

The Earth in the 21st and 22nd centuries

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Outline

- Introduction
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- Sociological considerations
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- Conclusion

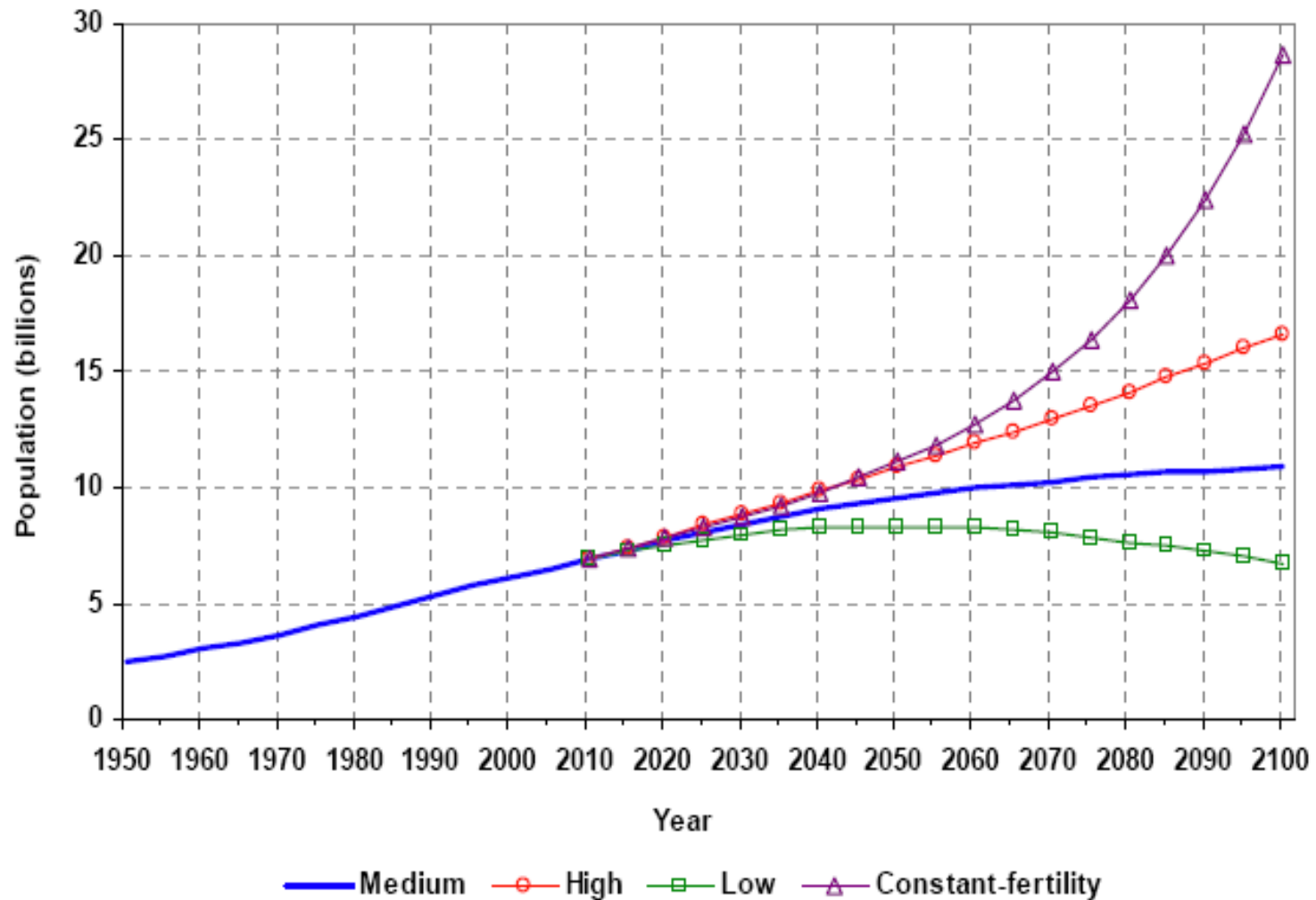


Introduction

- This chapter discusses the number of inhabitants on our planet now and in the future
 - How will the world population now and in 2100 be related to other major factors of life on Earth?
- Discussion about the future of the Earth's population from the perspectives of ecology, sociology, and philosophy
 - This chapter has more to do with the influence of population in several other arenas



Population of the world according to different projections and variants, 1950–2100



Source: United Nations, 2013d: xv.



Ecological considerations

- What might be the impacts of 10 billion inhabitants of the Earth, based on an ecological view of the population?
 - Interaction of population, organization, environment and technology (the POET complex)
- The world's population in 2100 will number around 10 billion, and could be higher
 - The U.S. population now stands at 321 million and is likely to reach around 460 million by 2100
 - Need to consider how the numbers are related to resources and environment



Resources

- First look at resources, specifically oil and water
- Many countries are placing limitations on petroleum use and finding alternative sources of energy
- Water is a far more unreliable resource than oil
 - There are no substitutes for most of its uses
 - As population increases, there is an increased pressure to deplete our aquifers that are essential to so much of life



Environment

- Next consider the environment
- The famous human ecologist Amos Hawley defined the environment as
 - “Whatever is external to and potentially or actually influential on a phenomenon under investigation”
- Rapid population growth is a contributor, direct or indirect, to a series of environmental challenges for our planet

Environmental problems

- The overall environmental problems the planet faces include
 - “encroaching deserts, rising sea levels, deforestation, acid precipitation, resultant forest dieback, toxic contamination of food supplies, soil oxidation and pollution of water tables, ozone depletion, greenhouse gas buildup, and climatic change” (Rees, 2004)

