Unit 2

Population

Population

- Demography
- Spatial Distribution and Movement
  - Where are they?
  - Where are they going?

Population

- Scale of inquiry
  - Global
  - International
  - National
  - Local

Population

- Global Trends
  - Where are they growing fastest / slowest?
  - Identify trouble areas

Population

- Fastest Population Growth = Poorest Regions
  - Asia
  - Africa

Population

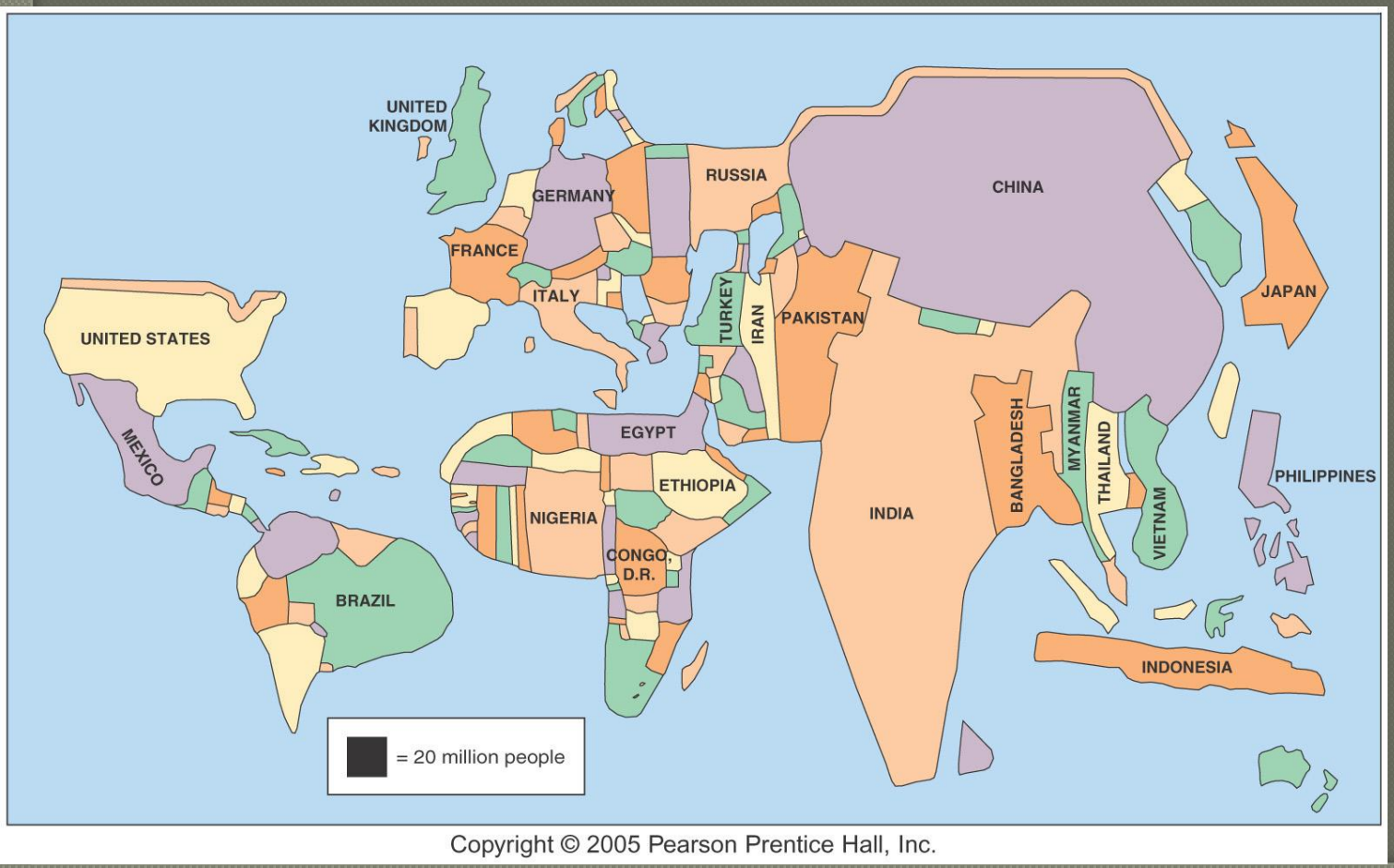
- Population Numbers
  - Intelligent Inquiries
- Population Equations
  - Global Population Accounting Equation
    - Total global population
  - Sub global Population Accounting Equation
    - Total Population of a Region

Population

- Equations
  - Global Population Accounting Equation
    - Original Population + Births – Deaths
  - Sub global Population Accounting Equation
    - Original Population + Births – Deaths + Immigration – Emigration
    - Immigration – move in
    - Emigration – move out

Population

- Population Distribution
  - Where are people?



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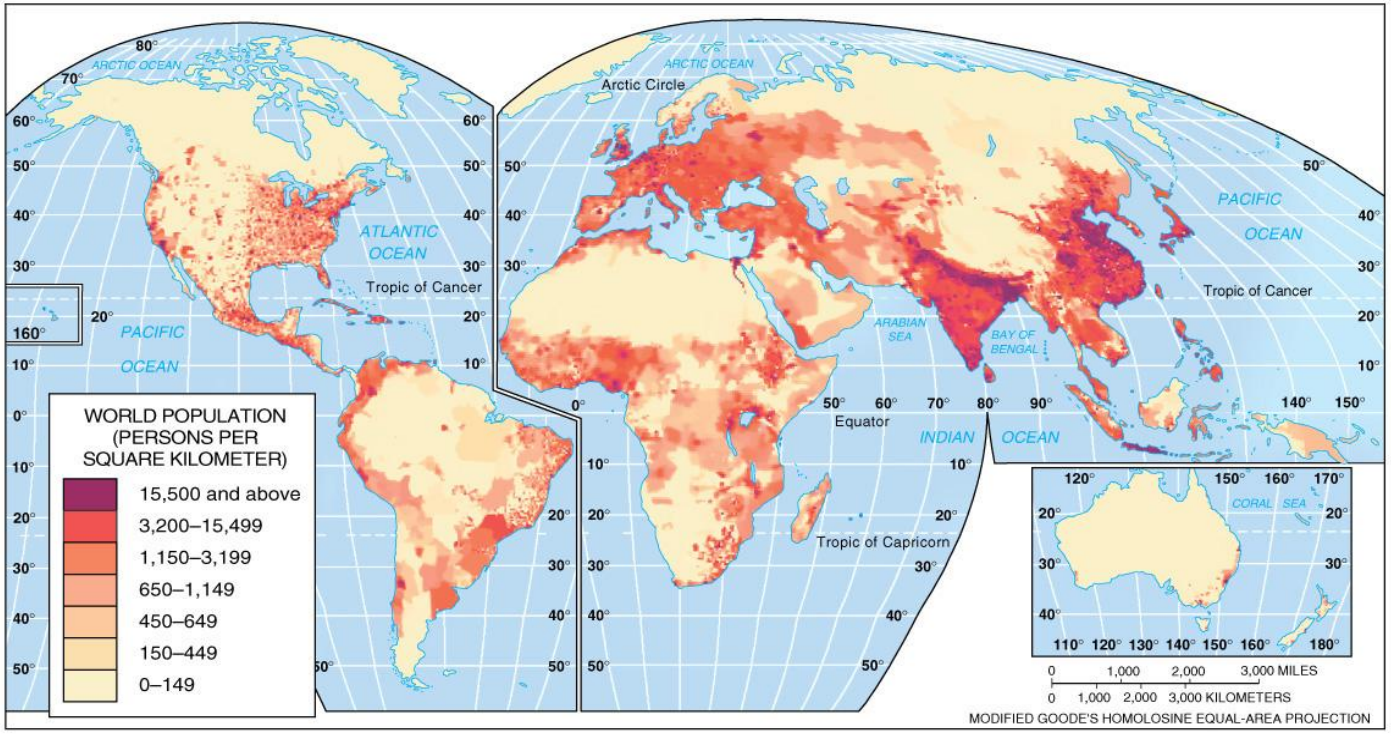
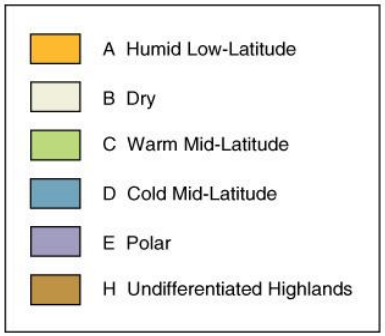
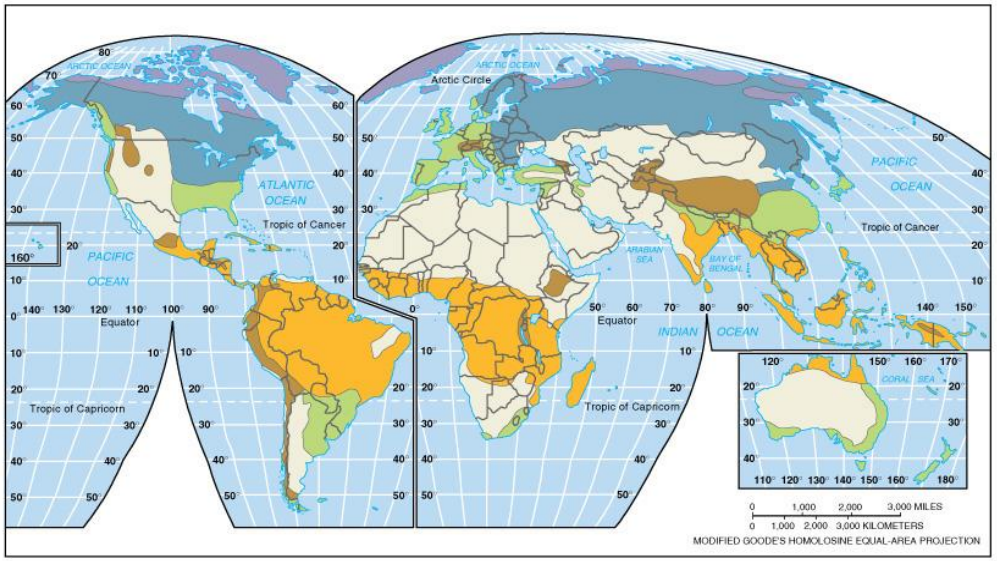
Population

- Population Distribution
  - Environmental factors
    - Too Cold
    - Too Wet
    - Too High
    - Too Dry







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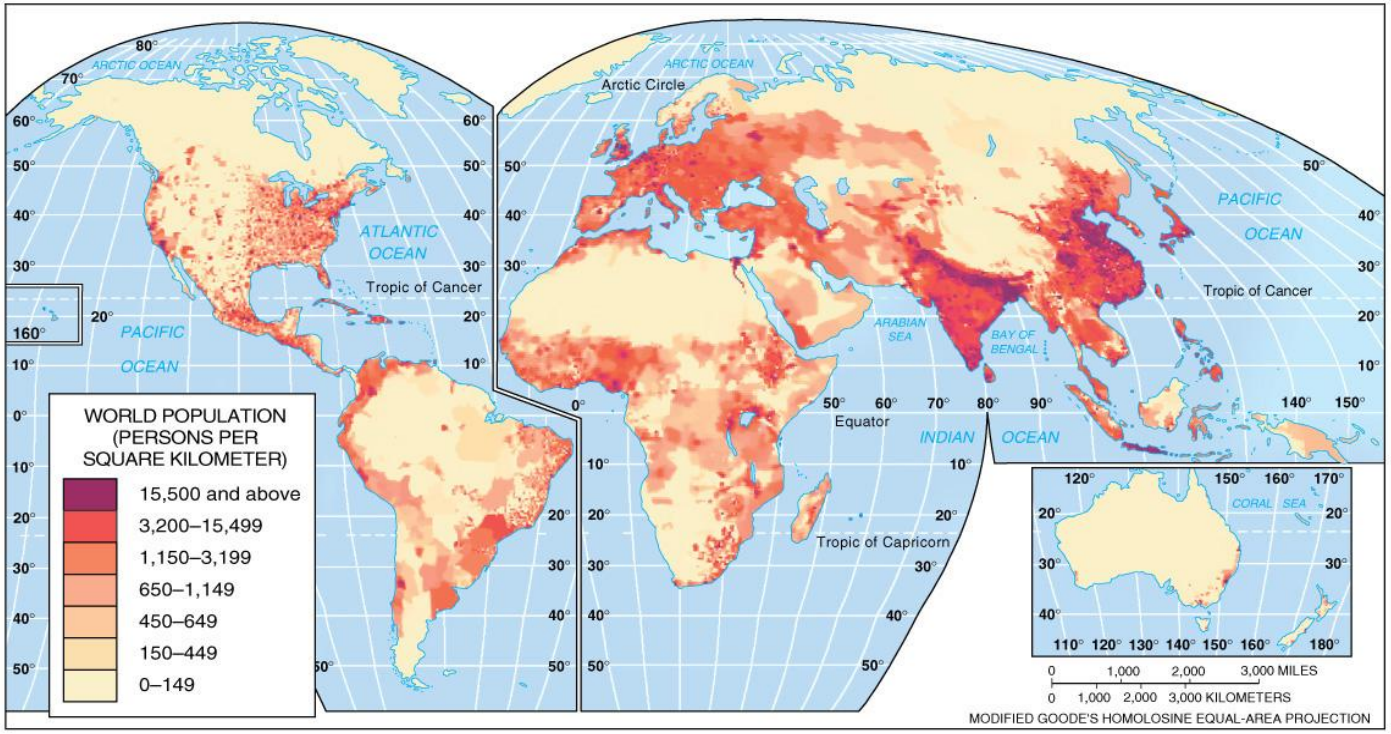
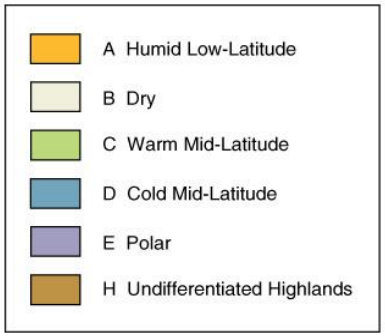
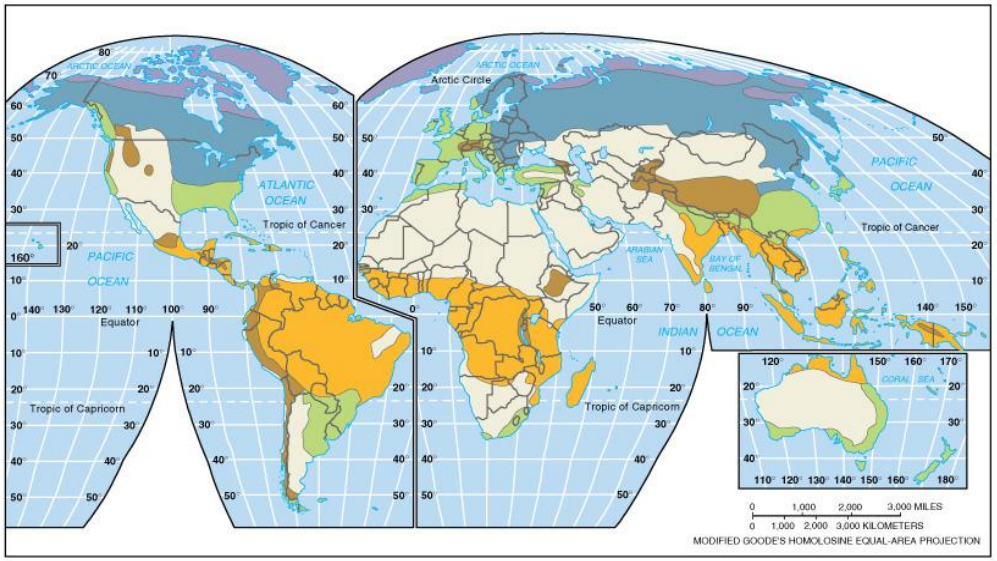
Population Distribution

