Hunter College - CUNY
Dept. of Geography & Environmental Science
GEOG 101 Lecture Presentation Summary
Spring 2021

NOTE: In the absence of in-person lecturing and face-to-face explanation of the material presented in the PowerPoint lecture slides, I will summarize the content of each lecture presentation, stressing the concepts and interrelationships that are essential to an introductory geography course. In essence, it is like giving you a transcript of my classroom lectures.

If, after reading this summary and viewing the lecture presentation, the imbedded short videos and hot links to articles, you have any questions, or if you would like to contribute a comment or two, need clarification by other examples or have additional information on the topic, please do not hesitate to email me at agrande@hunter.cuny.edu.

LECTURE 02: History of Geography

- The purpose of this lecture is to give you a sense of from where the field of geography comes. Too many people still have the conception that geographers just memorize place names, know the capital cities of all countries and like to color in blank maps. Geography has a long and complicated story often hidden within the fields of study to which geography gave birth.

- **Slide 2: Origins of Geography.** As far as can be determined, geographic analysis goes back as far as people began making decisions about their physical surroundings. An assessment of habitat was necessary for survival. People needed nearby sources of food, a good water supply and a safe place to live (food/water/shelter). An awareness of their surroundings developed. What was there and was it useful. Recognition of the sequential aspect of many natural phenomena: certain things happened in a certain order and this sequence repeated itself (cycles): daily, monthly, annually. Planning then depended on the recognition of the component parts, the stage of their sequence and when it will begin again. Successful living within a habitat allowed for population growth. However, growth meant the need for additional food, water and shelter. People had to move outside of their immediate habitat but they needed to get back to it and then to find it again if they wanted the new sources of food, water and shelter. This is geographical.

- **Slide 3: Natural Curiosity.** This also led to asking and finding the answers to important questions about earth environment: Why? How? When" "Why here and not there" and "Where else?".

- **Slide 4:** Intellectualism developed early in human history. Knowledge was divided into two categories: Time and Place. Time was the "when" and became history. Place was the "where" and became geography. All other field of study developed from these two by asking the question "why?" As the "why" was probed more deeply, focus narrowed. These are the specialties of today.

- **Slide 5. Classical Geography.** This chart is a very general representation of the development of Geography over time. The **Classical Period** (late-1700s) is from the first evidence of geographic study to the end of the European Renaissance. The chart is divided by PLACE and TIME. The time line at the bottom is divided into 500-year intervals during the BCE period and then into 100-year intervals (0-late 1700s). The places listed indicate the areas where geographic study was strong during their approximate dates. Remember that

there was overlap between the areas' time periods listed and, in some cases, sharing/using information discovered by others. People in these areas continued to pursue geographic knowledge outside of the boxed periods but were no longer dominant in the eyes of scholars. *NOTE: Inclusion is limited to the discovery of documentation (map/diagrams/writings) that can be dated. Oral histories/folklore are not included.*

- **Ancient Areas:** The period of earliest recording of geographic knowledge by the people of Egypt, Mesopotamia, China, Babylonia, Indus Valley and the Americas. The oldest discovered map (a clay tablet from Mesopotamia) dates from over 5800 years ago. This was the period of domestication of animals and plants, development of technology to make life easier, honing of navigational skills especially at sea, and the development of trade which resulted from people roving the earth.
- **Ancient Greece:** The Greeks were noted for their curiosity. There descriptions of the known world were systematically done. The word "geography" is a transliteration of the Greek "description of the earth." To the Greeks the earth was a place given to people by the gods live out their days.
- **Roman Empire:** While Roman scholars were aware of the writing of Greek scholars and used the information that the Greeks collected, the Empire was more interested in cataloging its territory. The Romans are noted for their extensive exploration, mapping and inventories of what each area had to offer Rome.
- **Chinese Empire:** Overlapping the Romans time-wise, the Chinese conducted extensive exploration and mapping of Asia, both inland and insular areas. They also inventoried the areas visited. Different from the Romans and maybe because of the extensive annual flooding on its great rivers, The Chinese were into the study of natural processes and became experts in flood control and water diversion (canal building). They believed that people and nature were inseparable.
- **Arabia.** The scholars of the Arab world were travelers, record-keepers and researchers. Their travels in parts of Africa and Asia expanded knowledge of their areas. Arab merchants were key in visiting, learning about and bring back know-ledge and materiel from the areas visited. However, the greatest achievement of the Arabs was the preservation of the works of Greeks and Romans in their libraries. When the libraries of Europe were destroyed during medieval times, copies of Greek and Roman discourses and inventories remained for later scholars to find and read. Without these libraries there would be few if any records of the works of the Greek scholars and Roman bureaucrats.
- **Scandinavia.** The Norse (Vikings) are noted for their exploration of the sub-Arctic region. There are credited with finding Iceland, Greenland and North America (Newfoundland). The Norse also traveled south into Europe, western Russia, and to North Africa and the Middle East via the Mediterranean Sea.
- **Renaissance Europe.** The Classical Period of Geography's last period was the European Renaissance of the 15th and 16th centuries. This led to the transition to the Age of Discovery and Modern Geography. As European scholarship came out of the "Dark Ages", attitudes changed with regard to roles of religion, humanity and nature. The era of the Great Explorations led to Europeans traveling the globe and "discovering" continents. The delving into natural processes came to the forefront and the earth sciences became a relevant field of study.

