

Chapter 3 – Geographies of Population

The Demographer's Toolbox

- **Demography** – the study of the characteristics of human populations
- Population is studied to understand the areal distribution of Earth's population
- Also interested in the reasons for, and the consequences of, the distribution of population from the international to the local level
- Historians study the evolution of demographic patterns and sociologists the social dynamics of human populations.

Sources of Information

- Governments rely on census data to collect information on births, deaths, marriages, immigration, and other aspects of population change
- **Census** – the count of the number of people in a country, region or city
 - Most are directed at gathering other information about the population, such as previous residence, marital status, income and other personal data
- Most census findings are not usually accurate; estimates suggest an undercount of between 1 percent and 2 percent in recent censuses, mainly because of enumerator error
- Some groups are more under-represented than others
- **Vital Records** – information about births, deaths, marriages, divorces, and the incidences of certain infectious diseases
- Data is collected and records of them kept by provincial and territorial levels of government
- **Family reconstruction** – the process of reconstructing individual and family life histories by linking together separately recorded birth, marriage, and death data
- Not all information that population experts use is as straightforward as census or vital records data. Nor are such data always available.
- It is necessary to utilize other types of data to say something about a past population's size and structure.
- Most contemporary population experts prefer to use a combination of both census and vital record information
- This is because census data can record only snapshot views (or cross-sections) of a population on the day the census was conducted
- They cannot consider change over time; for this, the information from a vital registration is invaluable
- Vital records can track only a limited number of variables over time; censuses give us a far richer data picture
- **Administrative Record Linkage** – the linking together of a number of different government databases to build one database with much more detailed information on each individual
- This allows a more detailed picture of individuals but also have up to date information

Population Distribution and Structure

- Population geographers bring to demography the spatial perspective that emphasizes description and explanation of the “where” of population distribution, patterns and processes
- Though the global population is increasing daily, the most important aspect is for geographers

is its uneven spatial expression from region to region and place to place

- Important are the implications and impacts of these differences

Population Distribution

- Many geographical reasons exist for the distribution of populations throughout the globe.
- Degree of accessibility, topography, soil fertility, climate and weather, water availability and quality, and type and availability of other natural resources are important factors that shape population distribution
- A country's political and economic experiences and characteristics also reflect on their population distribution

World Population Estimates by Continents		
Continent	Number of Inhabitants (In millions)	% of total population
Africa	944	14.2
Asia	4010	60.5
Australia, New Zealand, and the South Pacific islands	35	0.5
Europe	733	11.1
North America	335	5.1
Latin America and the Caribbean	569	8.9
TOTAL	6625	100

- Asia is by far the most populous continent, including 60.5 percent of the world's inhabitants in more than 40 countries
- Population clusters have a number of physical similarities
 - Almost all of the world's inhabitants live on 10 percent of the land
 - Most live near the edges of land masses, near the oceans or seas or along rivers with easy access to a navigable waterway
 - Approximately 90 percent live north of the equator, where the largest population of the total land area(63 percent) is located
 - Most of the world's population lives in temperate, low-lying areas with fertile soils
- Population numbers are significant not only on the global scale but also at other levels
- Concentrations within countries, regions, and even metropolitan areas are also important for showing us where people are.

Population Density and Composition

- Population could also be looked at in terms of density, a numerical measure of the relationship between the number of people and some other unit of interest expressed as a ratio
- **Crude density** – the total number of people divided by the total land area
 - Limitation of the crude density ratio is that it is one-dimensional
 - Tells us very little about the opportunities and obstacles that the relationship between

people and land contains

- Population geographers also examine population in terms of its composition and the subgroups that constitute it
- Population composition enables geographers to gather important information about population dynamics
 - For example, knowing the composition of a population in terms of the total number of males and females, number and proportion of old people and children, and number and proportion of people active in the workforce
- Retirees will be very common in today's population and future populations, as the baby boom generation ages
 - **Baby boom** – the increased number of births in the two decades following World War II
- Considerable amounts of countries' resources and energies are necessary to meet the needs of a large number of people who may no longer be contributing significantly to the creation of the wealth necessary for their support
- Might also be a need to import workers to supplement the small working-age population
- Populations in core countries – such as Denmark – has a small number of women of childbearing age relative to the total population size – will generally grow very slowly
- It is also based on the opportunities that women are given in countries; women with higher levels of education and employment will work outside the home and will not have enough time for child care. The opposite occurs in poorer countries.
- Businesses use population composition data to make marketing decisions and to decide where to locate their business
- The development of GIS has allowed businesses to target their markets easier and more effectively
- **Geodemographic analysis** – the practice of assessing the location and composition of particular populations
- Groups of Population:
 - **The Youth Cohort (0-15 years old)**
 - Relative and absolute decline of this group challenges the Canadian educational system with the problems of enrolment declines and ultimately, school closures as the numbers of students shrink
 - Colleges and universities will be affected by the decline in these cohorts
 - **Participation rate** – the proportion of a cohort or group that becomes involved in a specific activity, such as attending an education institution
 - At the sociocultural level, members of the youth cohort are faced with a country in which, sometime toward the middle of the twenty-first century, there will be more people over 65 years old than those under 16 years old
 - Consumer analysts have already begun to realize that the teenage demand for music, fashion and recreation that drove the marketplace during the baby boom is being replaced by a much older, demographic
 - **The Middle Cohort (16-64 years old)**
 - The major factor of change for this group is the baby boom cohort itself
 - Oldest members, ideally named “front-end boomers” by David Foot, were born in the