- 75 % on 5 %
  - Specific Regions
  - Hospitable Environment







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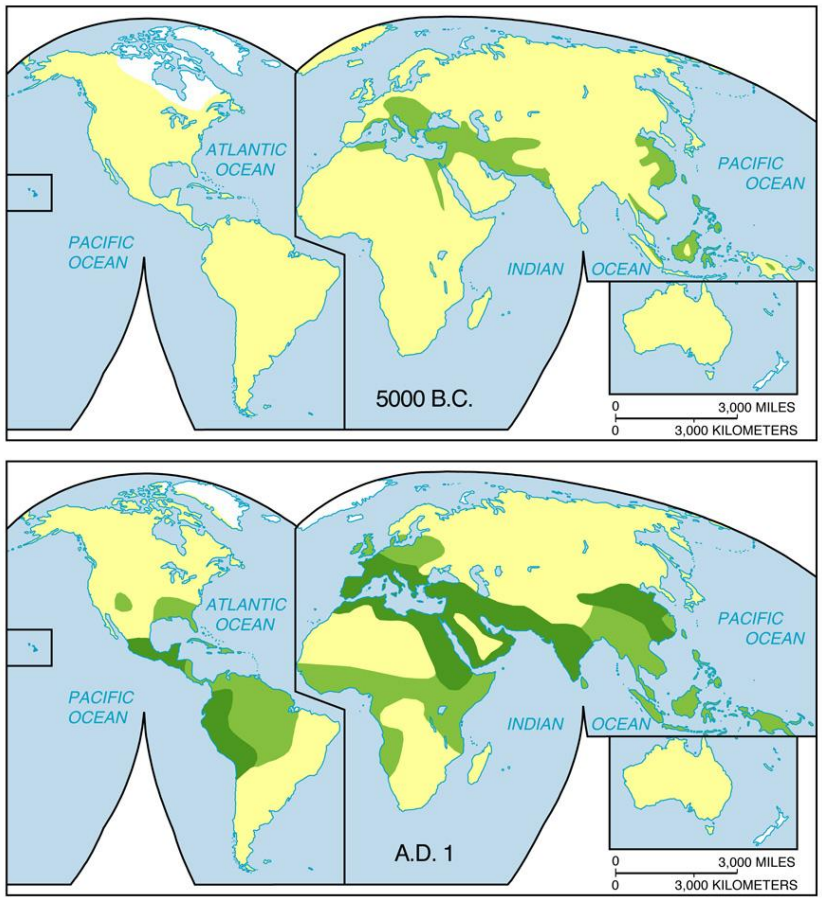
Population Distribution

- Ecumene
  - Area that holds a permanent settlement



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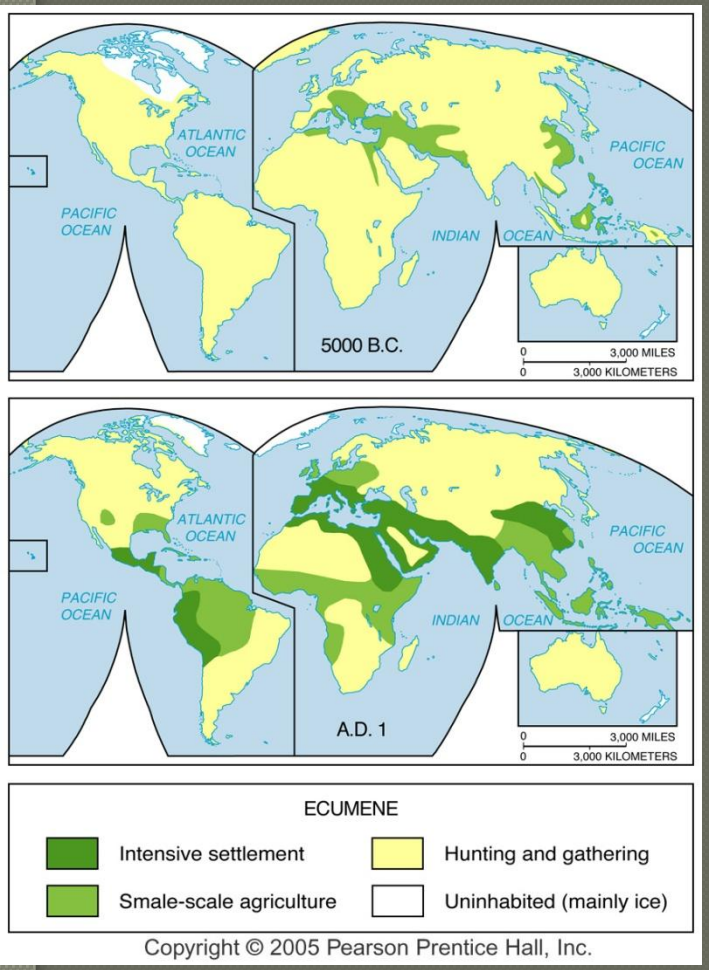
Expansion of the Ecumene
5000 B.C.–A.D. 1900



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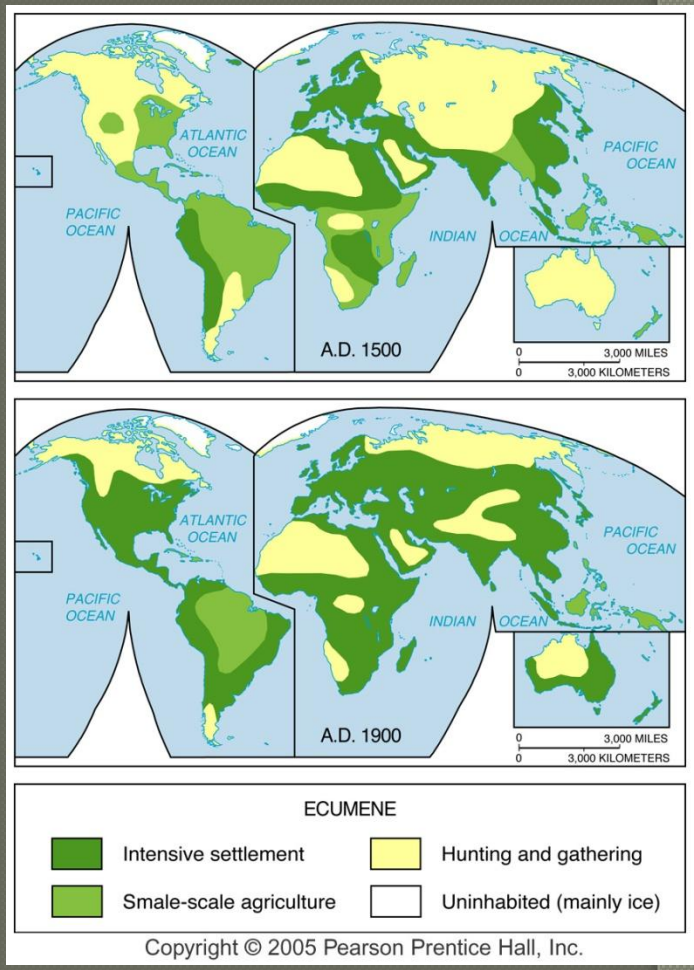

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Fig. 2-3: The ecumene, or the portion of the Earth with permanent human settlement, has expanded to cover most of the world's land area.

Population

- Density
  - 3 Types
    - Arithmetic
    - Physiological
    - Agricultural

Population Density

- Arithmetic
  - Total # of people / Total Land Area
- What does this not tell us?
  - Population Concentration

Population Density

- Physiological
  - Total # of people / Total Farmland
- How might this be helpful?

Population Density

- Agricultural
  - Total # of farmers per unit of arable land
- What different information might this give us?

Population

- Carrying Capacity
  - How many an area can support
- Factors
  - Wealth
  - Technology
  - Climate

Population Carrying Capacity

- Overpopulation
  - When a country outgrows it's carrying capacity
  - Carrying capacity can be increased
    - Improved technology
    - Better use of land, etc

Population

- Measuring Population and Population Growth
- CBR
- CDR
- IMR
- Life Expectancy
- Fecundity
- GFR
- TFR

Population Growth

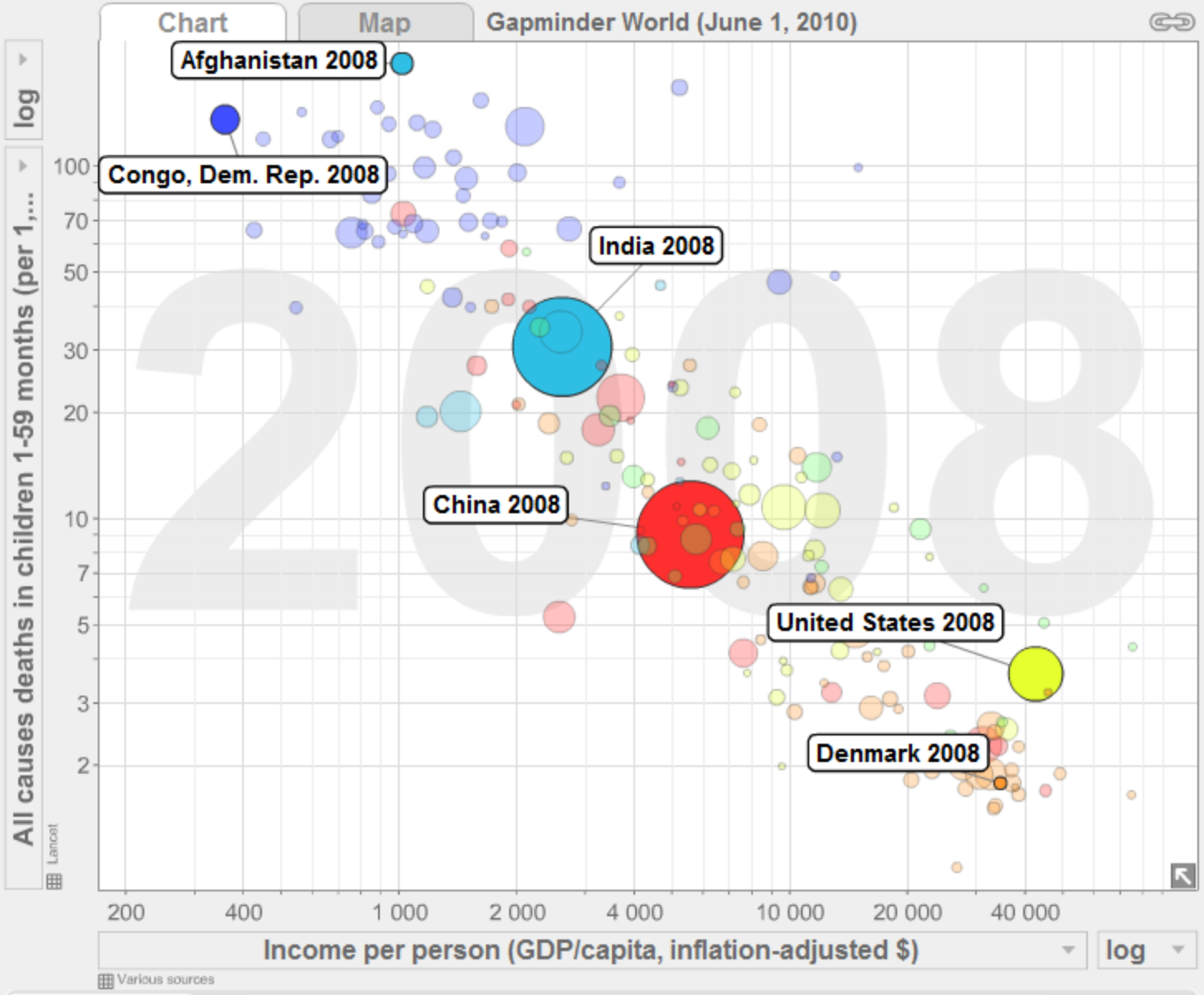
- CDR
  - Crude Death Rate
    - # of Deaths per 1,000 ppl per year
- CBR
  - Crude Birth Rate
    - # of live births per 1,000 ppl per year

Population Growth

- IMR
  - Infant Mortality Rate
    - # of infant deaths per 1,000 live births
    - Must live 1 year

pen list of graphs | + Bookmark graph | How to use

Chart | Map | Gapminder World (June 1, 2010)



Color | Gapminder Geogra...

Geographic regions

Select

- [x] Afghanistan
- [ ] Albania
- [ ] Algeria
- [ ] Angola
- [ ] Argentina
- [ ] Armenia
- [ ] Australia
- [ ] Austria
- [ ] Azerbaijan
- [ ] Bahamas
- [ ] Bahrain
- [ ] Bangladesh
- [ ] Barbados

Deselect all

Size | Various sources

Population, total

1.46 B

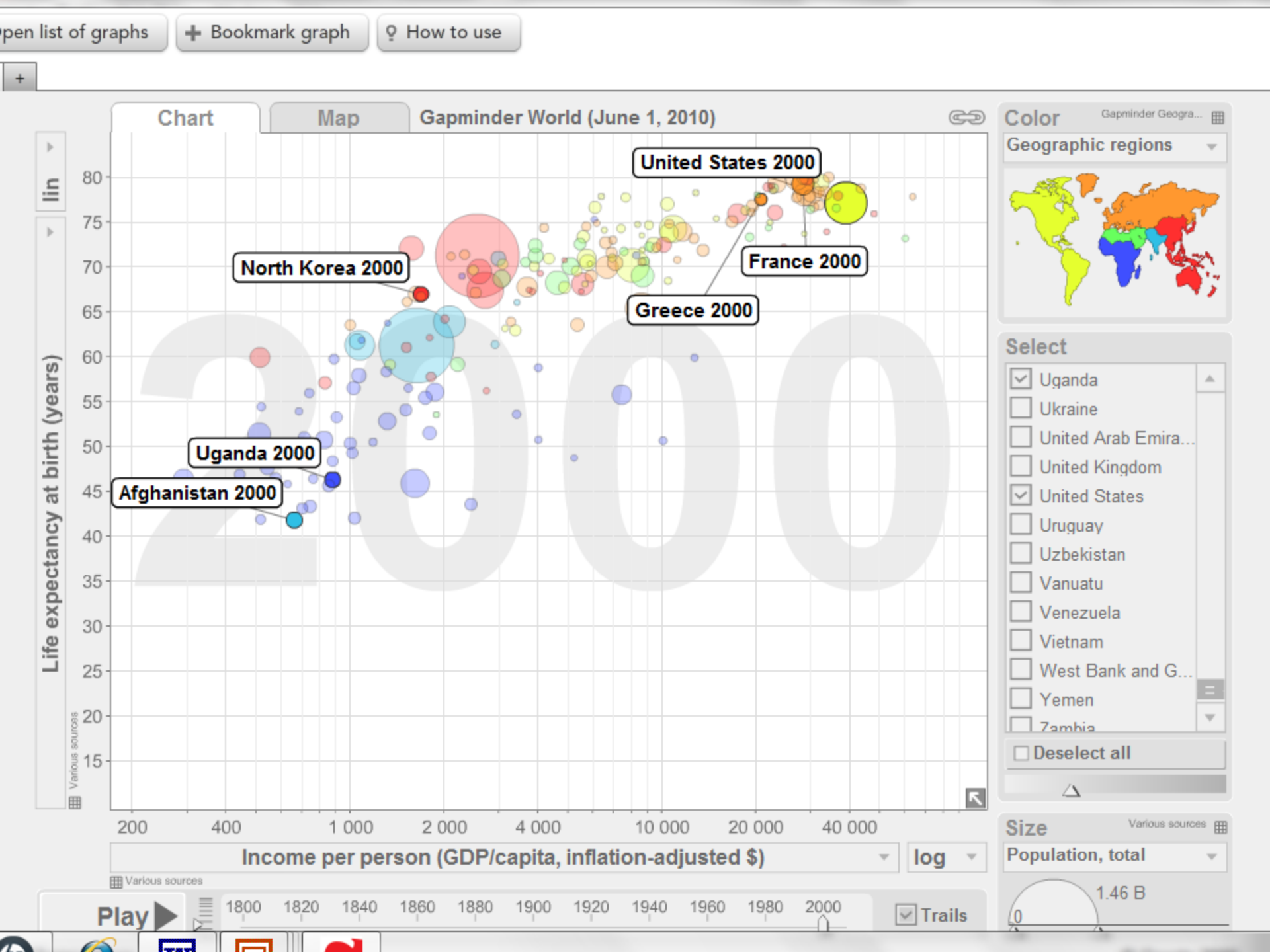
0

Play

Trails

Population Growth

- Life Expectancy
  - Average lifespan
- Fecundity
  - Years a woman is able to conceive and bear children
  - 15 to 45

