



Wittgenstein Centre

FOR DEMOGRAPHY AND
GLOBAL HUMAN CAPITAL

A COLLABORATION OF IIASA, VID/ÖAW, WU

World Population Trends and the Rise of “*homo sapiens literata*”

Wolfgang Lutz, Vatican, 12 Nov 2018



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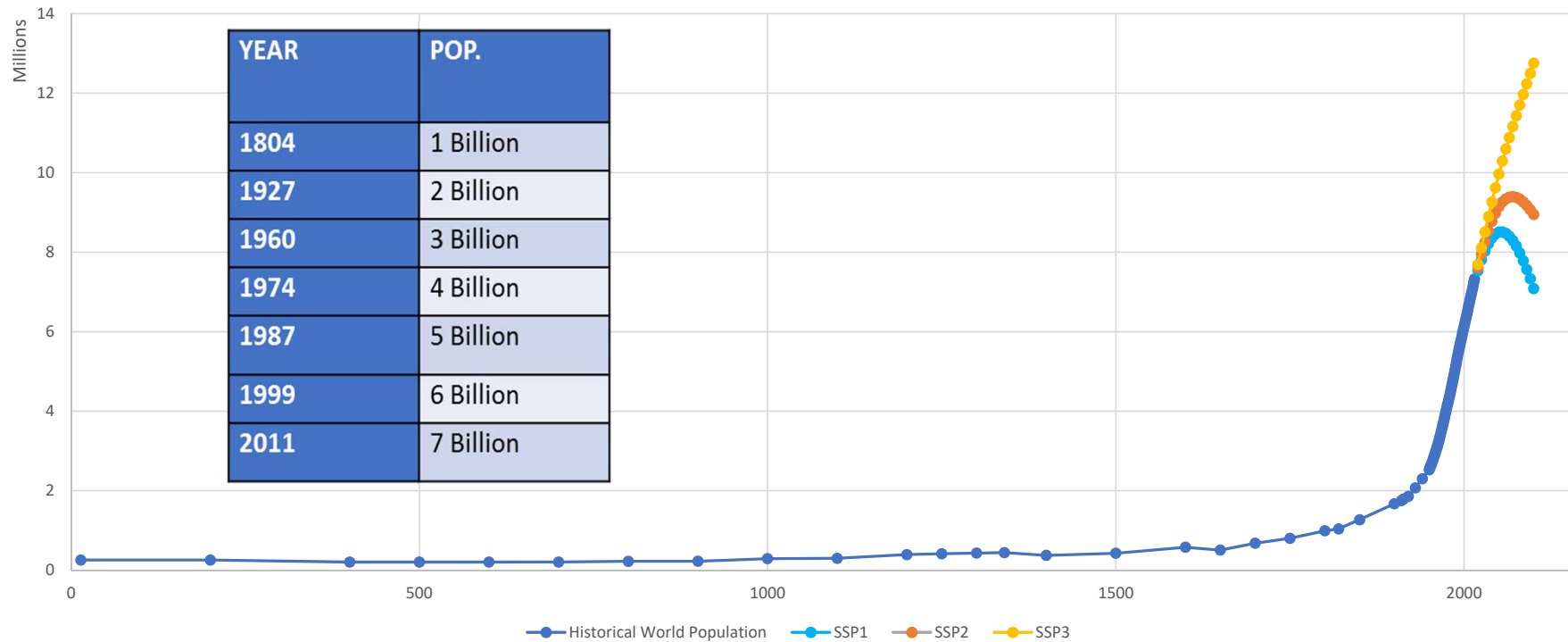
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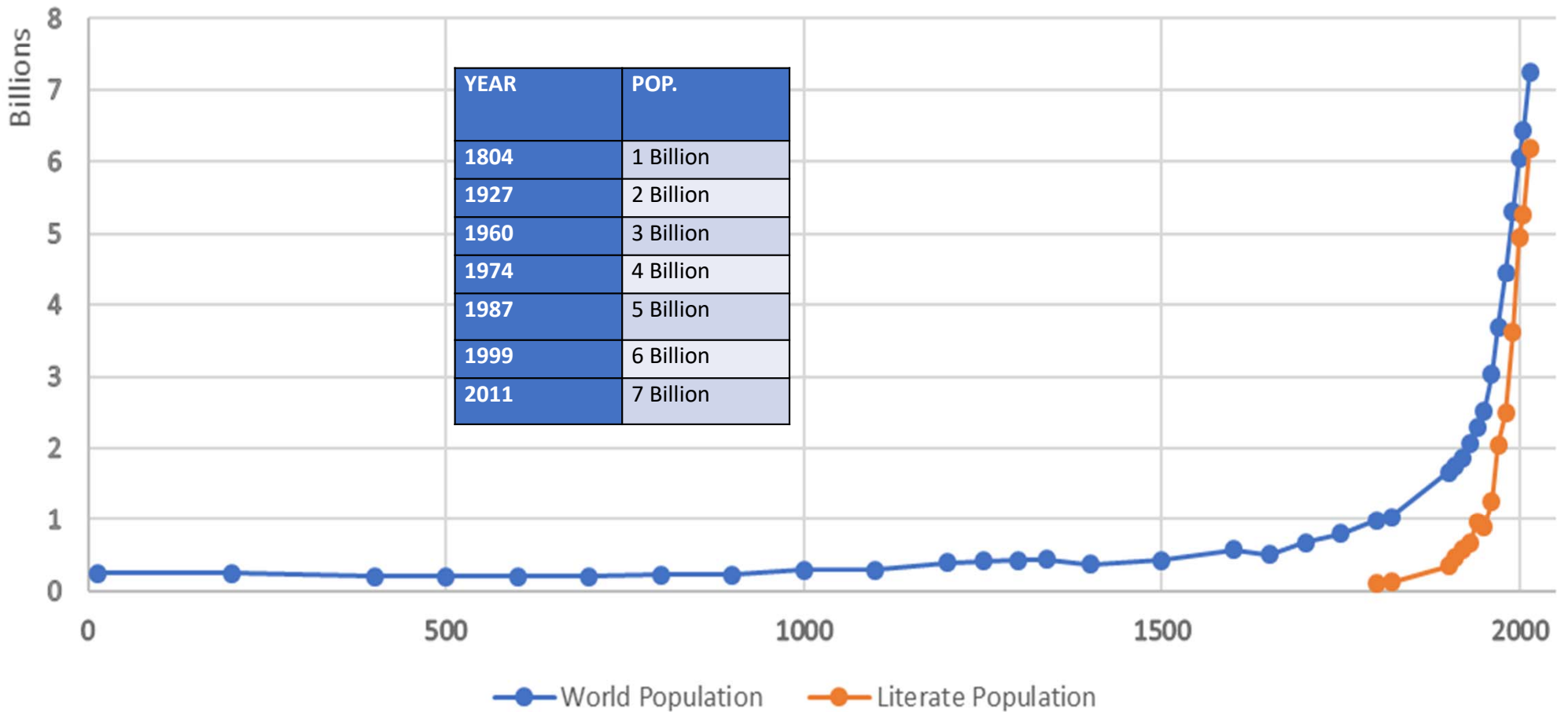


