into the future their projections reach, the more their findings will be influenced by subjective assessments that can neither be proved nor disproved for their factual accuracy. Nevertheless, making an optimistic or pessimistic assessment of the 21st century is not simply a matter of subjective whim: future predictions involve arguments that can only be called into question by counter-arguments, not by mere opinions.

Mainstream demographic thinking on the 21st century can be summarized along the following lines:

Birth rates in the industrialised countries are now too low to sustain their current population levels, while those in developing countries are too high. However, birth rates have been falling for decades in the developing countries, too. The world average number of births per woman is likely to fall back to 2.1 children per woman between 2020 and 2050, and indeed will probably subsequently fall below that level. The world population will probably stabilize at somewhere between 9 and 10 billion inhabitants. The percentage annual growth rate in the world's population has been falling since the mid-1970s, but absolute annual growth has also now begun to decline, and currently amounts to

approximately 87 million more people per annum. Whenever economic development is more rapid, the number of births per woman in developing countries falls more quickly too. The absolute number of starving people has been constant or even falling for some years even though the total population has continued to rise. Known crude oil reserves are increasing even though consumption is rising. The quality of the environment in industrialised countries is improving. In principle, it is conceivable that the developing countries will also attain these improvements after a certain time lag. -- The science of demography started out in the 18th century by posing the central question as to the planet Earth's carrying capacity. 250 years later, it appears that we can give an optimistic response to this key question.

However, the other side of the coin as regards declining birth rates is the increase of the ageing index all around the world. This process shifts the main emphasis of demographically induced problems away from carrying capacity towards intergenerational equity. The ageing index (age dependency ratio) – expressed as the number of people aged 60 and over per 100 aged 20-60 – is rising inexorably as life expectancy increases simultaneously with continuing falls in the number of births. In industrialised countries such as Germany, the ageing index will at least double by the mid-21st century, and will probably treble. The same is true if the limit for calculating the index is set at 65 or 70 years instead of 60.

As policymakers and the public have become aware of the inevitability of these dramatic increases in the ageing index, some shock waves have been generated. For one thing, the demographic shift will render obsolete the intergenerational pact on which Germany's social welfare system is based. In industrialised countries the number of births is falling, and there is nothing politicians can do to break the momentum of this. In countries like Germany, the pay-as-you-go method of funding statutory pension systems needs to be replaced by fully-funded capital based individual pensions. The latter system is less susceptible to negative demographic influences.

As the initial shock dies down, it is time for the actuaries and reformers to step forward. Pension models are now being drawn up which would appear to make it a practicable proposition to move over from the pay-as-you-go to the capital-funded system of contributions and payments. The problem of carrying capacity having been demonstrated to be soluble in principle because there are no natural laws standing in the way, it now appears that the problem of caring for the needs of society's older members could also, in principle, be resolved by this change in how we organize basic pension provision. So does that mean that demography in the 21st century will finally be able to break free from its role as a supplier of pessimistic forecasts, to become just a normal branch of science which will not automatically have its findings loaded with a largely negative "excess significance"?

I doubt whether this change of roles will actually happen. My reason is that the conversion of social insurance systems to a fully-funded saving approach will in fact dramatically exacerbate the problem of intergenerational equity on a world scale. What will happen is that the problem of intergenerational equity will be shifted on to another level when people provide for their retirement by accumulating personal capital, thus creating a new problem: that of interregional equity. I use the term "region" from a global perspective, differentiating between the industrialised and developing countries.

The essence of capital-funded pensions is that retired members of the population will no longer have their economic livelihood based on the income from labour, but on the income from capital. But this can only be a genuine solution if the older members of the population are also the owners of the economy's productive capital. The industrialised countries may be able to meet this condition in future years, but the developing countries will not, for their most productive capital endowments are owned by people in other regions of the world, namely in industrialised countries.

Demographic ageing is a worldwide phenomenon. The ageing index of the world population is set to increase from 18 today to 32 in the year 2050 and 42 in 2100¹. Looked at on a global scale, any bid to resolve the problem of intergenerational equity by switching to capital-funded individual pensions can only succeed if the proportion of the world population aged 60 and above living in the developing countries is matched by those countries' share of the world's capital endowment. If, as it inevitably will be, the developing countries' share of capital ownership is well below that required level, the change to capital-funded pension systems will not, in fact, resolve the international problem of equity in caring for the aged, but will further exacerbate it.

The UN's Universal Declaration of Human Rights is built on an awareness that putting general human rights into practice also depends on recognizing each person's right to social security, especially in his or her old age. If human rights are not realized on a worldwide basis, it will also be impossible in the long run to attain or uphold world peace. The demographic ageing process on a global scale will lead us further away from our goal of intergenerational and international equity. Hence even though moving to a capital-based system of funding old age pensions is now unavoidable in many countries, just as the owners of capital in industrialised countries are ensured a secure living in retirement, the gap between them and the inhabitants of developing countries who have no capital at all will grow wider than ever. That will take us further and further away from achieving a major, global human-rights objective, namely social justice. This being so, demography will not be able to assume the status of a "normal branch of science" until population trends themselves have settled into a "normal" track, i.e. one that assures replacement on the basis of a stationary population. However, it will be the

end of the 21st century before a stationary population can be reached, simply because of the in-built momentum of developments already in progress. So demography is, for the time being, stuck with its negative "excess significance".

¹ H. Birg, *World Population Projections for the 21st Century - Theoretical Interpretations and Quantitative Simulations*, Frankfurt, New-York, 1995 (Variante B.M. 2040, p. 354.)