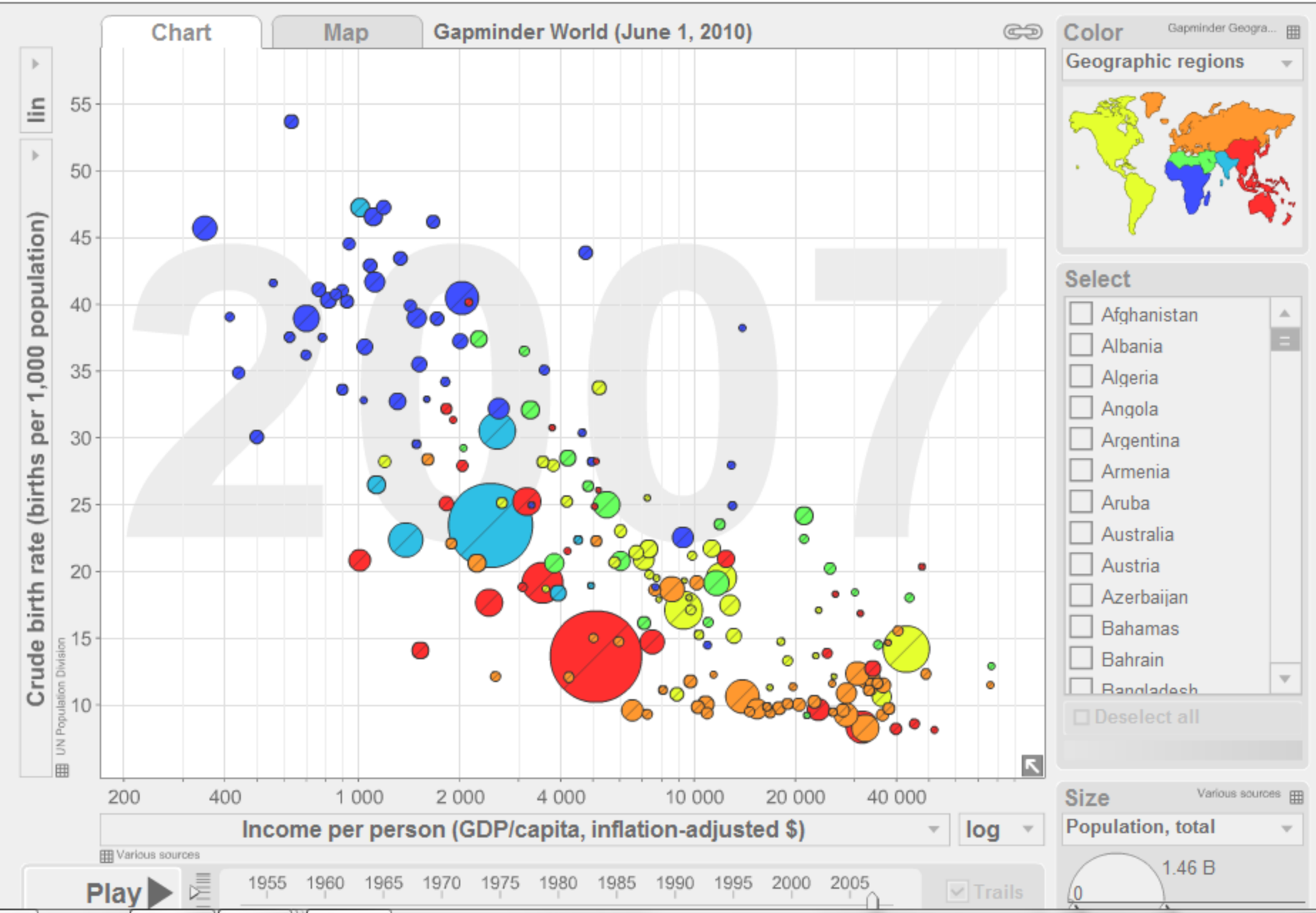

pen list of graphs
Bookmark graph
How to use
Chart
Map
Gapminder World (June 1, 2010)
lin
Life expectancy at birth (years)
Various sources
80
75
70
65
60
55
50
45
40
35
30
25
20
15
United States 2000
North Korea 2000
France 2000
Greece 2000
Uganda 2000
Afghanistan 2000
2000
200
400
1 000
2 000
4 000
10 000
20 000
40 000
Income per person (GDP/capita, inflation-adjusted $)
log
Various sources
Play
1800
1820
1840
1860
1880
1900
1920
1940
1960
1980
2000
Trails
Color
Gapminder Geogra...
Geographic regions
Select
Uganda
Ukraine
United Arab Emira...
United Kingdom
United States
Uruguay
Uzbekistan
Vanuatu
Venezuela
Vietnam
West Bank and G...
Yemen
Zambia
Deselect all
Size
Various sources
Population, total
1.46 B
0

Population Growth

- GFR
  - General Fertility Rate
    - Number of births per 1,000 women in the fecund years
- TFR
  - Total Fertility Rate
    - Predicted children a women will have during the fecund years

en list of graphs | + Bookmark graph | How to use

Chart | Map | Gapminder World (June 1, 2010)



Color — Gapminder Geogra...

Geographic regions

Select

- Afghanistan
- Albania
- Algeria
- Angola
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh

Deselect all

Size — Various sources

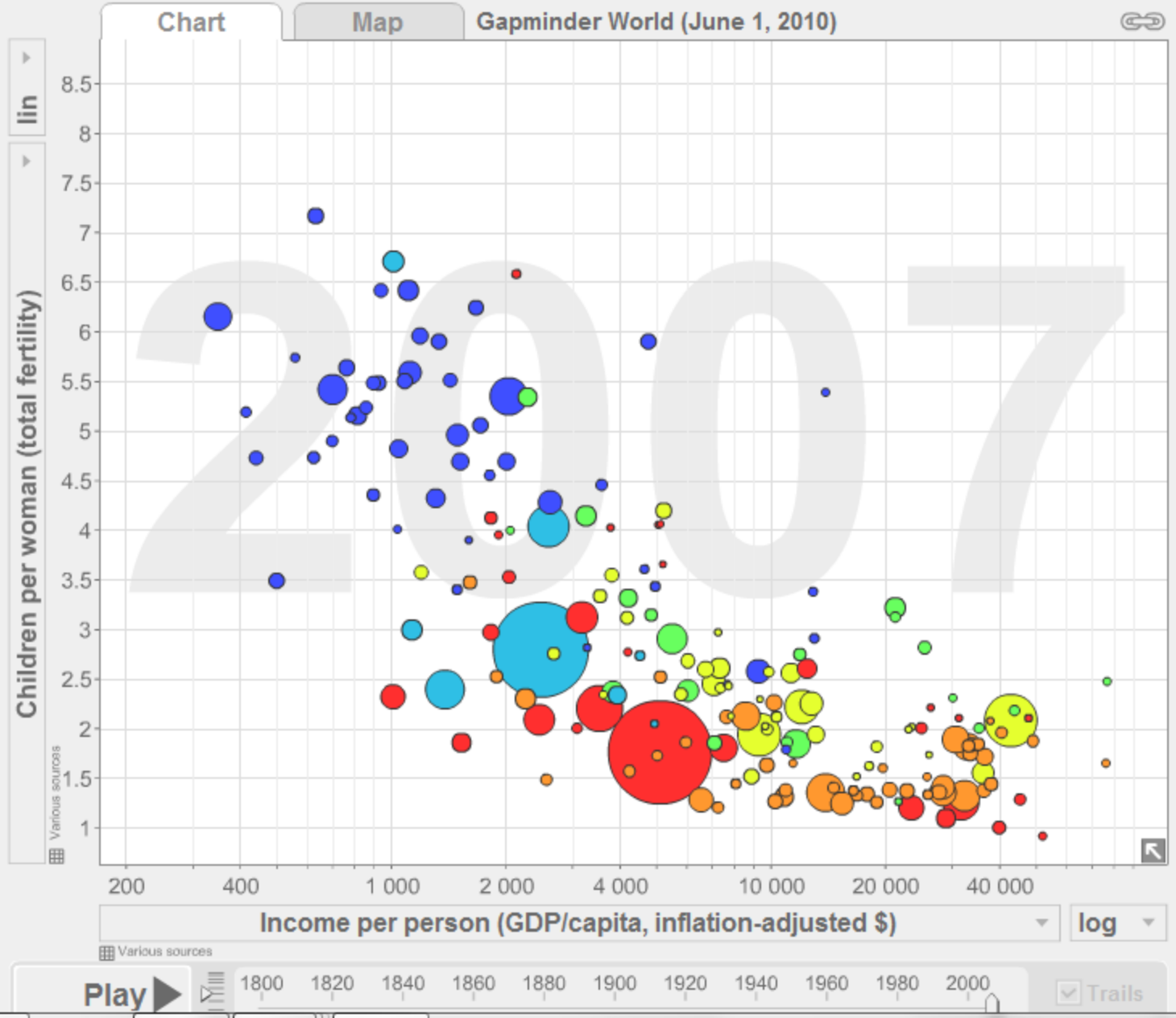
Population, total

1.46 B

0

Open list of graphs | + Bookmark graph | How to use

Chart | Map | Gapminder World (June 1, 2010)



Color — Gapminder Geogra...

Geographic regions

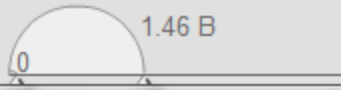
Select

- Afghanistan
- Albania
- Algeria
- Angola
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh

Deselect all

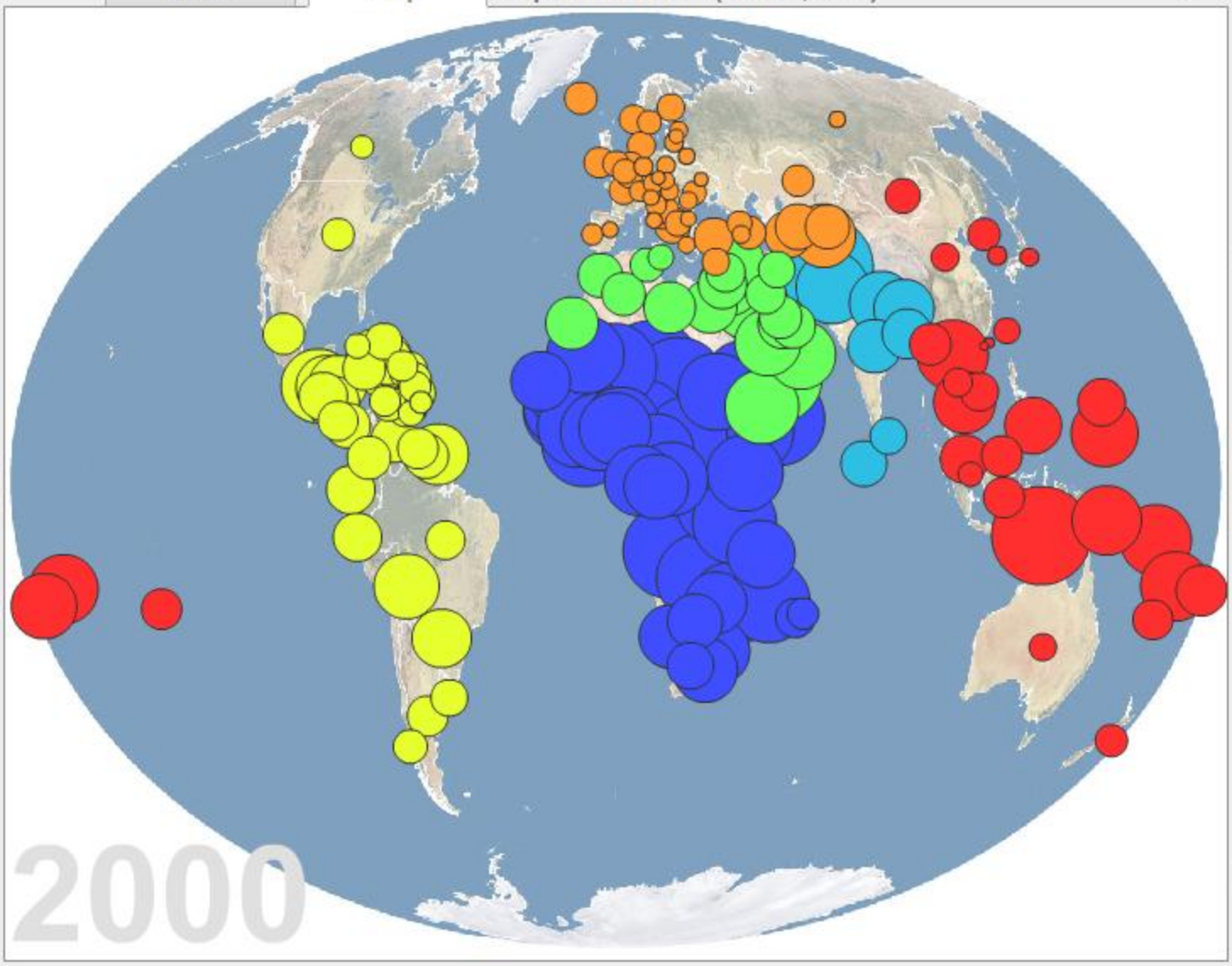
Size — Various sources

Population, total



pen list of graphs | + Bookmark graph | ♀ How to use

Chart | Map | Gapminder World (June 1, 2010)



Color — Gapminder Geogra...

Geographic regions

Select

- Afghanistan
- Albania
- Algeria
- Angola
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh

Deselect all

Size — Various sources

Children per woma...

