

Chapter 1 – Geography Matters

Geography In Canada

- **Pre-Confederation**
 - Geography in Canada predates the creation of Canada as a country in 1867
 - Country's Aboriginal Peoples, European explorers, immigrant settlers had particular interests in acquiring knowledge about the land they were on
 - Aboriginal peoples had an abundance of information about the country's environments
 - Much of their early maps were drawn from memory or from the ground/snow
 - First drawn on paper or animal skins to help first Europeans find their way across Native lands
 - Europeans, keen on exploration and colonization, sought the best routes to explore as much as possible
 - Samuel de Champlain (1570-1635) illustrated his accounts of travels along the St. Lawrence River with his own paintings and maps
 - David Thompson (1770-1857) devoted most of his life to the study of geography and the practice of geography. As an employee of the Hudson's Bay Company, he mapped the company's vast western lands before they became a part of Canada in 1869.
 - Fascinations with the Northwest Passage by European explorers once they discovered Canada and many expeditions were launched to find the fabled route to the East
 - Geographical knowledge of the region increased with every exploration made
 - Due to increasing pressure from other nations towards possible invasion of the Northwest Passage, Canada has begun to reexplore the North in an effort to definitively claim the North.
 - Surveying land was followed once farms and townsites were formed.
 - One account of survey work along the Rideau Canal describes how surveyors set fire to a distant tree to have an unambiguous point of reference for their sightlines.
- **1870's to 1930's**
 - 1892 saw the federal government of Canada began Canada's first extensive topographic map series – it was a survey of the Prairies at the scale of 1 inch to 3 miles
 - Followed in 1906 by the first sheet of a national topographic series
 - First National Atlas of Canada was published
 - Early themes of travel and adventure books in this period looked deeply at the geographical development of Canada.
 - Many of the themes they mentioned (such as Canada's relations with the US, regional character of Canada, European settlement of Canada, French-English relations) would have relation to this day
 - Economists and historians had an interest in the role of the St. Lawrence + Great Lakes as an organizing of Canadian development
 - importance of the ecumene, or total amount of habitable land, as a limit on agricultural settlement
 - **Ecumene:** The total habitable area of a country.

- Early art looked at the landscapes of Canada
- Individuals also grouped together to advance the cause of geographical research
 - 1877 – la Societe de geographie du Quebec was established
 - 1905 – Champlain Society was founded to publish historical documents relating to Canada
 - 1929 – Canadian Geographical Society was founded in Ottawa
- **1930's to Present**
 - Geography became an integral part of Canadian Education
 - 1951 – Geography grew to a point where the Canadian Association of Geographers was founded with 65 members; its journal The Canadian Geographer was established
 - Today, Canadian Geography is widely recognized with universities all over Canada teaching undergraduate and graduate studies in Geography
 - Canadian geographers from the mid-1980s onward began to research work connecting Canada's geography with national issues
 - Canadian geography is an absorbing discipline for the following reasons:
 - Technological developments, such as GIS and remote sensing, have enabled geographers to deal with growing amounts of data in an increasingly sophisticated spatial manner
 - Growing public concerns about environmental change have given heightened relevancy to many aspects of geographical research
 - Addition of new research themes in recent years has significantly increased Canadian geography's purchase on real-world issues.
 - Examples include introduction of feminist analysis and ideas of gendered place, development of rural geography, growth of research into sustainable urban transportation
- **Geographers at Work**
 - Geographers possess the skills to integrate data from the physical and the social sciences, to use statistics and to write
 - Fields such as urban planning and teaching and serving in public administration at all levels
 - Employment in marketing or evaluating the most profitable location for stores, businesses, or factories
 - **Geodemographic Research** – investigation using census data and commercial data (such as sales data and property records) about the populations of small districts to create profiles of those populations for market research
 - Basically, the use of population data as a foundation for basic market research
 - Skills such as cartography, computer mapping and the field of geographic information system technology have enabled many graduates to pursue careers in business and many other fields
 - **Geographic Information System** – an organized collection of computer hardware, software, and geographical data that is designed to capture, store, update, manipulate, and display spatially referenced information