late 1940s and will be retiring in the next decade or so

- They occupy the upper ranks of many institutions and corporations
- Born at the end of the boom, around the mid-1960s, are entering mid-career
- Canada's workforce has expanded to accommodate the employment aspirations of the baby boomers and will only begin to free up space for under cohorts when the boomers retire in large numbers, from about 2020 onward
- The 16-64 age group is the one whose behaviour most affects the housing market and the size of our cities and towns
- Demand for sub-urban nuclear family housing, small inner-city condos and rural cottages can all be related to stages in the life cycle
- Demographic analysis has had an important part to play in the real estate industry and in the Canadian Mortgage and Housing Corporation.
- As the country's population continues to age, the demand for cottages in rural areas will decline as people seek the lifestyle and health care amenities of urban centres
 - Basically, as the population ages, the population will shift towards the suburbs but will ask for the lifestyle and health care similar to large urban areas
- **The Old-Age Cohort (65 years +)**
 - Main issues are health care and pension provision
 - Group is made up larger numbers of women than men (since average female life expectancies are higher)
 - In terms of health care expenditures, costs for seniors is much higher than that of children; health care costs will rise once the baby boom generation heads into retirement
 - Some provinces are considering a privatized health-care system as an alternative to the public health care system, which most believe is inadequate enough to handle the load that will come from the aging baby boomers
 - One main cause is the over-reliance of hospital care
 - Basic spatial inequalities produced by delivering health care in this way have raised issue of access as an ethical issue
 - Preventive measures are receiving greater attention than in the past because they are often far cheaper than remedies that require drugs and surgery
 - Public pensions will see a high level of strain since there will be more people receiving these pensions than there are paying into the Canada Pension Plan and Quebec Pension Plan
 - The federal government has already increased premiums and will have to do so again shortly, as the population continues to age
 - Geographers have noticed that the demographic of seniors is most common in cities such as Victoria (BC) and Kingston (Ontario).
 - Both those cities have a higher than average population of those aged over 65 because of the in-migration of the elderly to these communities
 - Situation places demands on these cities for such services as the provision of medical facilities, retirement homes and wheelchair accessible public transit
 - Other parts of Canada (examples: rural areas and Newfoundland) are aging because of

a continued migration of the young population coupled with an in-migration of the older population

- The metropolitan core of Canada has better resources to cope with the growing population of the elderly than the smaller cities of Canada
- Alternative Solutions:
 - Pronatalism
 - Some believe that due to the low birth rates of the population, the best solution is to reverse the trend and encourage birth
 - Government of Quebec attempted this in the 90's, by handing out "baby bonus" cheques; recently, has turned to a province-wide system of subsidized daycare as an alternative
 - No government scheme compensates for the true costs of raising children, and to look at the issue economically shows a basic misunderstanding of the causes of the decline of the birth rate
 - Increased Economic Productivity
 - Economists have agreed that the problems of an aging society could all be met by simply having a more productive economy
 - Economy that produces more can pay higher taxes and health insurance and pension premiums
 - Once all the baby boomers have eventually retired and the workforce begins to decline in size, the decline need have no impact on the economy if it is countered by rising productivity
 - NAFTA (example) has the potential to raise international markets, will have a long-term beneficial impact
 - New technologies offer other possibilities
 - Immigration
 - Promoted by the federal government as a solution to the aging population
 - Shortfall in births can be simply replaced by the recruitment of immigrants from overseas
 - Canada has the advantages of a trained bureaucracy already in place around the world and a public largely receptive to the policy
 - However, immigration is a short-term solution, as at the levels the country is experiencing, it can only postpone the effects of aging by approximately 7 years

Population Dynamics and Processes

Birth, or Fertility, Rates

- **Crude Birth Rate (CBR)** – the ratio of the number of live births in a single year for every thousand people in the population
- The level of economic development is very important factor that shapes the CBR
- It may be heavily affected by the demographic structure of the population, as graphically suggested by age-sex pyramids
- An area's CBR is influenced by women's educational achievement, religion, social customs, diet and health, as well as by politics and civil unrest