8.73

0.86

Play ▶

1800 1820 1840 1860 1880 1900 1920 1940 1960 1980 2000

Trails

Population Growth

- Replacement Fertility
  - TFR = 2.1
  - 0 Population Growth

Population Growth

- RNI
  - Rate of Natural Increase
  - CBR – CDR / 10
  - Does not figure migration stats

Unit 2

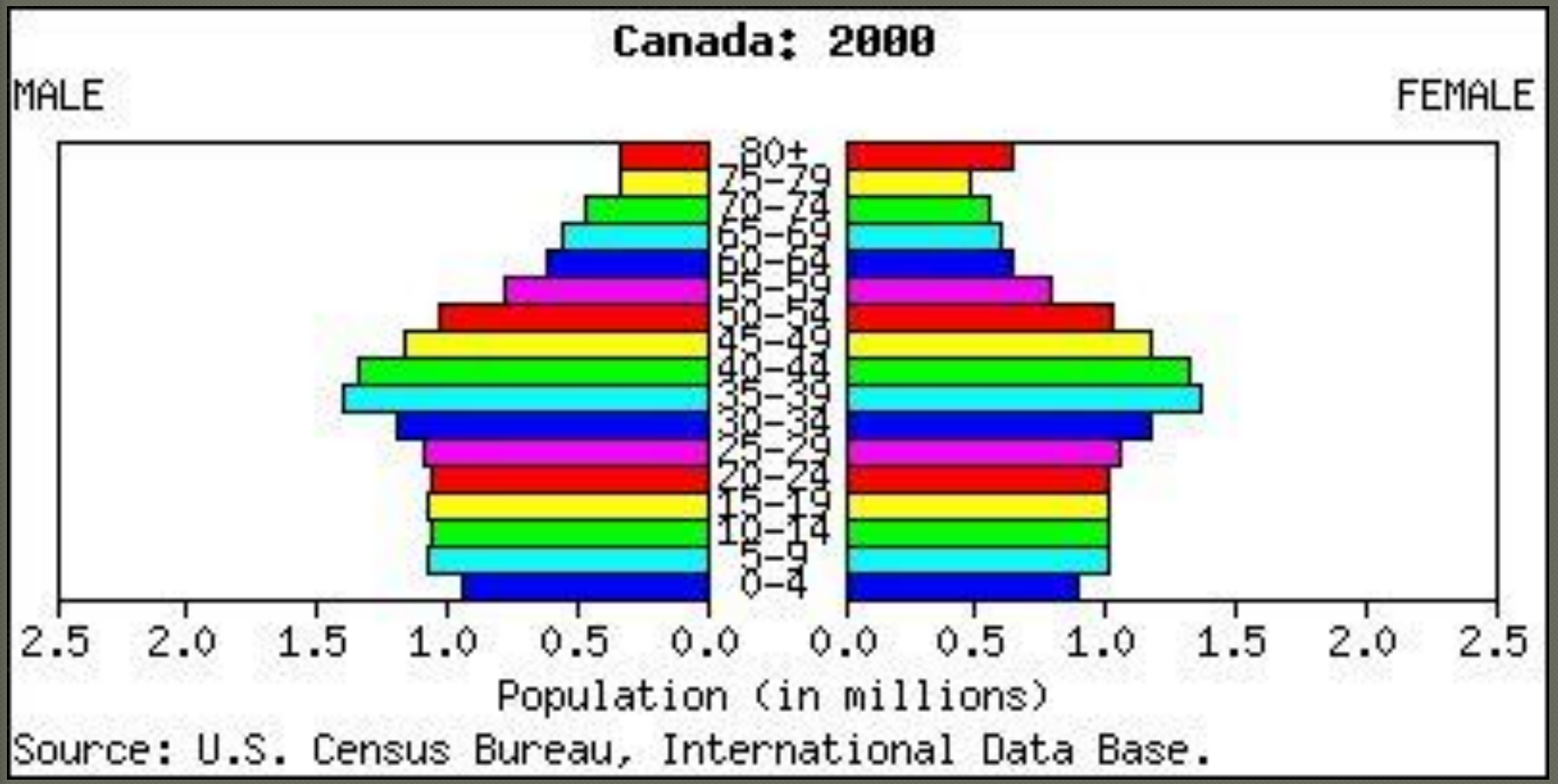
Population

Unit 2

Population

Population Pyramids

- Evaluate a country's population
  - Bar Graph
  - Age Group (Cohorts)
    - 5 years
  - Gender
    - Males on Left
    - Females on Right
- Predict future population growth
  - Evaluate country's future population position



http://www.cdli.ca

Population Pyramids

- Graying Population
  - More old than young
- Problems
  - Who takes care of old?
  - Who pays for old?
  - Who will work?

Population Pyramids in U.S. Cities

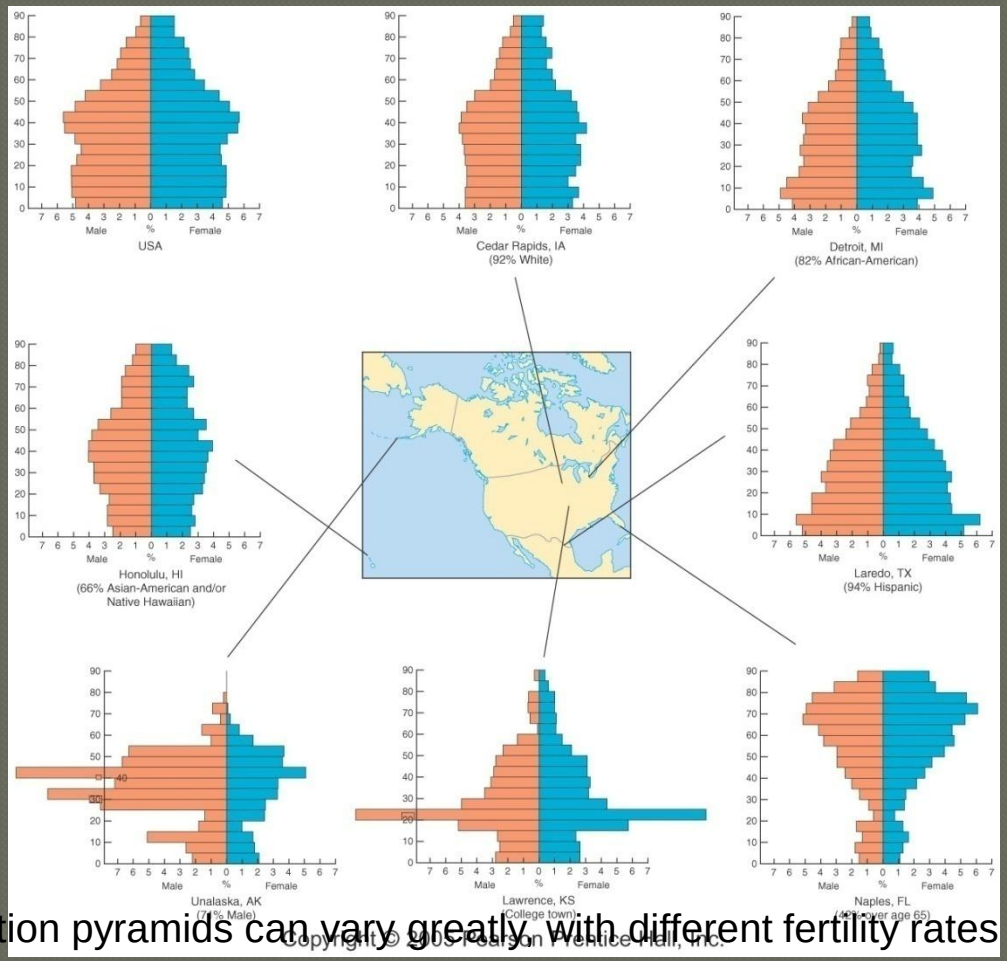


Fig. 2-16: Population pyramids can vary greatly with different fertility rates (Laredo vs. Honolulu), or among military bases (Unalaska), college towns (Lawrence), and retirement communities (Naples).

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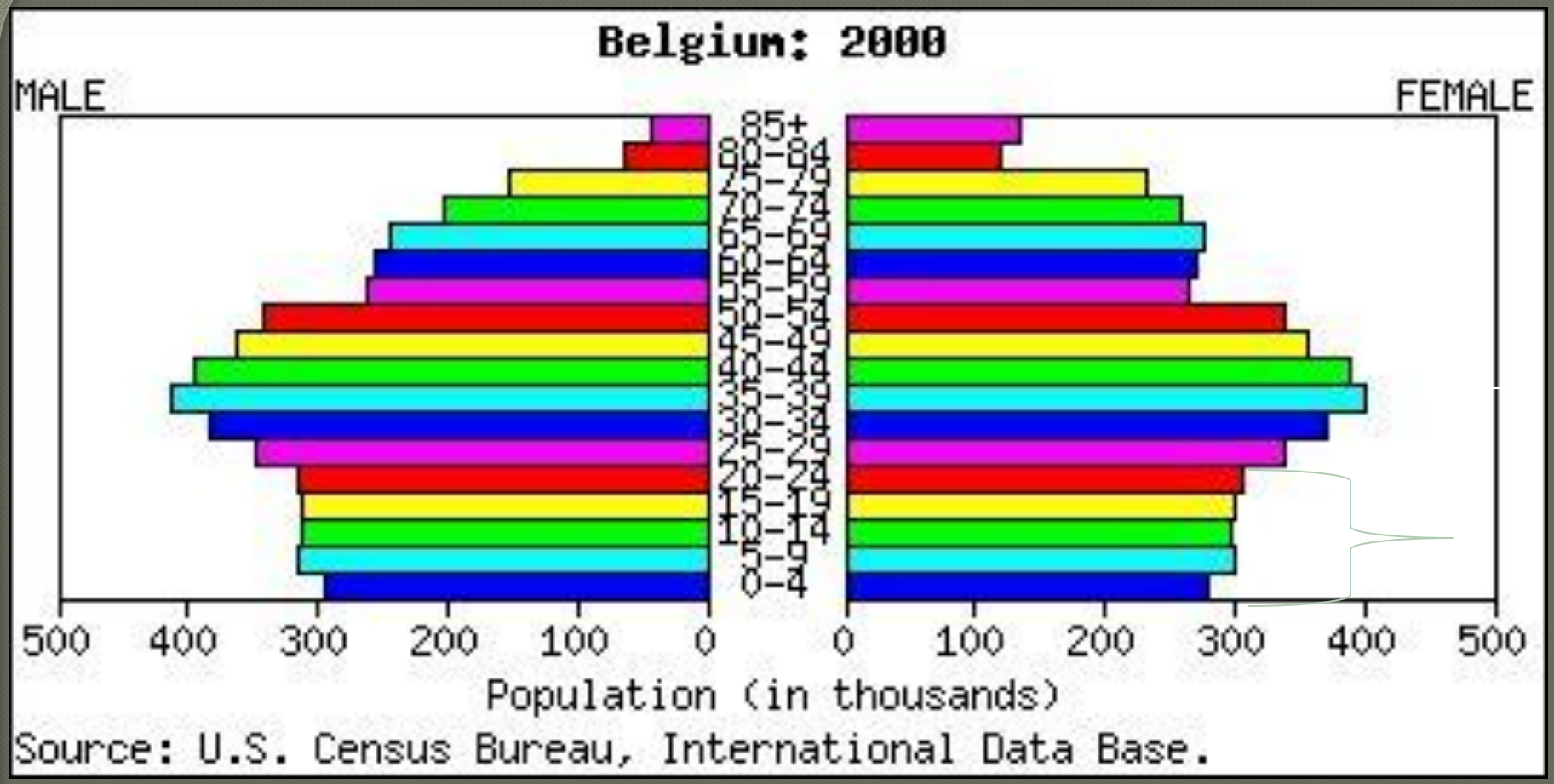
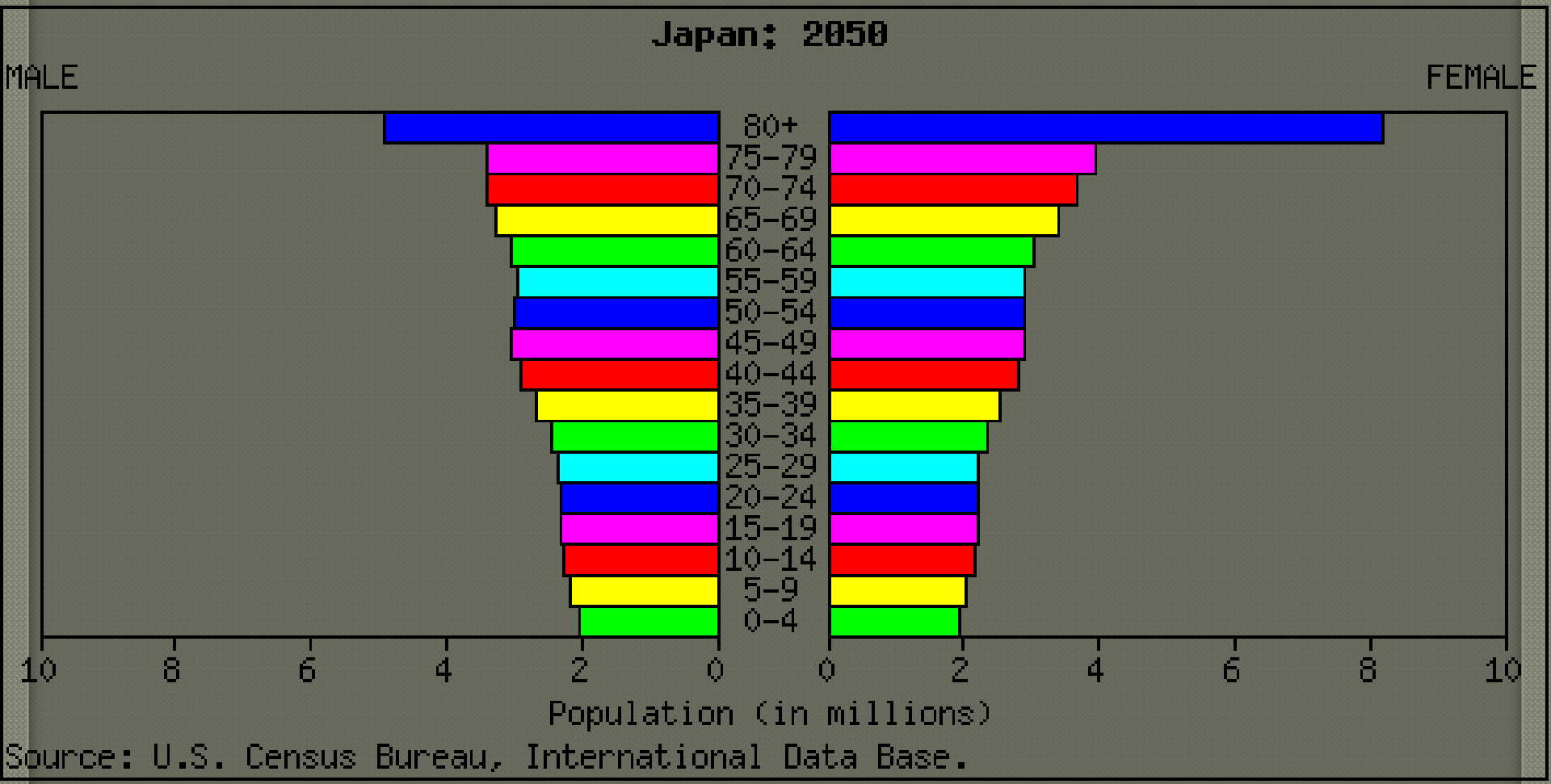
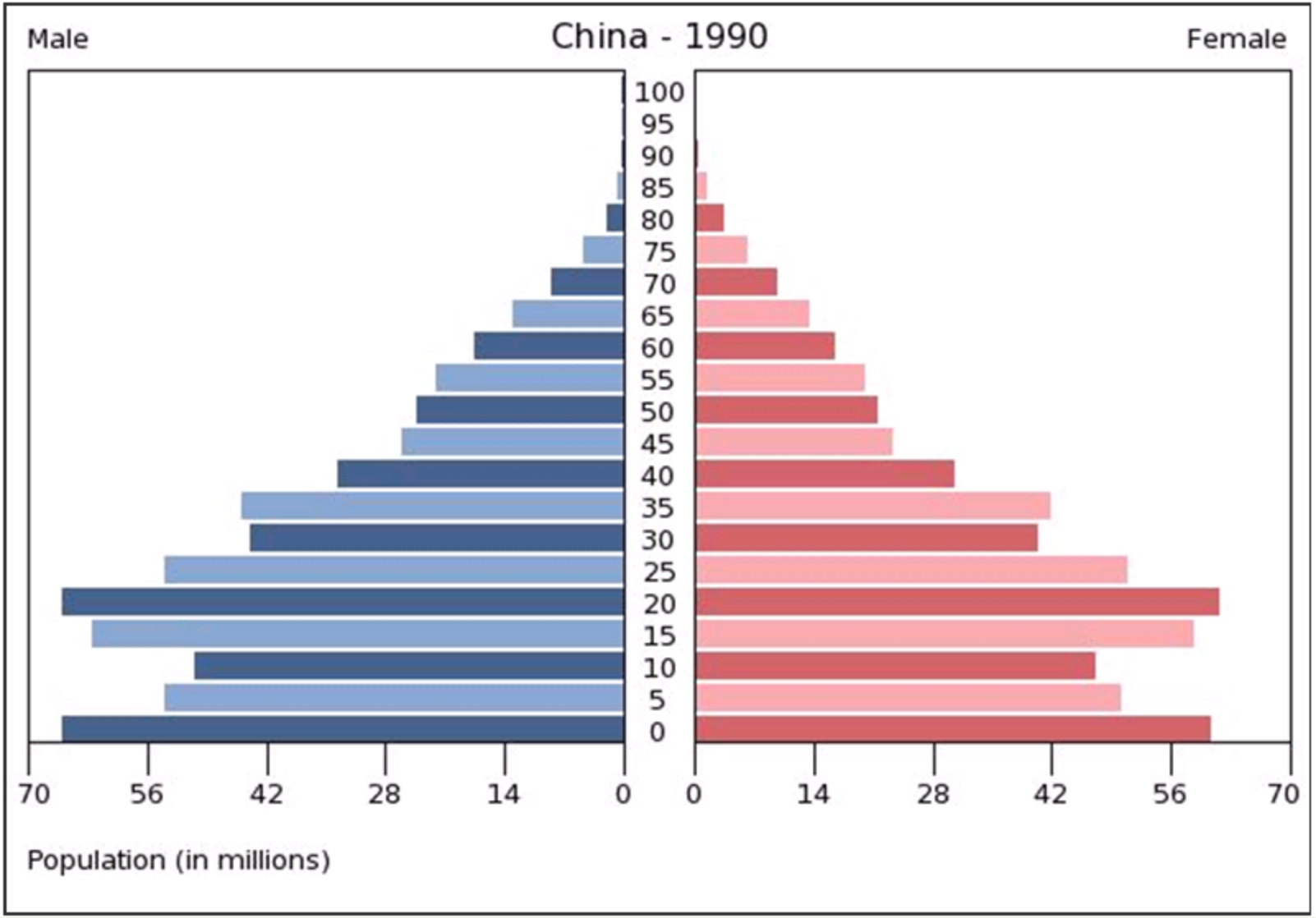