Studying Human Geography

- Two main branches of geography:
 - Physical geography deals with Earth's natural processes and their outcomes
 - Concerned with factors such as climate, weather patterns, landforms, soil formation, and plant/animal ecology
 - Human geography deals with the spatial organization of human activity and with people's relationship with their environments
 - Involves with looking at natural physical environments as the influence, and are influenced by, human activity
 - Study of human geography must cover a wide variety of phenomena
 - Include the ecology of human diseases, resource management, environmental pollution, regional planning and the symbolism of places and landscapes
- **Regional geography** – the study of the ways in which unique combinations of environmental and human factors produce territories with distinctive landscapes and cultural attributes
- **Region** – a larger-sized territory that encompasses many places, all or most of which share similar attributes in comparison with the attributes of places elsewhere
- The purpose of human geography is to reveal the connection between the natural, social, economic, political and cultural phenomena
 - “Why geographical relationships are important”

Basic Tools

- Observation is key to human geography
- Fieldwork, lab experiments and archival searches are all used by human geographers to gather information about geographical relationships
- **Remote Sensing** – the collection of information about parts of Earth's surface by means of aerial photography or satellite imagery designed to record data on visible, infrared, and microwave sensor system
 - Example: Agricultural productivity can be monitored by remotely sensed images of crops, and energy efficiency can be monitored by remotely sensed levels of heat loss from buildings
- Visualization is also a key to human geography; it transcribes the data into pictures/diagrams which can be used to explain the observations found
- Important activities because they allow large amounts of information to be explored, summarized and presented to others.
- Important in conveying the findings and conclusions of geographical research
- The analysis of data is used to discover patterns and establish relationships so that hypotheses can be established and models can be built
- **Model** – often described as a theory or concept, best thought of as “a simplification of reality” designed to help generalize our understanding of a particular process or set of phenomena; can take the form of a diagram, equation, or simple verbal statement, may be used as a summary of past and present behavior or to predict future events
- Maps can be used not only to describe data but also to serve as important sources of data and tools for analysis

Fundamental Concepts of Geography

- Study of geography is defined by its fundamental concepts
 - **Region**
 - The concept of region is used to apply to larger-sized territories that encompass many places
 - Based on:
 - Concept of the “region” is used to distinguish one area from another
 - Regions are distinguished on the basis of specific characteristics, or attributes
 - Regions minimize the variation of the chosen attribute within their boundaries and maximize the variation of that attribute between themselves and their neighboring regions.
 - Regions can be defined on the basis of any attribute or combination of attributes
 - Regions have been traditionally been divided into three types:
 - Formal Region – one that is uniform in terms of special criteria
 - Functional Region – an area that literally functions as a unit, economically or administratively, and is usually organized by transport routes focused on a dominant city
 - Vernacular region – is the local region as identified by the region's own inhabitants
 - Regional Geography is connected to the interplay between physical and human factors
 - **Location**
 - Location is expressed solely in terms of the names given to regions and places
 - Can be used also as an absolute concept where by locations are fixed mathematically through coordinates of longitude and latitude
 - **Latitude** – the angular distance of a point on Earth's surface, measured north or south from the equator, which is 0 degrees
 - **Longitude** – the angular distance of a point on Earth's surface, measured east or west from the prime meridian (the line that passes through both poles and through Greenwich, England, and that has the value of zero degrees)
 - Measuring Latitude has been used throughout history; different methods were used such as the use of multiple clocks to calculate their longitude
 - “The Great Navigator” Captain Cook pioneered a clock accurate enough to keep time over long sea journeys, as proven on one of his voyages across the Pacific.
 - **Global Positioning System (GPS)** - a system of satellites that orbit Earth on precisely predictable paths, broadcasting highly accurate time and locational information
 - GPS consists of 21 satellites (plus 3 spares) that orbit Earth on precisely predictable paths, broadcasting highly accurate time and locational information
 - GPS is owned by the US government, but the information transmitted by the satellites is readily available at no cost to everyone around the world
 - A GPS receiver is needed to transmit information; it can relay latitude, longitude and height to within 100 meters day or night
 - The GPS has greatly increased the accuracy and efficiency of collecting spatial data
 - Location can also be *relative*, fixed in terms of site and situation