- **Slides 6-22: Examples of Geographic Works.** With these examples look closely at the accuracy of the shapes and positioning. All was done by hand without the aid of aerial photography, GPS and other modern map-making instruments.

- **Slide 6: Oldest preserved maps to date.** 5800-year-old clay tablets from Mesopotamia.

- **Slide 7: Present-day map of Europe:** for shape and positioning comparisons.

- **Slide 8: World of Homer:** 3000-year-old map of the world.

- **Slide 9. World of Herodotus:** 2500-year-old map of the world. He believed the Earth was round.

- **Slide 10: World of Eratosthenes:** 2200-year-old map of the world. Called the Father of Geography" because he was the first to use the term and made many observations not credited to other people. He correctly estimated the earth's circumference using geometry by measuring sun angles in a water well at noon.

- **Slide 11: World of Strabo:** 2000-year-old map of the world. He wrote a 17-book geography of the world using Greek sources that recounted the history of Greece and Rome. It became the standard educational tool of the time. He expanded the work of Eratosthenes.

- **Slide 12: World of Ptolemy:**1900-year-old map of the world. Ptolemy was the last of the ancient classical geographers. His 8-volume "modern" work was a standard reference for over 1400 years. HOWEVER, his estimate of the earth was smaller than that of Eratosthenes. Columbus and other explorers used the smaller distances to plan their explorations (cost, time, route, food and water needed). Luckily for Columbus North America was in the way so he would have never made it to Asia by sailing west across the Atlantic Ocean. By the mid-1500s, all the additional explorations proved Ptolemy wrong and Eratosthenes correct.

- **Slides 13-17: Non-Western Contributions.** These slides look at the role of non-Western sources to our knowledge of the earth. Asians and Arabs made major contributions both to the earth sciences and to mapping. Unfortunately, no written record from the African and native American empires exist to document their contributions to world exploration other than the archeological finds that indicate advanced civilizations existed.

- **Slide 14: Song Dynasty Map of China**. This 12th century copy of an 11th century map was carved in stone. It has a grid overlain on it for measuring area. The major rivers of China are visible.
    - It was during the Song Dynasty that the concept of true (North Star) vs. magnetic north (compass) called magnetic declination was devised. China had invented the magnetic compass. It was soon noted that the needle did not point to the North Star. This find increased the accuracy of navigation by compass.

- **Slide 15: World of al-Idrisi.** 850-year-old map of the world. Commissioned by King Roger II of Sicily, al-Idrisi supervised the making of 70 maps. He sent people to the far corners of the world to get information.

- **Slide 16: Travels of Ibn-Battuta.** This map shows the wide-ranging travels of Arab geographer ibn-Battuta from 1325-1354. During his travels he collected a wealth of information, sketched and compiled a commentary on the cultures of people.

- **Slide 17: Kangnido Map of 1402.** This Korean made map was compiled from information collected from Asian traders and Islamic scholars in the 1300s. *Note the size distortions. There has always been the tendency of early cartographers to enlarge what is known and to guess at what is not definite. This is evident in some of the following maps.*

- **Slide 18: World of Waldseemuller – 1507.** 500-year-old map of the world. This is the first world map to use the name "America" for the newly discovered western continents. Note the distortion although Florida and the Guld Of Mexico and Cuba, Bahamas and the Caribbean islands are better placed.