Belgium: 2000
MALE
FEMALE
500
400
300
200
100
0
0
100
200
300
400
500
Population (in thousands)
Source: U.S. Census Bureau, International Data Base.



http://www.nationmaster.com

http://www.census.gov/ipc/www/idb/country.php
Google
File Edit View Favorites Tools Help
China - U.S. Census Bureau
Page



Internet

Population Pyramid

- Dependency Ratio
  - Help to analyze work force / age distribution
  - 15 – 64
    - Independent
  - 15>x>64
    - Dependent

Population Pyramid

- Dependency Ratio
  - Too High = problem
  - Too many dependents = strain on society
    - Strain on social services
    - Fewer workers available for each dependent
  - General problems
    - MDC's – Too many old
    - LDC's – Too many young
      - Especially parts of Africa that have been hits by AIDS

Unit 2

Population

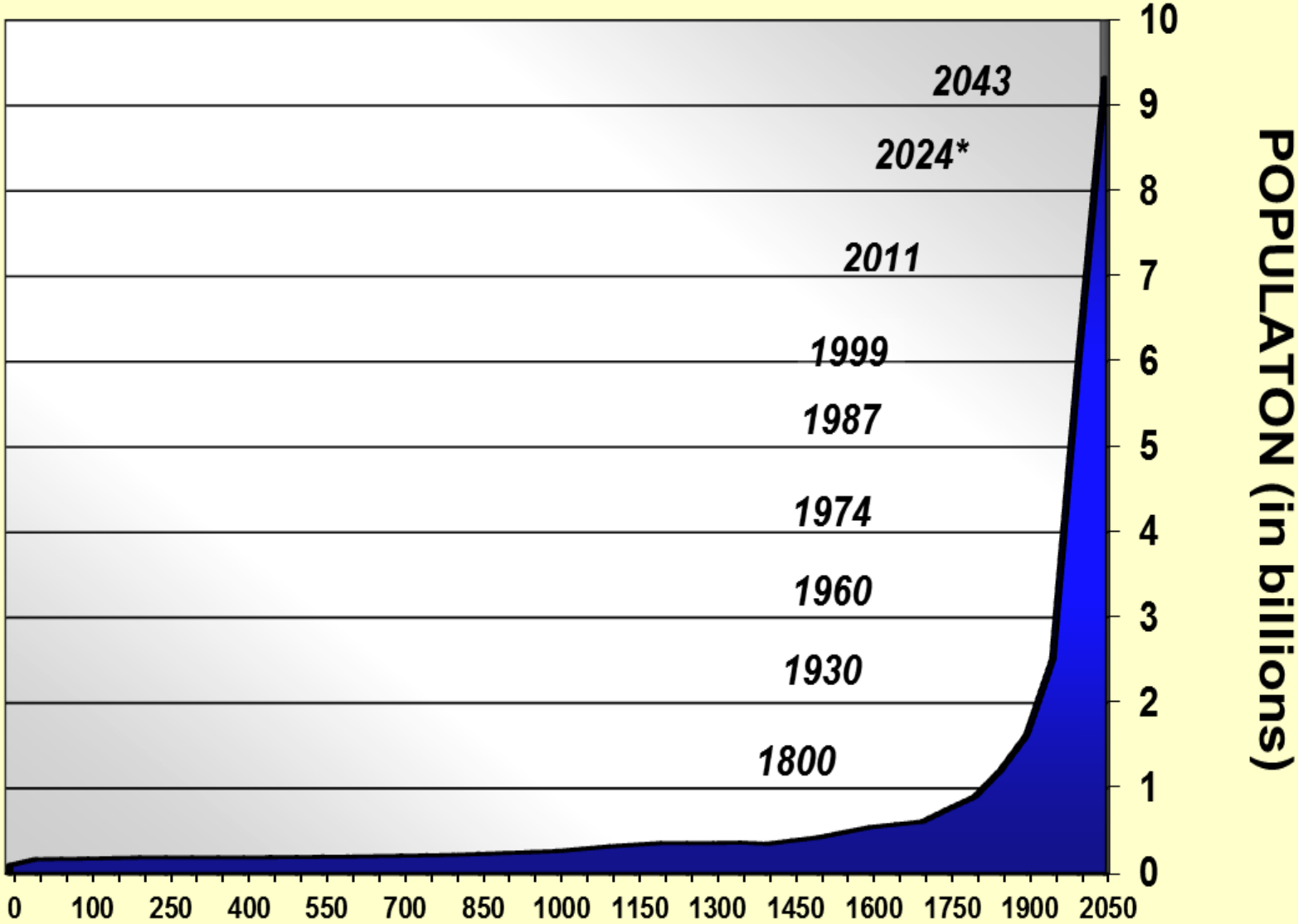
Unit 2

Population

Population Through Time

- Beginning until 1750
  - Modest population growth
  - 700 million in 1750
    - Wars, disease, draught, famine
    - High birth and death
  - Current
    - 6.8 billion

Human Population 1 AD - 2050 AD



*Projected

Population Through Time

- Ages of Population Growth
  - 1st Agricultural Revolution
  - Domestication of Animals / Crops
    - Move from hunter gatherer -> farmer

Population Through Time

- 1st Agricultural Revolution
  - More food = more people

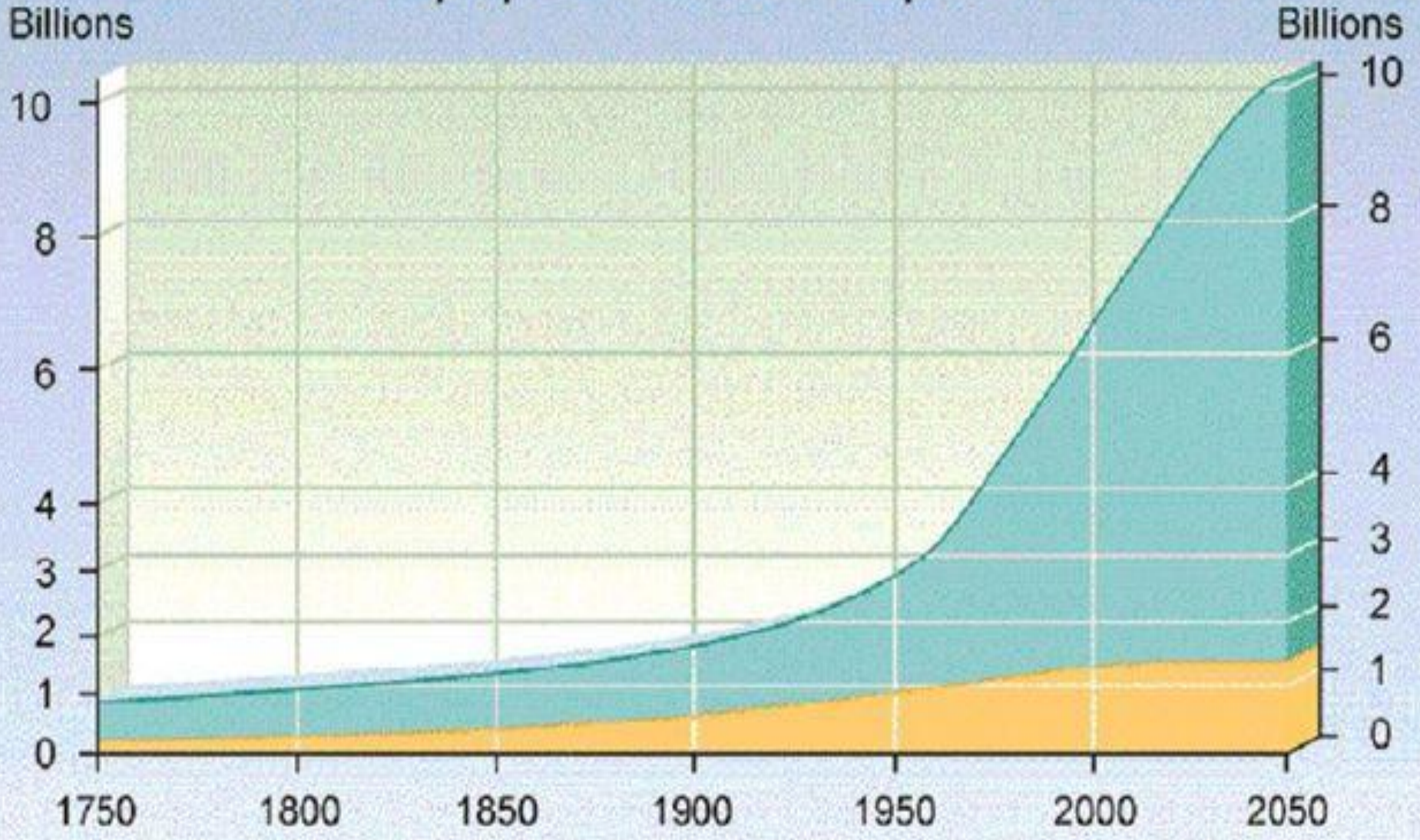
Population Through Time

- Industrial Revolution
  - Use of technology
- 2nd Agricultural Revolution
  - Improved farming technology
  - Improved fertilizer
  - Improved food storage

Population Through Time

- Move toward cities
  - Technology creates new jobs
- Other Agricultural Revolutions
  - Green Revolution
  - Bio Revolution
- Medical Revolution
  - Spread of Medical technologies to poor countries

World population development

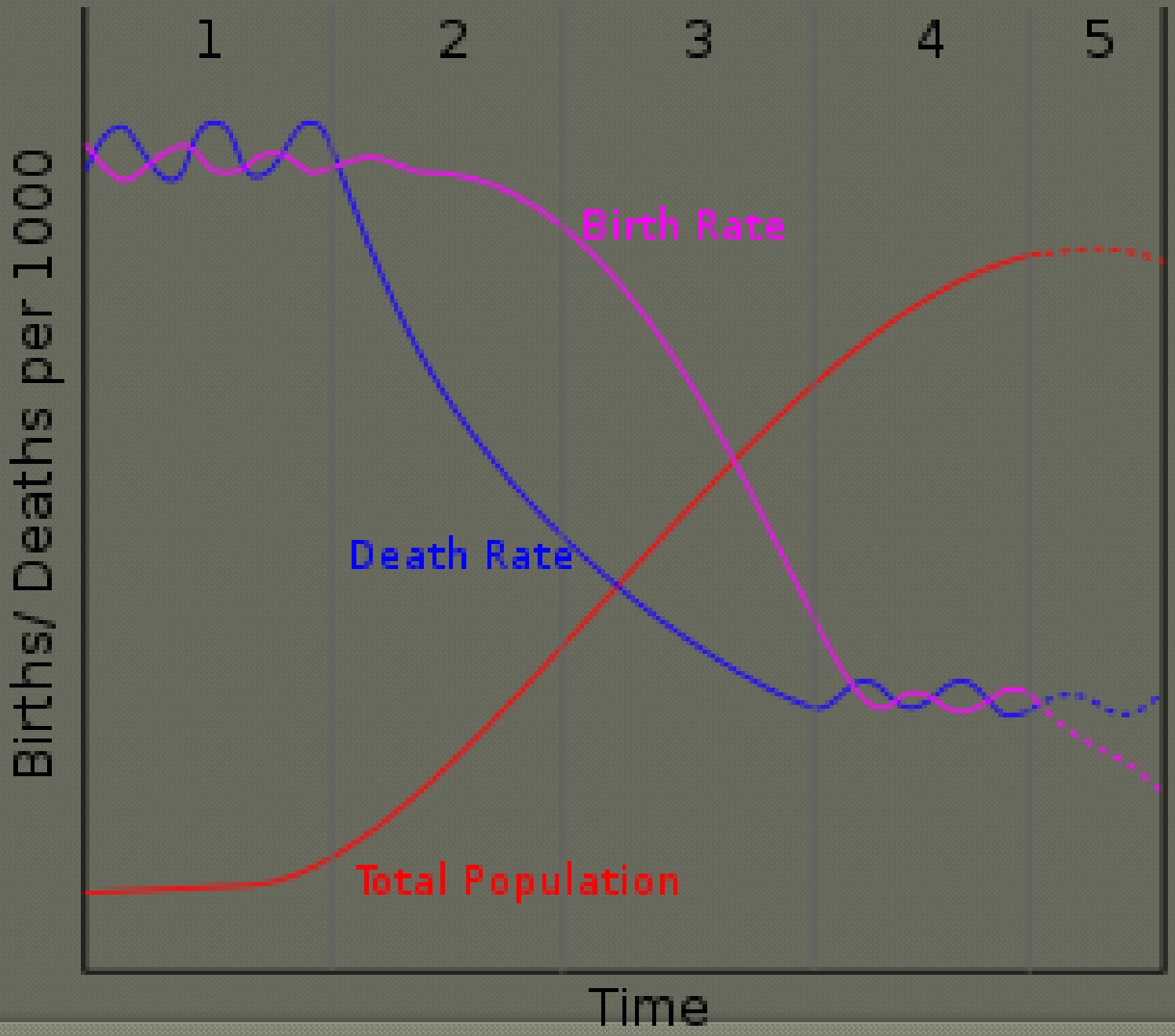


Demographic Transition Model

- Predicts changes in births, deaths, rates of natural increase
  - In the development of countries
- Use CBR, CDR, and Total Population

