Unit 2

Population
Demography

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

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

• Where are they growing fastest / slowest?
• Identify trouble areas
Fastest Population Growth = Poorest Regions

- Asia
- Africa
Population Numbers
• Intelligent Inquiries

Population Equations
• Global Population Accounting Equation
  • Total global population
• Sub global Population Accounting Equation
  • Total Population of a Region
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 Distribution

- Where are people?
Population Distribution

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

75% on 5%

- Specific Regions
- Hospitable Environment
Ecumene

- Area that holds a permanent settlement
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.
Density

- 3 Types
  - Arithmetic
  - Physiological
  - Agricultural
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?
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
Overpopulation

- When a country outgrows its 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
IMR

• Infant Mortality Rate
  • # of infant deaths per 1,000 live births
  • Must live 1 year
Life Expectancy
- Average lifespan

Fecundity
- Years a woman is able to conceive and bear children
- 15 to 45
Population Growth

- **GFR**
  - General Fertility Rate
    - Number of births per 1,000 women in the fecund years

- **TFR**
  - Total Fertility Rate
    - Predicted children a woman will have during the fecund years
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
Canada: 2000

Source: U.S. Census Bureau, International Data Base.

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).
Belgium: 2000

Source: U.S. Census Bureau, International Data Base.

http://www.cdli.ca
Japan: 2050

Population (in millions)

Source: U.S. Census Bureau, International Data Base.
Dependency Ratio

- Help to analyze work force / age distribution

- 15 – 64
  - Independent

- 15 > x > 64
  - Dependent
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
Ages of Population Growth

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

- Low Growth
- High CBR and CDR = Low RNI
- Subsistence Farming
- Not industrialized
Stage 2

- High Growth
- Declining CDR
  - Improved Technology / Improving Conditions
- CBR stays similar
- Causes High RNI
Stage 3
- Moderate Growth
- Declining CBR
  - Lifestyle Changes
  - Move to cities
  - Smaller Families
  - Women have more “options”
Stage 4

- Low Growth
  - CBR and CDR meet
    - Low levels
  - Low RNI
  - Modern Countries
  - Modern Technologies
  - Low to Zero Population Growth
Stage 5

- Negative Population Growth
- CBR declines below CDR
- Graying Populations
Unit 2

Population
Unit 2

Population
Epidemiologic Transition Model

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

- Stage 1
  - Poor sanitary conditions
    - Dysentery, Black Plague, Ebola
- Stage 2
  - Overcrowding
    - Cholera, Flu
    - Highly communicable
- Stage 3 & 4
  - Elderly
Stage 5
• Reemerging Disease
  • Avian Flu, MRSA
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
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
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
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

- Antinatalist
  - 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
Thomas Malthus

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

Negative (Preventative) Checks
- Birth Control
- Celibacy
Critics Say

- Improved Technology
- Allows more people
  - In less space
Unequal distribution of wealth
- Middle and Upper Class
- Upper Class Exploits Middle Class
Larger Populations

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

- Increased migration
  - Improved technology / transportation
  - Increased wealth

- Impact
  - Culture
  - Economics
  - Environment
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
Migration Selectivity

• How likely is someone to migrate
• Based on:
  • Personal, social, economic
Population Movement

- Age
  - 18 to 30
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
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
Fig. 3-1: Major source and destination areas of both international and internal refugees.
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
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
Immigrants came to the East Coast
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
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
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
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
Population
Wilber Zelinsky

- Explain and predict
- Uses the DTM
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