- **Site** – the physical attributes of a location – its terrain, soil, vegetation and water sources, for example
- **Situation** – the location of a place relative to other places and human activities
- Location can also have a *cognitive* dimension, in that people have cognitive images of places and regions
 - **Cognitive images (mental maps)** – psychological representations of locations that are created from people's individual ideas and impressions of these locations
 - Can be based on people's direct experiences, written/visual representations of actual locations, on people's imaginations, or a combination of these sources
 - Location is fluid, depending on people's changing information and perception of the principal landmarks in their environment
- **Distance**
 - Used as an absolute physical measure, where in units is seen as kilometres or miles
 - Also as a *relative* measure, expressed in terms of time, effort or cost
 - Example: to travel 10km from point A to point B could take more or less time than it does to travel 10km from point A to point C
 - Relative distance can be measured in many ways
 - Distance (in social space) between social groups is known as *social distance*
 - used to explain how social areas within cities develop
 - groups that are closer together in terms of social distance will interact more frequently than groups that are socially very distant from each other – irrespective of the physical distance between them
 - Distance can often be seen as misleading, since it could seem longer (or shorter), more (or less) pleasant going from point A to B than from A to C
 - **Cognitive Distance** – the distance that people perceive to exist in a given situation
 - Based upon how people see the distance, for example, how a person would determine the distance between his/her house and the local shopping mall
 - Importance of distance as a fundamental factor in determining real-world relationships is a central theme in geography
 - “First Law” of Geography:
 - “Everything is related to everything else, but near things are more related than distant things.”
 - **Friction of Distance** – the deterrent or inhibiting effect of distance on human activity
 - Friction of distance is a reflection of the time and cost of overcoming distance
 - Geographers established that these effects are not uniform, not directly proportional to distance itself
 - True whether distance is measured in absolute terms (kilometers, for example) or in relative terms (time or cost based measures)
 - Deterrent effects of extra distance tend to lessen as greater distances are involved

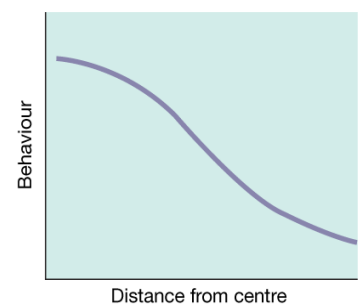


Figure 1.20 The friction of distance
The effects of distance on people's behaviour can be charted on graphs like this one. The farther people have to travel, the less likely they are to do so.

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- For example: The local grocery store may force someone to travel 2 km rather than 1 to get there, the deterrent effect of the same extra distance (1 km) after already travelling 10 km is relatively small
- **Distance-decay function** – the rate at which a particular activity or process diminishes with increasing distance
- They reflect people's behavioural response to opportunities and constraints in time and space
- Reflection of the utility of particular locations to people
 - **Utility** – the usefulness of a specific place or location to a particular person or group
- Example: The business manager of a supermarket chain will decide on the usefulness (utility) of certain locations of new stores based on costs and revenues for each potential site
- Example: Seniors looking for a location to retire would look at the benefits of many retirement areas, based on quality-of-life aspects in retirement places
- Major theme: regardless of how people think of place utility, they tend to ***seek to maximize the net utility of location***
 - Example: The supermarket chain's business manager will look for the location that will net the greatest profit
 - Example: Seniors will choose a location that represents the best trade-off among housing costs, cost of living and the quality of life
- Richard Morrill – the “nearness principle”
 - People will seek to.....
 - Maximize the overall utility of places at minimum effort
 - Maximize connections among places at minimum cost
 - Locate related activities as close together as possible
- As a result, patterns of behaviour, locational decisions, and interrelations between people and places take on fairly predictable, organized patterns
- **Space**
 - Space can be measured in absolute, relative and cognitive terms
 - Described mathematically through points, lines, areas and planes whose relationships can be fixed precisely through mathematical reasoning
 - Conventional way to view space is as a container, defined by rectangular coordinates and measured in absolute units of distance
 - **Topological Space** – the connections between, or connectivity of, particular points in space
 - measured not in terms of conventional measures of distance but rather by the nature and degree of connectivity between locations
 - Relative measurements of space can also be socioeconomic space or of experimental or cultural space
 - *Socioeconomic space* can be described as sites and situations, routes, regions and distribution patterns
 - spatial relationships have to be fixed through measures of time, cost, profit and