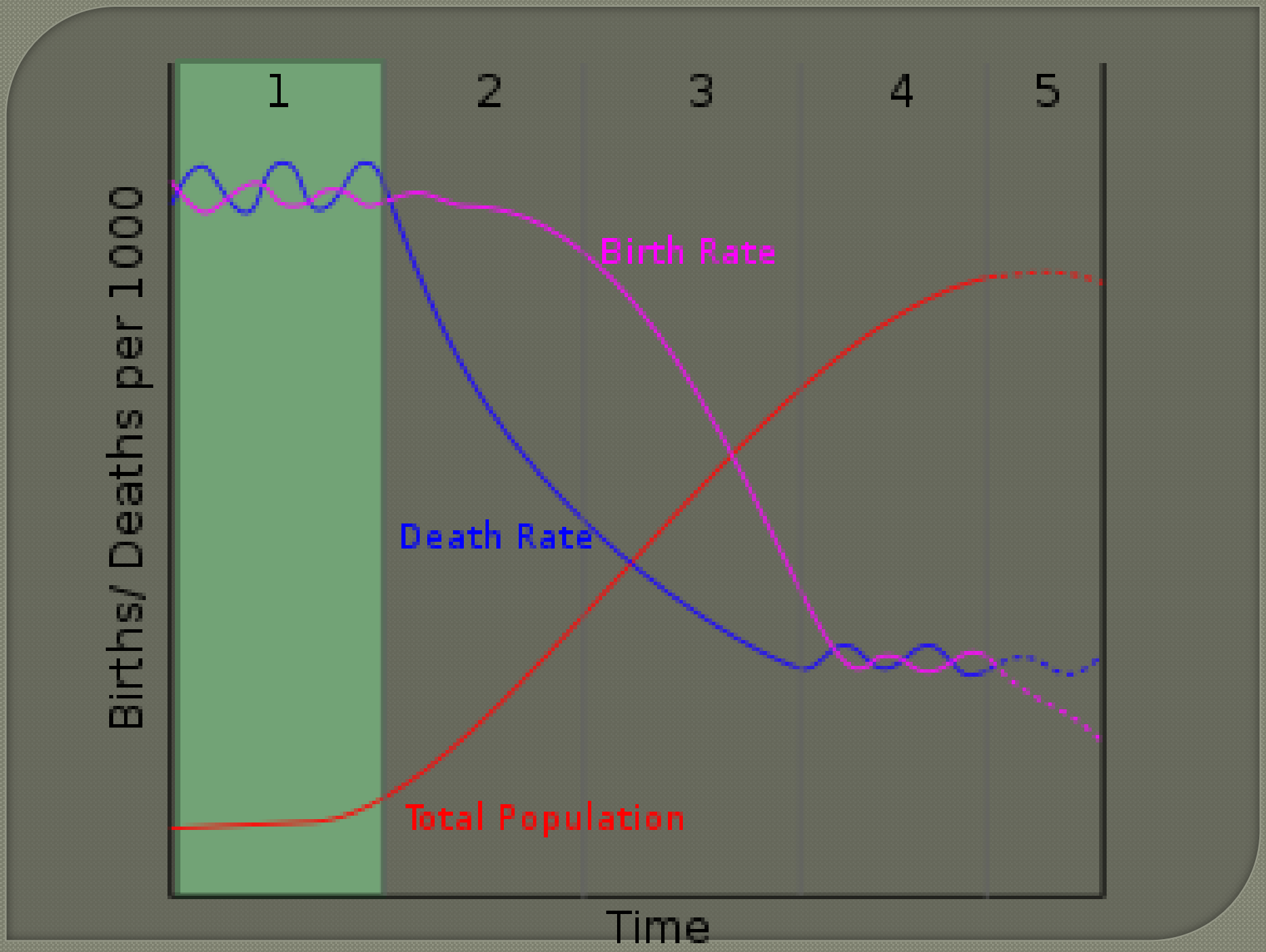
Demographic Transition Model

- 4 Stages
  - Low Growth
  - High Growth
  - Moderate Growth
  - Low Growth


1
2
3
4
5
Births/ Deaths per 1000
Birth Rate
Death Rate
Total Population
Time

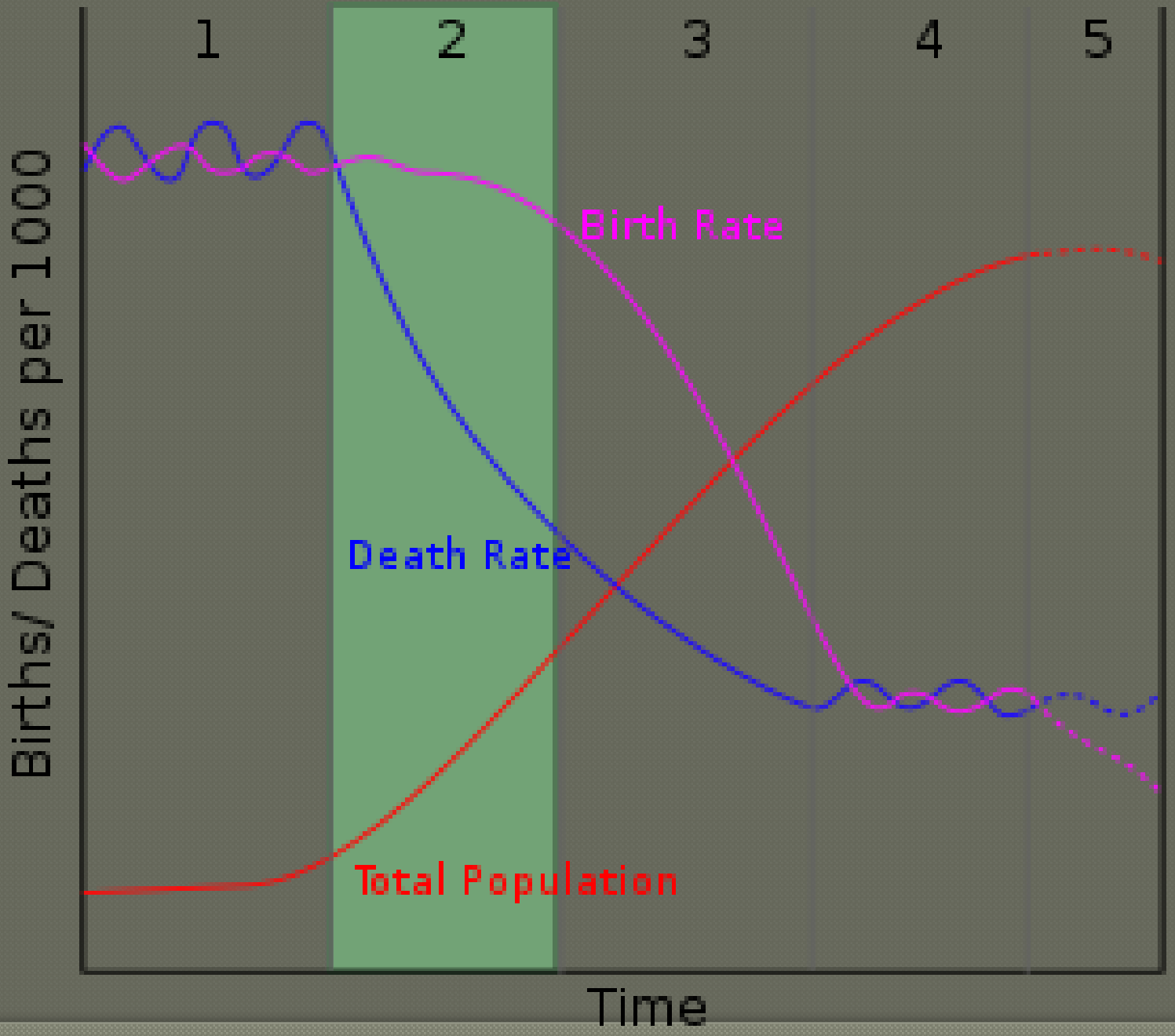
Demographic Transition Model

- Stage 1
  - Low Growth
  - High CBR and CDR = Low RNI
  - Subsistence Farming
  - Not industrialized


1
2
3
4
5
Births/ Deaths per 1000
Birth Rate
Death Rate
Total Population
Time

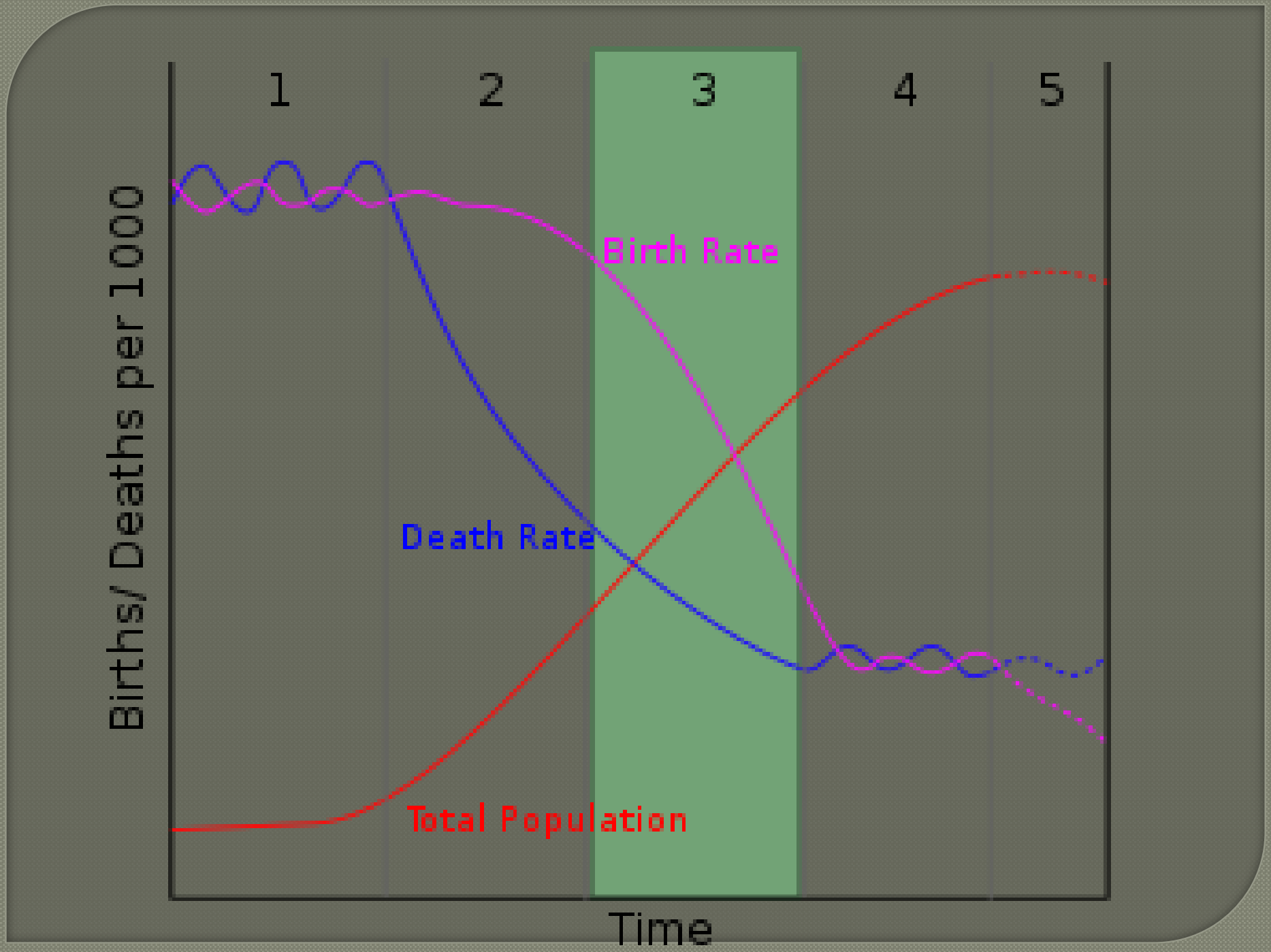
DTM

- Stage 2
  - High Growth
  - Declining CDR
    - Improved Technology / Improving Conditions
  - CBR stays similar
  - Causes High RNI


1
2
3
4
5
Births/ Deaths per 1000
Birth Rate
Death Rate
Total Population
Time

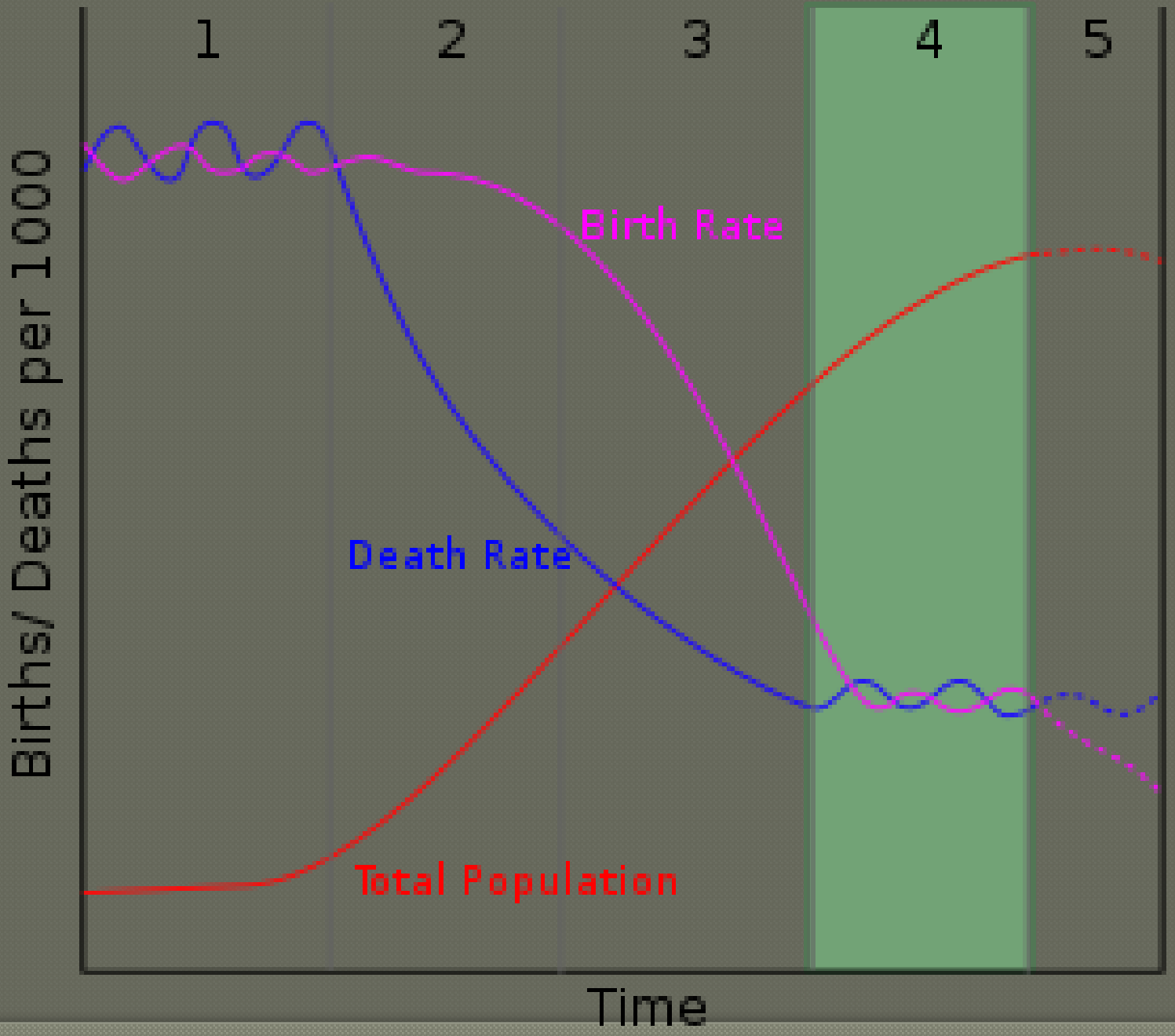
DTM

- Stage 3
  - Moderate Growth
  - Declining CBR
    - Lifestyle Changes
    - Move to cities
    - Smaller Families
    - Women have more “options”