- **Slide 19: Munster Map – 1552.** This ornate but general map is the first map to focus on the Americas. Note the placement of Japan off the coast of Mexico. Shapes are generally good. In North America there is Hudson Bay but no Alaska; the Mississippi River and Rio Grande are shown. The narrowness of Central America is portrayed as is the bulge of Brazil (with Africa in good proximity. Antarctica is shown close to the tip of South America.

- **Slide 20: Bellero Map – 1554.** Another early map of the Americas. More information about coastal areas is included.

- **Slide 21: de Witt World Map Tapestry – 1665.** The purpose of this map was purely for decoration and not navigation or study. If you have taken an Art History course you have been introduced to this art form. It includes separate maps of the Eastern and Western Hemispheres as well as the North and South Polar Regions.

- **Slide 22: Homann Map of Mexico, Hispaniola and New England – 1720.** With more information we get more details and much greater accuracy.
  NOTE: If you are interested in historic maps the free David Rumsey collection has a tremendous inventory. It includes new technology that allows old and modern maps of the same location to be viewed together and overlaid to do comparisons.

- **Slide 23-25: Modern Geography.** This chart is a <u>very general</u> representation of the highlights as the field of Geography developed after the Classical Period (late-1700s) to the present. There is a time line at the bottom is in 5 -year increments. Above the time line are boxes that group trends in the academic field and geographic methodologies within time periods. Slides 24 and 25 zoom in on those periods. You will see that Geography has become less descriptive and more analytical as time progressed and new technical tools became available. Yet there is always the need to get "Back to Basics" as evidenced by the resurgence of K-12 grade geographic education starting in the 1980s.

- **Slide 24: Modern Geography 1750-1945.** This section of the chart covers the period from the end of the Classical period (late 1700s) to the end of World War II (1945).

    - We begin with the Age of Enlightenment in Europe. A rebirth that began with the Great Explorations moved into the scientific revolution: <u>*Basic Principles and General Laws of Nature*</u> were recognized. **Logic** became the linchpin of the physical, biological, and social sciences and of the humanities. Fantasy drawings of creatures, phenomena and places were no longer included on the blank areas of maps.
    - By the mid-1800s geography divided into two branches: Physical Geography and Anthropo Geography (now called Human Geography). Schools of thought within these branches develop the foremost being the espousing of Environmental Determinism (people are controlled by their surroundings) vs. that of Possibilism (people

are influenced by their surroundings but in the end make choices to fit their needs). Eventually Possibilism won out.
    - This is the period of the establishment of the famous geographical societies who sponsored field expeditions and scientific research especially in the little-known interior areas of South America, Africa, Asia and Australia.
    - Toward the end of the 1800s American Geography comes out of the shadow of the European schools of thought. Subunits are created within the two branches and people with specialties begin to become prominent. By the early 1900s, Regional studies, Cultural landscape studies and Geopolitics are the main focus of American geographers.
    - Geographers play a role in the war efforts of WWI and WWII including the peace negotiations.
    - Technology developed (aerial photography, SONAR, disease repression, etc.) to aid the military during the war and the information collected from it now become part of the civilian study of the earth and its people.

- **Slide 25: Modern Geography 1746-present.** This section of the chart covers the period from the end of the end of World War II (1945) to the present (2021).
    - After WWII there are continued advances in military technology: high altitude photography, satellite imagery, various forms of sensing equipment, RADAR, SONAR, LIDAR, geothermal scans, etc. Once declassified they could be put to civilian scientific use.
    - The new technology plus the rapid rise of computerization in the 1960s and 1970s led to increased specialization, much of it mathematically based. Geography becomes much less descriptive and increasingly quantitative: data manipulation, hypothesis testing, modeling and the like.
    - By the early 1980s many “geographers” could not find places on a map as they moved so far from the original premise of the field geography. Led by National Geographic Society a “Back to Basics” movement was started in the United States. With the aim on bring basic geographic principles and methodologies back to the K-12 classroom. Geographic Alliances were set up in all states and Hunter College was the first host institution for the New York Geographic Alliance.
    - In the 1990s geography had come back closer to its roots. There are more humanistic and local area study research topics. Qualitative (cultural) studies have grown while quantitation still remains a part of the disciple.
    - The 2000s brought a new emphasis on spatial analysis and deconstruction (finding hidden meanings).
    - The GPS revolution and the digital location tracking are geographical products welcomed (knowingly or unknowingly) by the general public. Our phones know where we are and they share that information if you allow them to do so.

- **Slide 26: Geography in Academia.** This chart shows the relationship of geography to other academic disciplines.

- **Slide 27: Next Lecture Topic: Studying Geography.**