- production with relation to physical distance
 - Example: dividing the world into economic sections, such as the West or according to gross national product (GNP) are examples; an economic scale replaces simple distance as a measure
- *Experimental or Cultural space* is the space of groups of people with common ties and it is described through the places, territories and settings whose attributes carry special meaning for these particular groups
 - Basically, space that have cultural meaning, such as the Great Wall of China
- **Cognitive space** – space defined and measured in terms of the nature and degree of people's values, feelings, beliefs, and perceptions about locations, districts and regions
 - Examples: landmarks, paths, environments, and spatial layouts
- Space is much more than an objective “container” in which activity occurs in many ways
- Space is itself created or called by that activity
- **Detailed Example:**

History of settlement of the Prairies

- First phase: distance has no effect since they have first arrived; they are isolated and self-sufficient.
- Second phase: they have begun to settle in, a “centre” is created and the location of the farm is now redefined in terms of its distance from the centre (assume the centre is a small town). This is important if the farm needs to know the distance to the town's grain elevator
- Third phase: railways are established through the town, allowing the farmers to transport their wheat/grain throughout the local area. Friction of distance is created when economic exploitation being used to settle the Prairies is established.
- Conclusion:
DISTANCE + EFFECTS OF FRICTION OF DISTANCE = SPACE

- French scholar Henri Lefebvre (1901-1991) created the three main processes societies use to constantly produce space:
 - Spatial Practice – the spatial locations in which our social and economic activities are found and the ways in which they are linked to create space. In communist or cooperative economies, common ownership of land prevents the creation of a land market and the creation of rich and poor economic zones familiar in Western Capitalism.
 - Representations of Space – The ways in which power is “inscribed” in space. Examples are municipal zoning regulations, which control the space that each person is allowed to have throughout the city)
 - Representational space/spaces of representation – the functions of spatial allusions

in the common symbols used in any culture's literature or art. This connects with how single, simple word can fully describe spaces based on cultural and social perspectives.

- Geographical problems are not, ultimately, rooted in physical space as much as they are in more abstract social spaces
- **Place**
 - **Place** – a concept with two meanings
 - an objective location that has both uniqueness and interdependence with other places
 - a subjective social and cultural construct – a place that has personal meaning with individuals or groups
 - Yi-Fu Tuan: “Place is space filled with meaning”
 - Our lives in the world inevitably make small certain parts of the world unique and meaningful to us as individuals
 - We are influenced by our wider social and cultural frames of reference
 - **Place making** – any activity, deliberate or unintentional, that enables space to acquire meaning
- **Accessibility**
 - **Accessibility** – the opportunity for contact or interaction from a given point or location in relation to other locations
 - Implies proximity, locations, distance; important influence on people's behaviour
 - Connectivity is also an important aspect of accessibility because contact and interaction are dependent on channels of communication and transportation
 - It is thus a function not based on distance but also of the makeup of networks of communication and transportation
 - Accessibility is often a function of economic, cultural, and social factors
 - Relative concepts and measures of distance are often as important as absolute distance
- **Spatial Interaction**
 - Interdependence between places and regions can be sustained only through movement and flows
 - The term *spatial interaction* is used to describe all kinds of movement and flows involving human activity
 - Freight shipments, commuting, shopping trips, telecommunications, electronic cash transactions, migration and vacation travel
 - Fundamental principles of spatial interaction:
 - Complementarity – There must be a demand in one place and a supply that matches it or complements it in the other
 - Factor in physical environments and resource endowments
 - Common example is the common migration of people during the winter months to places such as Cuba, Mexico, Florida since it is warmer there
 - Example: Saudi Arabia is filled with oil whereas Japan has none. Japan has a demand for oil whereas Saudi Arabia has a large supply of it.