1
2
3
4
5
Births/ Deaths per 1000
Birth Rate
Death Rate
Total Population
Time

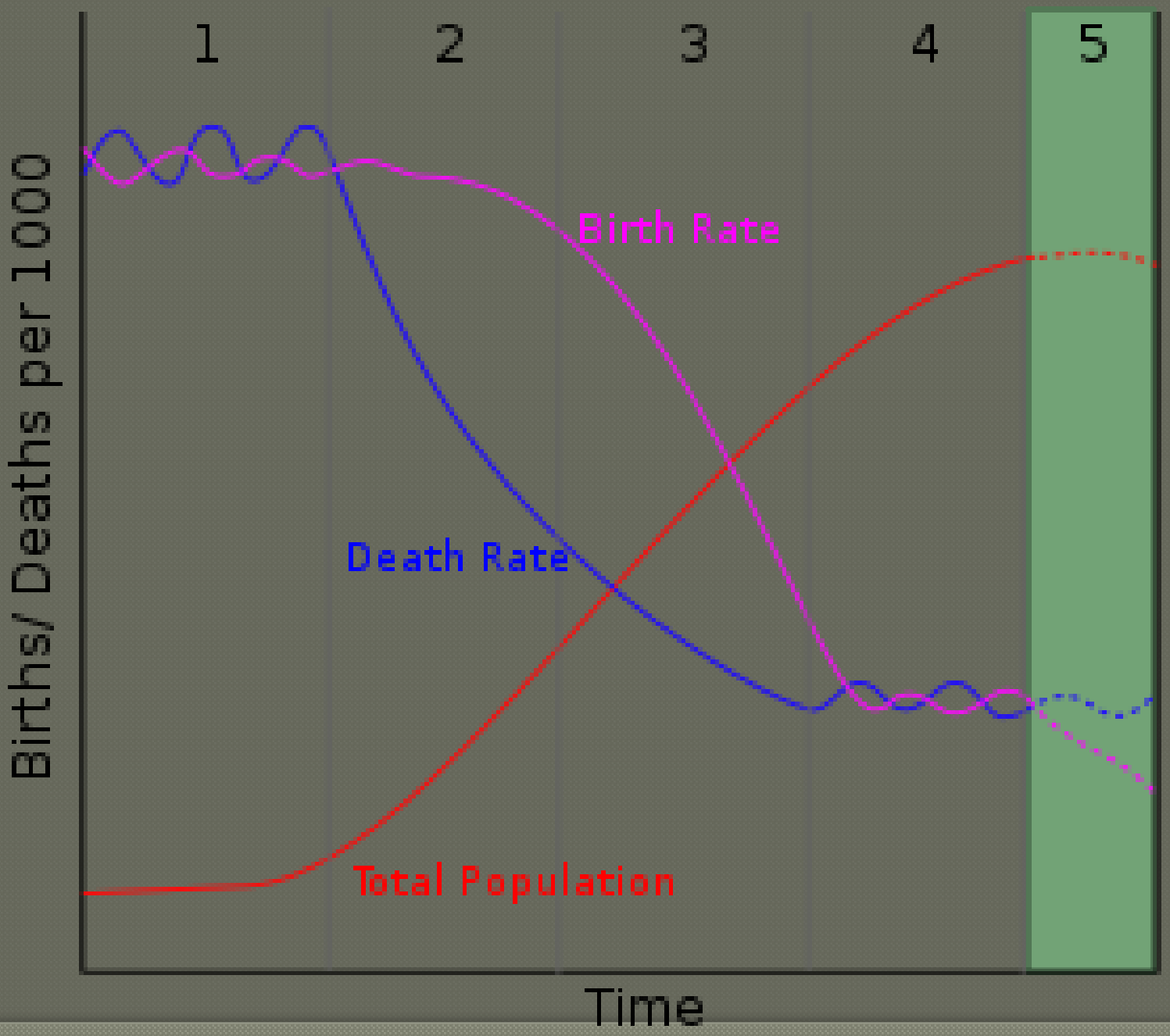
DTM

- Stage 4
  - Low Growth
    - CBR and CDR meet
      - Low levels
    - Low RNI
    - Modern Countries
    - Modern Technologies
    - Low to Zero Population Growth


1
2
3
4
5
Births/ Deaths per 1000
Birth Rate
Death Rate
Total Population
Time

DTM

- Stage 5
  - Negative Population Growth
  - CBR declines below CDR
  - Graying Populations


1
2
3
4
5
Births/ Deaths per 1000
Birth Rate
Death Rate
Total Population
Time

Unit 2

Population

Unit 2

Population

Epidemiologic Transition Model

- Correlates with the DTM
  - Causes of death in each Stage

ETM

- 4 Stages
  - Stage 1
    - Poor sanitary conditions
      - Dysentery, Black Plague, Ebola
  - Stage 2
    - Overcrowding
      - Cholera, Flu
      - Highly communicable
  - Stage 3 & 4
    - Elderly

ETM

- Stage 5
  - Reemerging Disease
    - Avian Flu, MRSA

Population Pyramids & The DTM

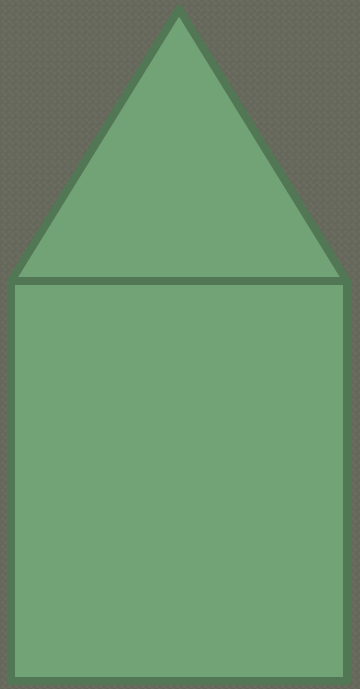
- Basic pyramid shapes correlate to the DTM
- Represent population growth / future population growth
- We can guess what stage of the DTM based on the basic pyramid shape
  - Can also correlate to levels of development

Population Pyramids & The DTM

- Basic Shape 1
  - DTM Stage 2
  - Regular Pyramid
    - High Growth
    - Wide Base

Population Pyramids & The DTM

- Basic Shape 2
  - DTM Stage 3
  - Extended Pentagon
    - Moderate Growth
    - Even base and sides



Population Pyramids & The DTM

- Basic Shape 3
  - DTM Stage 4
  - Column
    - Slow to no growth
    - Even sides

Population Pyramids & The DTM

- Basic Shape 4
  - DTM Stage 5
  - Reduced Pentagon
    - Negative Growth
    - Sides are moving in
    - Indicates falling birth rates

Population Pyramids & The DTM

- Basic Shape 3
  - DTM Stage 3

Unit 2

Population

Population Policies

- Government / State Policies
  - Try to solve problems
    - Overpopulation
    - Underpopulation
  - Increase status of a state
    - For the benefit of the state
    - nationalism
- Pronatalist
- Antinatalist

Population Policies

- Pronatalist
  - Produce larger families
  - Larger population
- Antinatalist
  - Curb population growth

Population Policies

- Pronatalist
  - Historical
    - Achieve state goal
      - Conquer territory
      - Meet economic objective
      - Nationalism / Status of the state
  - Recent
    - Curb population decline
      - Need to sustain economy / viability of the government
      - Maintain native population
        - Not be overtaken by foreign cultures / populations

Population Policies

- Pronatalist
  - Policies
    - Tax incentives
      - Tax credit
      - Tax deduction
    - Cash rewards / prizes
    - Pay for child care / day care

Population Policies

- Antinatialist
  - Over population
    - Cannot sustain population growth
    - Cannot meet the needs of the population and future population
      - Food, Economics
    - Controlled and planned economies

Population Policies

- Antinatalist
  - Policies
    - 1 Child Policy
    - Restrictions on family
      - Where they can live, work, etc

U.S.S.R. - pro-natalist

Starting on July 8, 1944 the government of the U.S.S.R. began awarding medals to women in order to encourage a high fertility rate.

Why did the government believe there was a need for a pro-natalist policy at this time ?

3 main categories of medals were presented

- Motherhood Medals
- Order of the Glory of Motherhood
  or
  Order of Maternal Glory
- Order of Mother Heroine

Motherhood Medal 2nd Class

5 children 8,000,000 awarded

Order Mother Heroine

10 children

200,000 awarded

Motherhood Medal 1st Class

6 children 4,000,000 awarded

Order of Maternal Glory 3rd Class

7 children 2,000,000 awarded

Order of Maternal Glory 2nd Class

8 children 1,000,000 awarded

Order of Maternal Glory 1st Class

9 children 500,000 awarded

Population Theories

- Thomas Malthus
- Karl Marx
- Ester Boserup
- Neo Malthusians

Population Theories

- Thomas Malthus
  - The earth has a natural limit
  - Large populations strain natural resources
  - Earth creates “natural checks”
    - War, famine, disease, natural disaster, etc

Thomas Malthus

- Positive Checks
  - Violent
- Negative (Preventative) Checks
  - Birth Control
  - Celibacy

Thomas Malthus

Thomas Malthus

- Critics Say
  - Improved Technology
  - Allows more people
    - In less space

504
506
508
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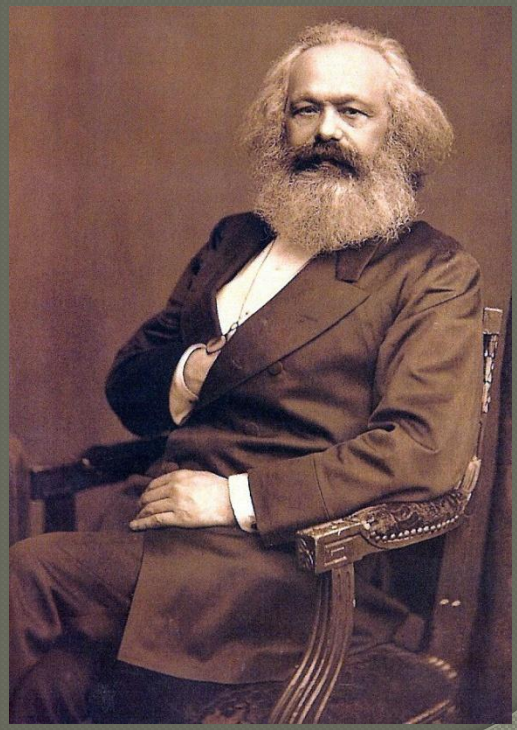
Editorial

Karl Marx

- Unequal distribution of wealth
  - Middle and Upper Class
  - Upper Class Exploits Middle Class



Ester Boserup

- Larger Populations
  - Forces innovation
  - Technological Development
  - More people = more opportunities for problem solvers
    - Human Capital

Neo-Malthusians

- Similar to Malthus
  - Only certain parts of the world need to slow growth
  - Characteristic of the region
  - Provide more room for contraceptions

Unit 2

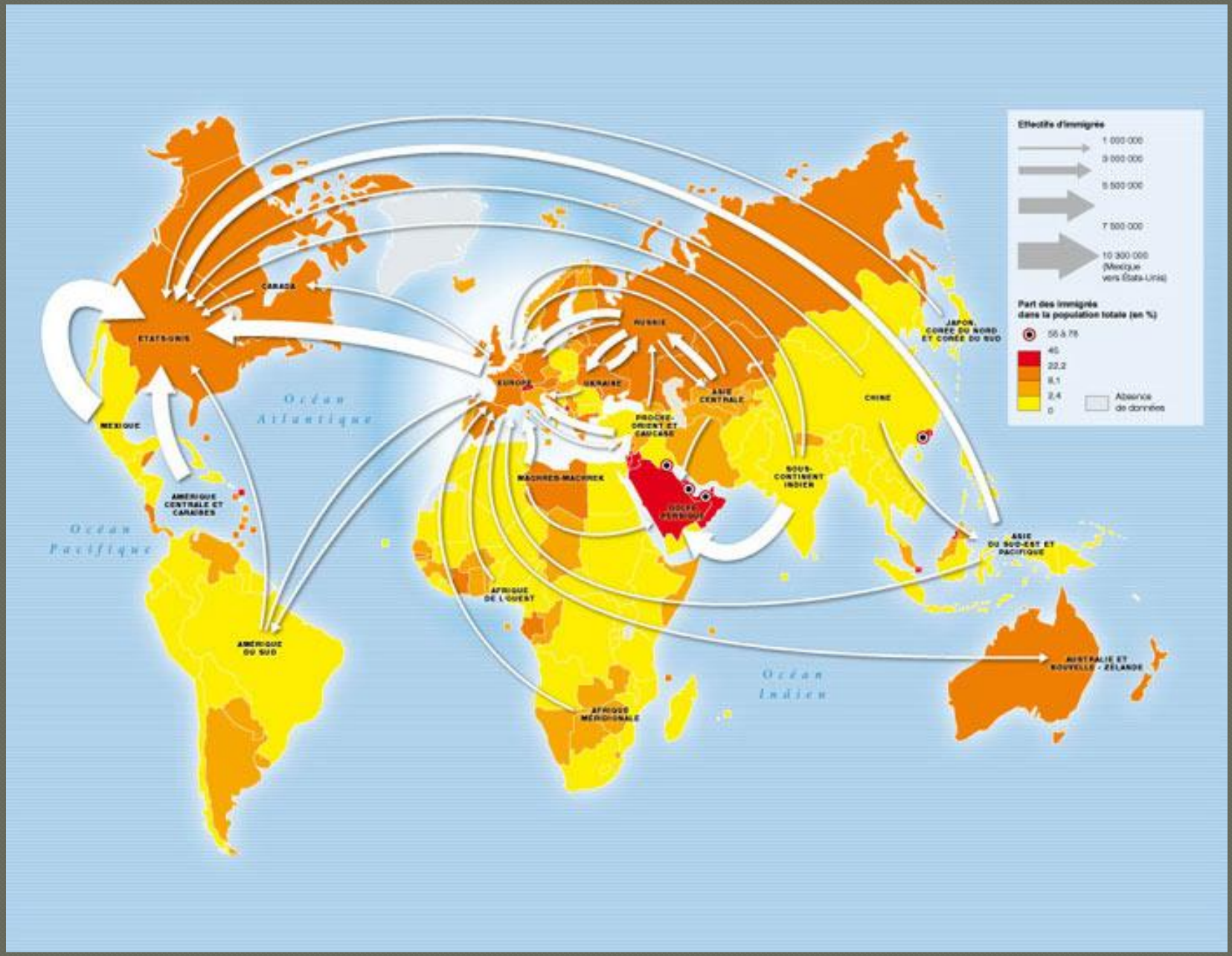
Population

Unit 2

Population

Populations Movement

- Increased migration
  - Improved technology / transportation
  - Increased wealth
- Impact
  - Culture
  - Economics
  - Environment


Effectifs d'immigrés
1 000 000
3 000 000
5 500 000
7 500 000
10 300 000
(Mexique
vers États-Unis)
Part des immigrés
dans la population totale (en %)
55 à 78
46
22,2
8,1
2,4
0
Absence
de données
CANADA
ETATS-UNIS
MEXIQUE
AMÉRIQUE
CENTRALE ET
CARAÏBES
AMÉRIQUE
DU SUD
Océan
Atlantique
Océan
Pacifique
EUROPE
RUSSIE
UKRAINE
ASIE
CENTRALE
PROCHE-
ORIENT ET
CAUCASE
MAGHREB-MACHREK
GOLFE
PERSIQUE
AFRIQUE
DE L'OUEST
AFRIQUE
MÉRIDIONALE
JAPON,
CORÉE DU NORD
ET CORÉE DU SUD
CHINE
SOUS-
CONTINENT
INDIEN
ASIE
DU SUD-EST ET
PACIFIQUE
AUSTRALIE ET
NOUVELLE-ZÉLANDE
Océan
Indien

Population Movement

- Migration
  - Permanently move from home region
  - Cross to another administrative boundary

Population Movement

- Immigration
  - Move to a place
- Emigration
  - Move out of a place

Population Movement

- Net In-Migration
  - More immigrants than emigrants
- Net Out-Migration
  - More emigrants than immigrants

Population Movement

- Migration Streams
  - Where?
  - Why?
- Counter Stream
  - Move against the current in migration

Population Movement

- Push Factor
  - Why they leave
- Pull Factor
  - Why they come

Population Movement

- Migration Selectivity
  - How likely is someone to migrate
  - Based on:
    - Personal, social, economic

Population Movement

- Age
  - 18 to 30

Population Movement

- Brain Drain
  - Worry of Gov’ts
- More Education
  - More likely to leave
- Brain Drain
  - Most educated leave

