

## Thomas Malthus and His Legacies



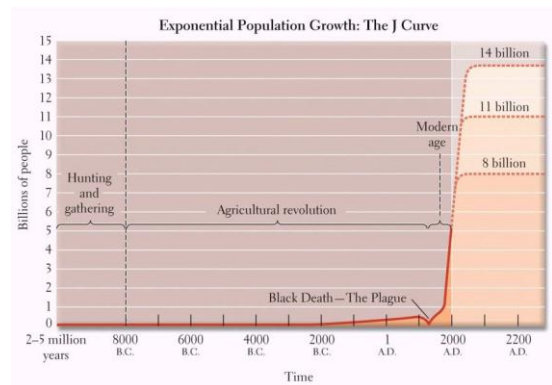
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## Presentation Outline

- Global Population Dynamics
- Who was Thomas Malthus and what is “Malthusianism”?
- Malthus’ Legacies: the “Neo-Malthusianists” and “Cornucopians”
- Critiques of Malthusianism
- Conclusions

## World Population Growth

- 1800-1850 1 billion
- 1930 2 billion
- 1960 3 billion
- 1975 4 billion
- 1987 5 billion
- 1999 6 billion
- 2011 7 billion
- 2026 8 billion (projected)



## Thomas Malthus (1766-1834)

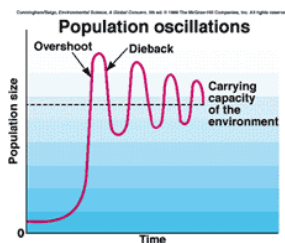
- Malthus was an ordained minister as well as a professor of history and economy
- His most famous work was "An Essay on Principles of Population" (1798)
- His basic premise: "unchecked" population growth will outstrip subsistence (i.e., food production)-population grows exponentially while food supply grows arithmetically



## Patterns of Population Growth

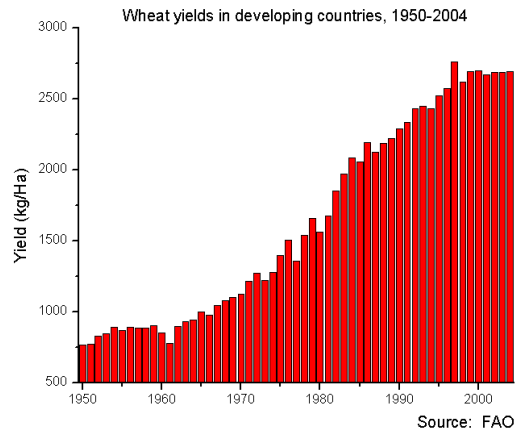
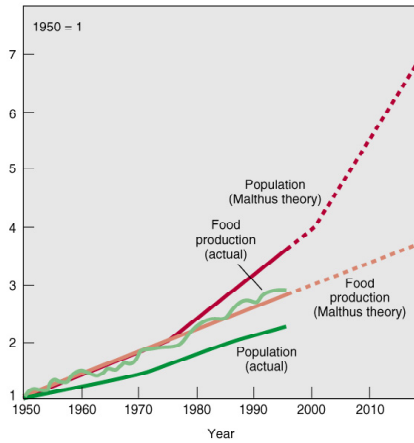
- Exponential (Geometric) Growth
- Malthusian (Irruptive) Growth
  - Growth follows cycles related to food availability
- Logistic Growth
  - Growth levels off in relation to the carrying capacity

## Malthusian ("Irruptive") Growth



## Population Checks

- Malthus proposed the following "checks" on population:
  - Positive Checks: (Reactive- causes of mortality)
    - Famine, Disease, Warfare & Cycle of Poverty
  - Preventive Checks: (Proactive- limits to birth)
    - birth control, abstinence, abortion, infanticide
    - Malthus preached "moral restraint" (abstinence coupled with later marriage and child rearing)
    - Stressed the negative correlation between station in life & number of children



## Malthus' Legacy: The Neo-Malthusians

- Some declare that many Less Developed Countries exhibit conditions that support Malthusianism
- Believe theory will prove correct in long term
- Most famous: Garrett Hardin & Paul Ehrlich

## Paul Ehrlich: Neo-Malthusianist

- Biologist (Stanford University):
  - "Population Bomb" (1968)
  - "Population Explosion" (1990)
  - "Too many people, too little food, environmental degradation"
- Ehrlich suggested two solutions:
  1. Lowering the birth rate
  2. A rise in the death rate



## Julian Simon: Cornucopian

- Economist (University of Maryland)
- Book: "The Ultimate Resource" (1981)
  - Argued that population growth stimulates development (people are greatest resource)
  - Free trade and globalization will lift people from poverty



## Critique of Malthus

- Some Problems with Malthus' Theory
  - Discounted advances of Industrial Revolution
  - Did not foresee the great increases in food production
  - Exhibited rather low opinion of humankind (against welfare programs to assist poor)

## Critique of Malthus

- John Stuart Mill (English Economist and Philosopher): Economic comfort should translate into stable populations that progress culturally and socially
- Arsene Dumont (French Demographer): Desire to ascend social hierarchy translates into population control
  - Fear of social slippage
- Additional factors: import food/export people to alleviate overpopulation (redefine "carrying capacity")

## Conclusions

- Will Malthus ultimately be proven correct?
- Human population growth rates are actually declining
- However, a lot of "built up momentum" in human populations (globally, youthful population)
- Unknown impact of global climate change/continued reliance on finite resources (fossil fuels, etc.)
- Is the ultimate issue lack of food or distribution of wealth?

## Malthus' Influence on Darwin

- "In October 1838, that is, fifteen months after I had begun my systematic inquiry, I happened to read for amusement Malthus on *Population*, and being well prepared to appreciate the struggle for existence which everywhere goes on from long-continued observation of the habits of animals and plants, it at once struck me that under these circumstances favourable variations would tend to be preserved, and unfavourable ones to be destroyed. The results of this would be the formation of a new species. Here, then I had at last got a theory by which to work". (Charles Darwin)