- Another factor is the international division of labour
 - More developed countries have sought to establish overseas suppliers for food, raw materials, exotic produce
 - This allows the more developed countries to specialize in more profitable manufacturing and knowledge-based industries
- A third factor is the principles of specialization and the economies of scale
 - **Economies of Scale** – cost advantages to manufacturers that accrue from high-volume production, since the average cost of production falls with increasing output
- Transferability – Depends on the frictional or deterrent effects of distance
 - A function of the costs of moving a particular item, and the ability of the item to bear those costs
 - If the costs of moving a product from one place to another make it too expensive to sell successfully at its destination, then that product does not have transferability between those places
- Intervening Opportunities – Important in determining the volume and pattern of movements and flows
 - Simply, alternative origins or destinations
 - Essentially, the proximity or closeness of a destination versus another based on price and time-distance
 - Size and relative importance of alternative destinations are also important aspects of the concept of intervening opportunity
- Spatial Diffusion – The way that things spread through space and over time
 - Examples: how diseases spread throughout the world over a period of time, how information about agricultural innovations are spread between members of the farming community
- **Expansion diffusion** – a phenomenon spreads due to the proximity of carriers, or agents of change, who are fixed at their location.
 - Example: one person has a rumour to spread in their school. The person spreads it to their friends who then spreads it to all their other friends within the school.
- **Relocation diffusion** – a phenomenon is spread as an initial carrier or group of carriers moves from one location to another
 - Example: one person comes back from a vacation with an infectious disease. The disease spreads throughout the country with the potential to travel and spread further to other parts of the world.
- **Hierarchical diffusion** – a phenomenon that can be spread from one location to

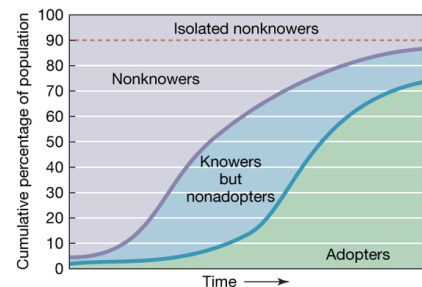


Figure 1.23 Spatial diffusion The spatial diffusion of many phenomena (such as diseases or ideas) tends to follow an S-curve of slow buildup, rapid spread, and levelling off. In the case of the spread of a disease, such as measles, or the adoption of an innovation, for example, it usually takes a while for enough people to become exposed to the disease or for sufficient potential adopters to get to know about the innovation, and even longer for a critical mass of them to adopt it. After that, the disease or innovation spreads quite rapidly, until most of the susceptible population or potential adopters have been exposed to the disease or innovation. (Source: D.J. Walmsley and G.J. Lewis, *Human Geography: Behavioural Approaches*. London: Longman, 1984, fig. 5.3, p. 52. Reprinted by permission of Addison Wesley Longman Ltd.)

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another without necessarily spreading to places in between

- Example: how a fashion trend started by one person can spread throughout a city and into smaller communities
- Usually spread between centres of equal rank in a urban hierarchy

- **Scale**

- **Scale** – The general concept that there are various scales of analysis (local, regional, national, global) that they are linked, and that processes operating at one scale can have significance at other scales
- Based on how it is not based on numbers, but can have a deeper meaning
- All the levels are intertwined, linked together since an event at one level could have a consequence on other levels
 - Example: A farm cannot produce enough wheat for everyone; the seasonal climate for this time of the year is noticeably cooler than last year
 - The region won't be able to produce and refine the flour needed for food
 - The nation will notice this and see this as a drought season; will take into consideration the possible limits on how much of the resource can be available
 - Globally, people will see this as signs of climate change and environmental damage

The Global Perspective

- Each place, each region, is largely the product of forces that are both local and global in origin
- Ultimately, each place and region are linked to many other places and regions through these same forces
- The individual character of places and regions cannot be accounted for by general processes alone. Some local outcomes are the product of unusual circumstances or special local factors.