- Most demographers believe that the availability of birth-control methods is also critically important to a country's or region's birth rate
- **Fertility** – the childbearing performance of individuals, couples, groups, or populations
- Crude birth rate is only one indicator of fertility and is somewhat limited in its usefulness
 - It tells very little about the potential for future fertility levels
- **Total Fertility Rate (TFR)** – the average number of children a woman will have throughout the years that demographers have identified as her childbearing years, approximately ages 15 through 49
- Whereas the CBR indicates the number of births in a given year, the TFR is a more predictive measure that attempts to portray what birth rates will be among a particular cohort of women over time.
- A population with a TFR of slightly higher than 2 has achieved replacement-level fertility
 - This means that birth rates and death rates are approximately balanced and there is stability in the population
- **Doubling time** – the measure of how long it will take the population of an area to grow to twice its current size

Death, or Mortality Rates

- **Crude Death Rate (CDR)** – the number of deaths in a single year for every thousand people in the population
- Crude death rates often roughly reflect levels of economic development: countries with low birth rates generally have low death rates
- Often associated with economic development, CDR is also significantly influenced by other factors
- Demographic structure with more men and elderly people, usually leads to higher death rates
- Other important influences on mortality include health care availability, social class, occupation, and even place of residence
- Poorer groups in the population have higher death rates than the middle class
- **Natural Increase** – the difference between the CBR and the CDR, which is the surplus of births over deaths
- **Natural Decrease** – the difference between the CDR and the CBR, which is the deficit of births relative to deaths
- **Infant Mortality Rate** – the annual number of deaths of infants under one year of age compared with the total number of live births for that same year
- Figure is usually expressed as number of deaths during the first year of life per 1000 live births
- Infant mortality rate is used by researchers as an important indicator both of a country's health care system and of the general population's access to health care
- Global patterns show that although infant mortality rates are high in the peripheral countries of Africa and Asia, they are low in the more developed countries of Europe and North America
- Generally, these patterns reflect adequate maternal nutrition and the wider availability of health care resources and personnel in core regions

- When patterns are examined below the global scale, infant mortality rates are not uniform
- Child mortality refers to the number of children who die before their fifth birthday and is measured in relation to every 1000 live births.
 - Industrialized countries had 7 deaths for every 1000 births while the poorest nations had an average of 158.
 - Highest rate was in Sierra Leone, where it was 284 per 1000
 - In more than one-third of sub-Saharan African countries, child mortality rates had increased or stagnated
- **Life expectancy** – the average number of years an individual can expect to live
- Life expectancy varies considerably from country to country, region to region, place to place and among different classes and racial and ethnic groups
- Another key factor influencing life expectancy is epidemics, which can quickly and radically alter population numbers and composition
- Countries with well-developed urban systems, diffusion will occur hierarchically which is much faster than simple spread, or contagious diffusion
 - Example of widespread epidemic – AIDS
 - Though the disease is beginning to stabilize, the levels of infection are still high
 - Death levels are declining, but it is still able to spread rapidly because it has been able to diffuse hierarchically
 - Countries with high health care levels have been able to slow the spread with widespread public relations.

Demographic Transition Theory

- **Demographic Transition** – the replacement of high birth and death rates by low birth and death rates
- Believed that fertility and mortality rates are directly tied to the level of economic development of a country, region or place
- State that many of the economic, political, social and technological transformations associated with industrialization and urbanization lead to a demographic transition
- According to the demographic transition model, the decrease in population growth is attributable to improved economic production and higher standards of living brought about by changes in medicine, education, and sanitation
- Reason for the lag in declining fertility rates relative to mortality rates is that while new and more effective methods for fighting infectious diseases have been advanced, large families have begun to decline
- Though this model is based on actual birth and death stats, many population geographers and other experts question its generalizability to all places and all times
- Features of demographic change witnessed in core countries, such as higher living standards, have not occurred in many peripheral countries
- Poor economic growth has led to a decrease in the population and limiting factors on the current population has halted any population growth.

Population Movement and Migration

- Individuals may make far-reaching, international or intraregional moves, or they may simply move from one part of a city to another
- Global shifts in industrial investment result in local adjustments to those shifts as populations move or remain in place in response to the creation or disappearance of employment opportunities