Population Movement

- Brain Drain
  - Keep workers from leaving
    - HOPE Scholarship

Population Movement

- Two types of Migration
  - Voluntary
  - Involuntary / Forced
- Refugees
  - Involuntary Migrants
  - Flee persecution or abuse

Population Movement

- Refugees
  - International
    - Flee to another
  - Intranational
    - Move within the country

Refugees: Sources and destinations

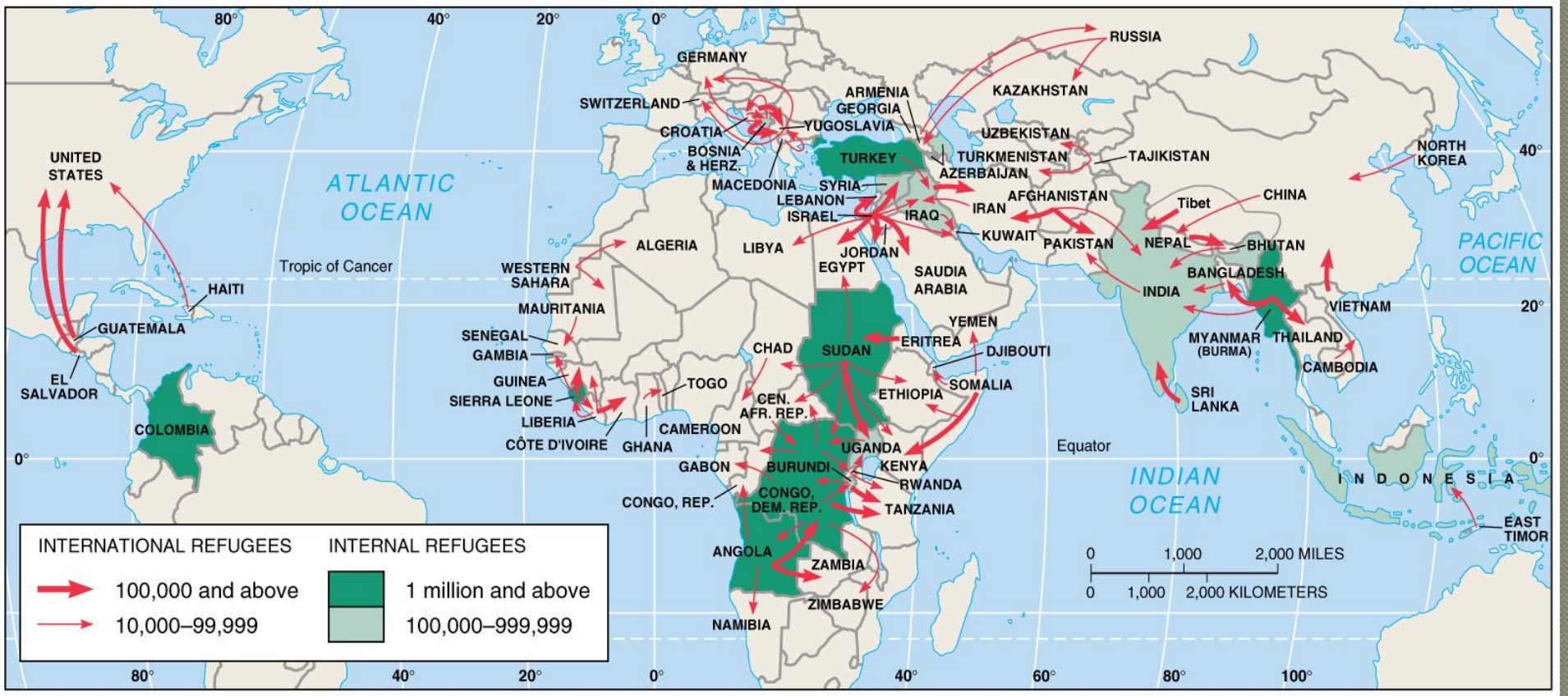


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Fig. 3-1: Major source and destination areas of both international and internal refugees.

Population Movement

- Internally Displaced Persons
  - Refugees who do not move to a new country
  - Face all the hardships of a refugee
  - Are not given refugee status by the UN
  - International support and aid is not required

Forced Migration around the World

- Sub-Saharan Africa
- Middle East (SW Asia)
- Europe
- South Asia

Sub Saharan Africa

- Conflict in Rwanda and Congo
  - Tribal and Ethnic Conflict
- Darfur in Sudan
  - Animist and Muslims

Sub Saharan Africa

- Zaire, Tanzania, Uganda, Liberia, Sierra Leone, Angola, and Burundi
  - War related relocation

Mid East / SW Asia

- Palestinians
  - Creation of Israel
- Kurds in Iraq
  - Under Saddam Hussein
- Afghans under the Soviets

Europe

- Yugoslavia
  - 7 million refugees fled to Europe

SE Asia

- Vietnam War
  - Displacement of Vietnamese
- Cambodia
  - Khmer Rouge
  - 300,000 Refugees
- Myanmar / Burma

South Asia

- Sri Lanka
  - 1 million displaced by Sinhalese Government

Movement of People

- Generally
  - Moving from:
    - Asia, Africa, Latin America
  - Moving to:
    - America, Oceania, Europe

External Migration

- Post World War II
- Jewish immigrants to Israel
- East German immigrants
  - To West Germany
  - Soviet Control / Communism

External Migration

- Asian immigrants
  - To the US
  - From Philippines, Vietnam, and India
- North Africa and Turkish
  - To Europe
  - Germany and England

Unit 2

Population

Unit 2

Population

3 Migration Waves to the US

- Colonial Era
- 19th and 20th Century
- Late 20th Century

Colonial Era

- 1607 to 1776
- From Europe and Africa
- Europeans
  - Religious persecution
  - New life
- Africans
  - Slave trade

Colonial Era

- Immigrants came to the East Coast

19th and 20th Century 1800's & 1900's

- Ireland and Germany

- Post Civil War
  - Russia and Hungary

Late 20th Century

- 1970s and 1980s
  - Asia
- 1980s on
  - Latin America

US Immigration Policy

- Unrestricted
- Quota Act of 1921 / National Origin Act of 1924
  - Sets limits
  - Non-Western Europeans
  - Based on total number of immigrants
    - 2%
    - 1910 Census

US Immigration Policy

- 1968
  - Country quotas replaced
  - Hemisphere Quota
    - East – 170,000
    - West – 120,000

Migration to U.S., by region of origin

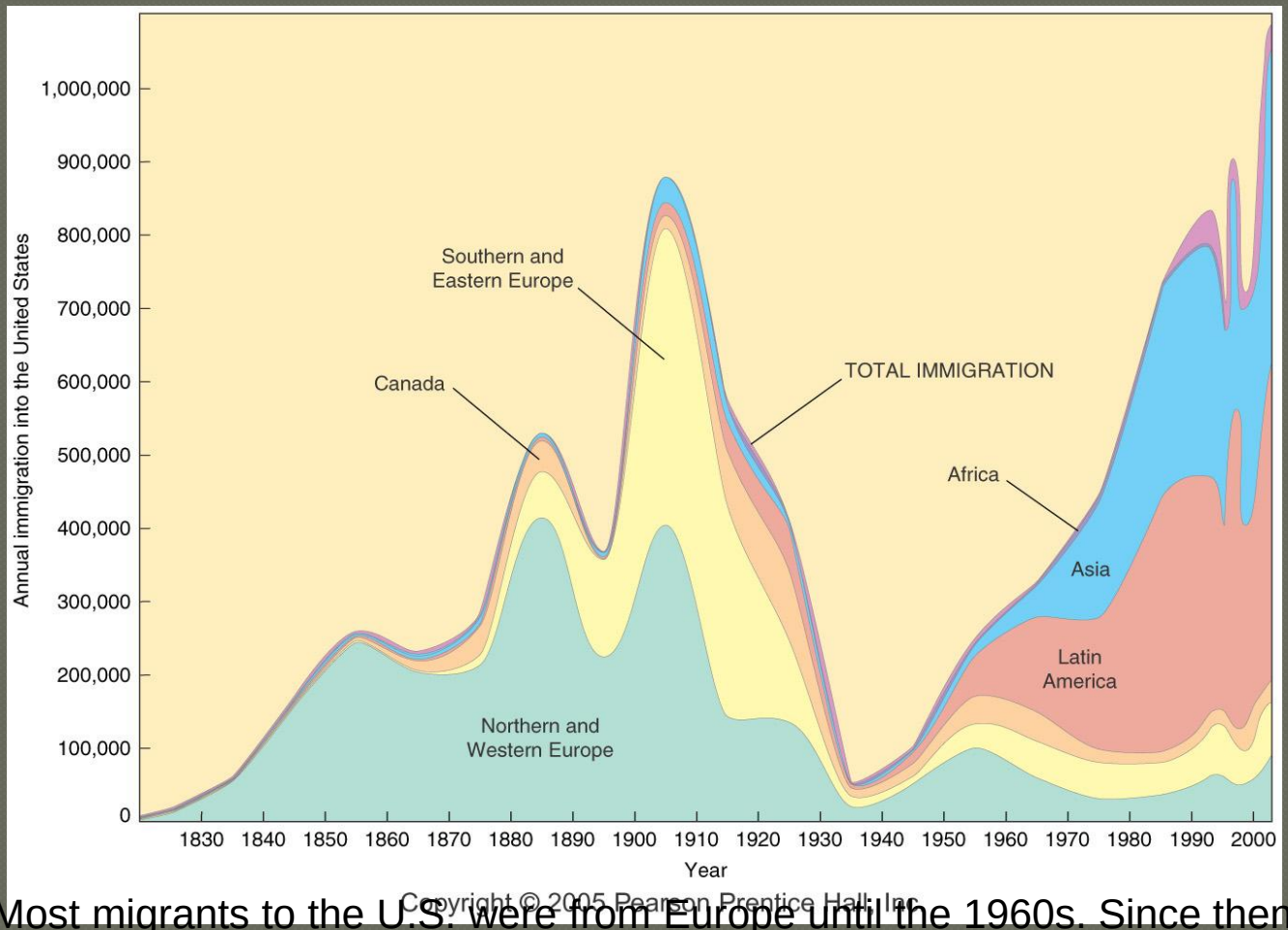

Fig. 3-4: Most migrants to the U.S. were from Europe until the 1960s. Since then, Latin America and Asia have become the main sources of immigrants.

US Immigration Policy

- 1978
  - Global Quota
  - 290,000
  - 20,000

US Immigration Policy

- Current Policy
  - 620,000
  - 7%

Unit 2

Population

Unit 2

Population

Internal Migration

- Movement within a country
- Two Types
  - Interregional
  - Intraregional

Internal Migration

- Industry
  - Intraregional
    - Rural to Urban
    - Urban to Suburban

Internal Migration

- Crowded Cities
  - Counterstream
- Counterurbanization
  - City to rural
  - New transportation / technology / jobs

Internal Migration

- General US Migration
  - Southward and Westward
- Baby boomers
  - Move south
  - Better weather
  - Improved Racial Tensions
- Available Jobs

Interregional Migration in the U.S.

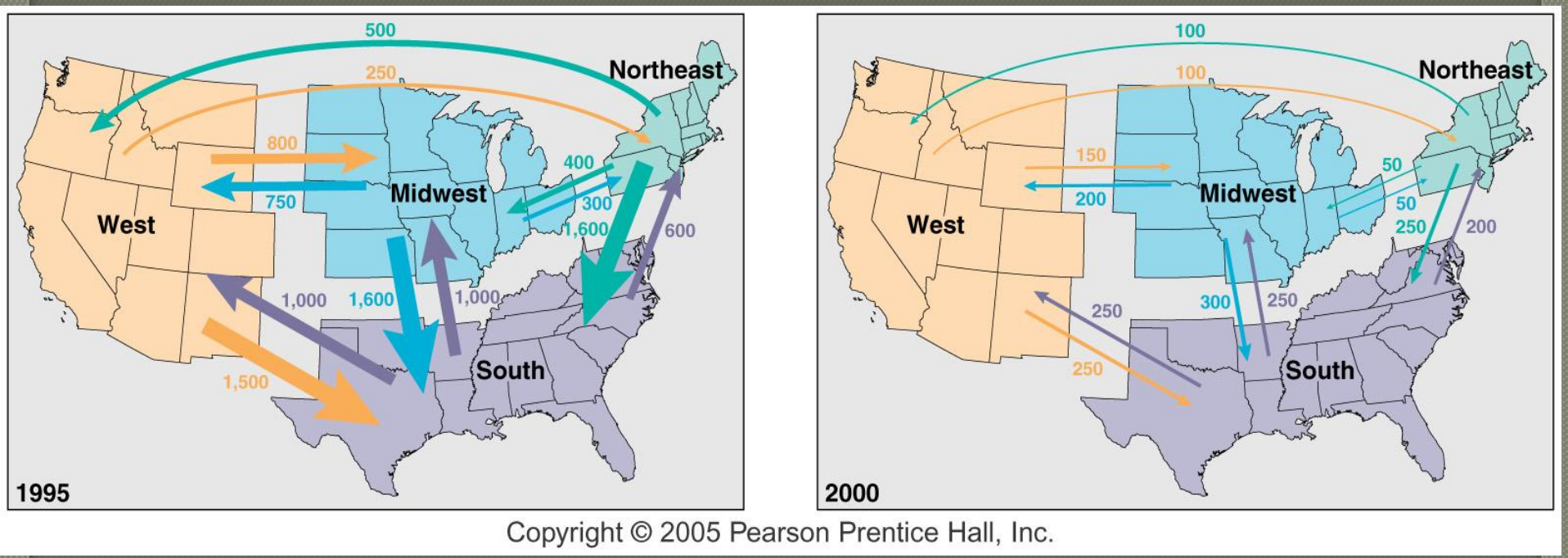

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Fig. 3-13: Average annual migrations between regions in the U.S. in 1995 and in 2000.

Intraregional Migration in the U.S.

Fig. 3-14: Average annual migration among urban, suburban, and rural areas in the U.S. during the 1990s. The largest flow was from central cities to suburbs.

Migration Models and Theories

- Gravity Model
  - Interaction and movement between places
- More people =
  - More immigrants
- Distance is an immigration factor

Gravity Model

- The closer the location
- Think distance decay

Gravity Model

- Does not account for…
  1. Selectivity Factors (Education Level, Age, Job Opportunities)
  2. Unpredictable Human Behaviors

Ravenstein's Laws of Migration

- British Geographer Ernst Ravenstein
  - 11 generalizations
- Short Distances
- Step Migration
  - End goal
  - Stop in between

Ravenstein's Laws

- Intervening Obstacles
  - Keeps one from completing migration

1.
2.
3.
4.

Ravenstein's Laws

- Long Distance Move
  - Large city
- Rural Residents
  - More likely to move
- Young adults
  - More likely to move

Ravenstein's Laws

- Migration creates counterstream

Chain Migration

- Migrate to where others are
- Where they have a connection

Unit 2

Population

Unit 2

Population

Model of Migration Transition

- Wilber Zelinsky
  - Explain and predict
  - Uses the DTM

Migration Transition

- Each stage of the DTM produces incentives (motives)
- Stage 1
  - Shelter or Food
- Stage 2
  - Resources are used
  - More people
  - Less land available
  - People leave the country

Migration Transition

- Stage 2
  - Move to more developed nations
  - Abundant resources
- Stage 3 & 4
  - Intraregional
  - Rural to Urban
  - Urban to Suburban
  - Urban to Rural and back

Short Term Local Movement & Activity Space

- Space you interact with
  - Activity Space
- Will depend / fluctuate

Short Term Movements

- 3 Types
  - Cyclical
  - Seasonal
  - Periodic

Cyclical

- Daily Routine

Seasonal

- Leave home b/c of season change
- Seasonal work
  - Migrant Workers
- Transhumance
  - Pastoral farming
  - Moving animals each season

Periodic

- Longer periods
- College
- Military
- Internship