Global warming

- Global warming (climate change) is the evidence of a rise in the Earth's temperature
- Pollution (e.g., air, water) is closely related to global warming
- Garbage and waste disposal may be among the most visible issues of continued rapid population growth

Sociological considerations

- Presented thus far is a rather dismal picture of population growth and its impact on the world
- However, Ester Boserup, a deceased Danish economist, argued that population growth was a stimulus to social change
- Herbert Simon, a deceased American economist, was also demographically optimistic
 - He was a major proponent for the argument that “population growth is neutral”



Technology

- One area where the optimists and the pessimists can agree is technology
- The technological changes in the world, developed and developing, especially during the last half of the twentieth century, have been remarkable

Philosophical considerations

- Humankind is evolving
 - We see it in our behavior, in our changing activities, in the globalization of knowledge, and in our relationships
- Consider all evolution over recent generations
 - Not only with regard to computers and the internet
 - But also with respect to medicine, the genome project, and stem-cell research
- More has happened in the last generation (the last 30 to 35 years) than in earlier generations



Conclusion

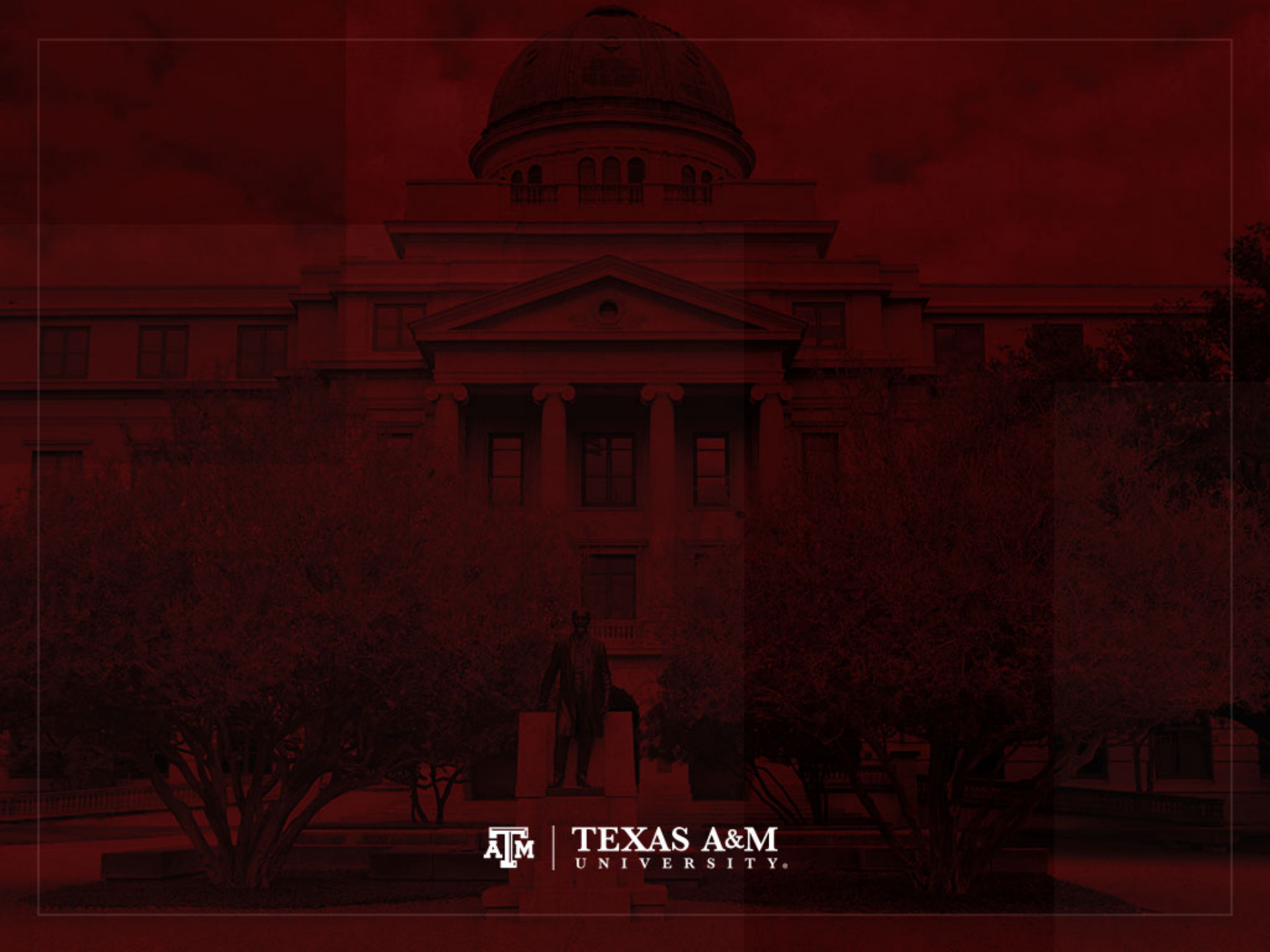
- We are facing monumental population and environmental challenges
- Enormous advances in technology
 - The era of the Industrial Revolution is long over
 - Now we are experiencing the Information Revolution
- Dramatic transformations never before imagined
 - Population size and change are in the middle of this incredible phenomenon
- In the era of globalization, will we all get along?
 - It depends on how we adapt to one another in the balance of the 21st century



References

Poston DL, Bouvier LF. 2017. Population and Society: An Introduction to Demography. New York: Cambridge University Press. 2nd edition. Chapter 16 (pp. 416–428).





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