Mobility and Migration

- **Mobility** – the ability to move, either permanently or temporarily
 - Can be used to describe a wide array of human movement ranging from a journey to work to a great distance, permanent move
- **Migration** – a long-distance move to a new location
 - Involves a permanent or temporary change of residence from one place to another
- **Emigration** – a movement in which a person arrives in another country
- **Immigration** – a movement in which a person arrives in another country
- Example: a person *emigrates* from China and *immigrates* to Canada
- **International Migration** – a move from one country to another
- **Internal Migration** – a move within a particular country or region
- Most migrations often involve a desire for economic betterment/stability, or an escape from adverse political conditions (oppression).
- Interprovincial migration in Canada is common, as people within Canada are more likely to move to provinces with cities that have better regional economic stability or better “essentials” (eg. Education standard, health care services, municipal services, etc.)
- Governments are concerned with migration numbers, migration rates and the characteristics of migrant populations because these factors can have consequences for political, economic and cultural conditions on all levels.
- Peripheral countries such as Cuba that has experienced significant out-migration of highly trained professionals may find it difficult to provide needed services, such as health care
- Countries such as Canada, the US, Germany, and France which receive large numbers of low-skilled in-migrants willing to work for extremely low wages
- Countries will also face considerable social stress in times of economic recession when unemployed citizens blame the immigrants for “stealing” their jobs or receiving welfare benefits
- **Gross migration** – the total number of migrants moving into and out of a place, region or country
- **Net migration** – the gain or loss in the total population of a particular area as a result of migration
- Migration is an important concept because the total population of a country, region or locality is dependent on migration activity as well as on birth and death rates
- Migrants make their decisions to move based on push factors and pull factors
 - **Push factors** – events and conditions that impel an individual to move away from a location
 - **Pull factors** – forces of attraction that influence migrants to move to a particular location

- Push factors can include migrant dissatisfaction with their home country, war, economic dislocation or ecological deterioration
- Pull factors can include migrant desires, strong economic growth, potential for jobs, etc
- **Voluntary Migration** – the movement by an individual based on choice
- **Forced Migration** – the movement by an individual against his or her will
- In 2008, the Office of the United Nations High Commissioner for Refugees (UNHCR) reported that the total number of refugees and internally displaced people (IDP) under its care had risen by 2.5 million during the course of 2007, to reach a total of 25.1 million by year's end
- The term *refugee* can be defined as people who have fled their homelands because they have a well-founded persecution on the grounds of race, religion, nationality, political belief, or social characteristic
- In recent years, the increasing numbers of refugee claimants asking for protection has led many countries, including Canada, to seek ways of deciding the status of refugees within their country
- Fears of increasing numbers or of possible abuse of the system has led many countries of asylum to introduce restrictions on the entry of refugee claimants (such as visas) and on the rights of refugees once they are admitted
- The local environment plays a large factor in the definition of a refugee since the natural area they live in could be hazardous to an extent where they must move out for their own survival
- Sea-level increased in many places due to global warming is an example
- Famines and droughts in many countries have forced people to move to seek out better fertile land

International Voluntary Migration

- Not all migration is forced
- Canada is created from the efforts of waves of immigrants, who add their own contributions to the development of Canada
- Immigrants first settled in the west by small bands of hunter-gatherer peoples migrating from Asia as early as 11500 years ago
 - Later, Vikings settled in Newfoundland 10000 years later and subsequently around 500 years later, the Europeans settled in the areas around the St. Lawrence River
- Large, cheap agricultural lands of Ontario and Quebec attracted a number of different migrant groups
- 60% of the migrants between 1815-1865 were from Ireland, hoping to escape from the famine of 1846-1849
- In the 90's, immigrants focused more towards cities as potential destinations
- In 1967, a non-racist selection policy was created and the main sources of Canada's immigration changed from European to Asian
- Contributions from all immigrants can be seen all across Canada such as the National Railway, the various farmlands that have been passed on by generations, the miners from Czech and Yugoslav in the 1930's who extracted minerals from the mines in Manitoba
- Migration does not always involve a permanent change of residence
- Temporary labour migration has long been an indispensable part of the world economic order

and has at times been pursued by governments and companies alike

- Individuals who migrate temporarily to take jobs in other countries are generally known as guest workers
 - **Guest workers** – individuals who migrate temporarily to take jobs in other countries
 - Can be seen in the form of foreign workers in possession of work visas in other countries
- Temporary migration of Mexican and Caribbean farm labourers to Canada is an example of “guest workers”
- Sending workers abroad is an important economic strategy for many peripheral and semiperipheral countries since
 - lessens local unemployment
 - enables workers to send substantial amounts of money to their families at home
 - helps keep the workers' families afloat and supports the dominance of the core in global economic activities
- Though it benefits the foreign workers, economic downturns in the guest worker's host country may result in a large decrease in remittances received by the home country, worsening the country's economic situation

International Forced Migration

- African slave trade is a notable example of international forced migration
- Migration stream was integral to European economic expansion from the seventeenth through the nineteenth century
- Large fortunes in the sugar trade were largely earned on the backs of African slaves working the sugar plantations of Brazil, Guyana and the Caribbean
- Other examples include the forced migration of Jews from Germany preceding WWII and the deportations of Armenians out of Eastern Anatolia to other parts of the Ottoman Empire after WWI
- Immigration has also become a security issue after 9/11
- High refugee strains on refugee camps put considerable strain on the humanitarian aid resources of both international organizations and the host countries.