World Population Estimates, AD

Historical Global Population Size and three scenarios to 2100



Historical Global Population Size and Total Literate Population (14AD to 2014)



“*Homo sapiens literata*”

- **Sub-species** of *homo sapiens* which is characterized by high abstraction capabilities associated with literacy, codified knowledge, complex socio-economic institutions and modern science. (MPI-EVA, McElreath)
- Literacy is an acquired capability that is culturally transmitted and thus primarily part of (irreversible) cultural evolution. It causes lasting changes in the synaptic structures in our brains (?? Epigenetic transmission ??).
- Empirical studies show that the most transformative social changes are associated with the spread of **universal female literacy**. (Luther: “auch das geringste Mägdelein”).
- The future of world population growth and adaptive capacity to environmental change will crucially depend on female education.

Homo sapiens literata in the Anthropozene

We managed to improve our living conditions and grow in numbers, but through this also threaten our own life support systems.

To achieve the global sustainability transformation humanity needs **insight and foresight**. We need to act in anticipation of problems.

We need to be able to abstractly think what we do not yet experience.

We need the very best science and **all members of the population** need to be able to effectively use their brains.



Leopoldina Symposium

Brain Power for Sustainable Development

The Cognitive Preconditions for a Successful Sustainability Transition

13 June 2018 | 9:30 am – 6:00 pm
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