🌐 ᴭᴭᴭ 🌐 ᴭᴭᴭ 🌐 *Welcome to the AP© Human Geography Jam Session Review!* 🌐 ᴭᴭᴭ 🌐 ᴭᴭᴭ 🌐

- ᴄ Date of this year's AP© Human Geography exam: <u>**May 13, 2014**</u>
    - o registration required—ask your school's AP© coordinator or your teacher
- ᴄ How this session MAY <u>HELP</u> YOU PREPARE for the national exam:
    - o Highlight the breadth and depth of the content knowledge you should have
    - o Help you find the "holes" in your knowledge so that you can study that information between now and the national exam.
    - o Thinking about concepts in a new way—from a peer and/or different instructors.
    - o Try some different techniques for studying—both in groups and on your own.
- ᴄ What THIS SESSION WILL <u>NOT</u> HELP you do:
    - o Earn an automatic "5" on the national exam!

Your teachers and the UNO staff and faculty have put this session together because they BELIEVE IN YOU and because they love Human Geography.
Please use these hours carefully and in earnest.

REVIEW PACKET: <u>TABLE</u> <u>OF</u> <u>CONTENTS</u>

MODEL SESSION: A			
	1 Population & Culture	2 Agriculture & Economics	3 Urban Morphologies
Models	• Demographic Transition Model (p. 21) • Meinig (p 22+)	• VonThünen(p. 27+) • Rostow (p. 29) • Weber(p. 30+)	• Borchert/Adams (p. 32) • Burgess (p. 33) • Hoyt (p. 34) • Harris & Ullman "amoebas" (p. 35) • Vance (p. 36) • Griffin-Ford: Latin American Cities (p. 37) • McGee: Southeast Asian Cities (p. 38) • deBlij: African Cities (p. 38)
Theories/Formulas	Diffusion (p. 24+)	N/A and/or TBD	• Gravity Model & Spatial Interaction Formula (p. 39) • Rank-Size-Rule/Primate (p. 40+) • Christaller's Central Place Theory (p. 42+)

AP© Human Geography Study Guides/Resources

- These are NOT officially endorsed by the College Board©, but many AP© Human Geography students and teachers find them helpful resources for any or all of the following:
    - preview unit topics before class instruction
    - review specific ideas after instruction
    - build upon existing knowledge and supplement with new content knowledge
    - common tool for [independent] student study groups to use
    - review for the national AP© Human Geography exam in May
- NOT an exhaustive list
- Purchase prices range between ≈ $10 and $55, depending on how recently they were published, format (softcover, e-reader, etc.) and whether copies are new or used (prices based on Amazon.com, March 2014)

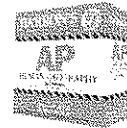📖 Barron's AP Human Geography, 5th Edition [Marsh, et.al.]

📖 Cracking the AP Human Geography Exam, 2014 Edition [Princeton Review]

📖 Kaplan AP Human Geography 2014 (Kaplan AP Series) [Swanson et.al.]

📖 Barron's AP Human Geography Flash Cards, 2nd Edition [published by Kaplan]

📖 5 Steps to a 5 AP Human Geography, 2014-2015 Edition (5 Steps to a 5 on the Advanced Placement Examinations Series) [Gillespie]

📖 AP Human Geography Crash Course Book + Online (Advanced Placement (AP) Crash Course) [Sawyer]

📖 AP Human Geography: A Study Guide, 3rd edition [Wood]

📖 AP Human Geography All Access Book + Online + Mobile (Advanced Placement (AP) All Access) [Sawyer]

📖 5 Steps to a 5 500 AP Human Geography Questions to Know by Test Day (5 Steps to a 5 on the Advanced Placement Examinations Series) [Flowers, et.al.]

📖 Kaplan AP Human Geography in a Box [published by Kaplan]

📖 AP Human Geography Exam Flashcard Study System: AP Test Practice Questions & Review for the Advanced Placement Exam (Cards) Paperback [published by Mometrix Media]

📖 AP Human Geography Exam Secrets Study Guide: AP Test Review for the Advanced Placement Exam Paperback [published by Mometrix Media]

SOME SUGGESTED WEBSITES

The College Board©'s home page for AP© Human Geography (registration required)
https://apstudent.collegeboard.org/apcourse/ap-human-geography

Online Review Flash Cards (≈918 terms)
http://quizlet.com/18245069/ap-human-geography-all-terms-flash-cards/

Extensive lists of APHG concepts and defintions from APHG teachers around the country:
http://miamibeachhigh.schoolwires.com/Page/2203
http://www.quia.com/pages/mrsbellaphg.html
http://geographyeducationdotorg.files.wordpress.com/2012/07/aphg-big-ideas-review-guide.pdf

Seth Dixon and Matt Wahl—APHG teachers with cool links via Scoop It
http://www.scoop.it/u/aphumangeog
http://www.scoop.it/t/human-geography

Blank Maps & Thematic Maps
http://alliance.la.asu.edu/maps/maps.htm

Exam Tips

The following strategies for answering the free-response questions were developed by faculty consultants to help you on exam day:

- Answering essay questions generally requires a good deal of training and practice. Students too often begin to write immediately, creating a string of disconnected, poorly planned thoughts. You need to learn to attack questions methodically and to plan your answers before putting pencil to paper.

- Carefully analyze the question, thinking through what is being asked, and identifying the elements that must be addressed in the response. Each AP Exam asks different types of questions. Be sure to carefully read the question to determine what is being asked and then plan your essay accordingly.

- After you have determined what is involved in answering the question, consider what geographic themes you can incorporate into your response. If there is a map, chart, graph, or diagram with the question, study it carefully before beginning your answer. Review the evidence you learned during the course that relates to the question and then decide how it fits into the analysis or explanation. Does it demonstrate a similarity or a difference? Does it argue for or against a generalization that is being addressed? Does it ask you to identify and explain a certain number of examples or reasons? For example, if it asks for two reasons, then be sure to identify and explain two reasons in your answer.

- Whenever you offer evidence to illustrate contrast or similarity, clearly state your intent. Then, with additional information or analysis, elaborate on the ways in which these pieces of evidence are similar or different. If there is evidence that refutes a statement, explain why it argues against the statement. Your answer should reflect an understanding of the subtleties of the questions.

- Be sure to develop your answer to show that you have an understanding of the concept and how it relates to the answer. Use appropriate geographic terms, and reference to models or themes, when appropriate.

- Thinking critically is important to show your understanding by adding information to explain concepts that may often come from more than one unit of the course.

- You are encouraged to carefully answer each part of the question, labeling you response as it is labeled in the question (while using sentences and paragraphs). You should also give examples, use appropriate terminology, and apply relevant information in the development of your answer.

- While essay writing in general is a valuable exercise, you may wish to work specifically on free-response questions from previous AP Examinations. This will allow you to compare your own responses with those that have already been scored and evaluated. Free-response questions are available through the Advanced Placement Program® in numerous formats. One of the easiest ways to find sample essays is to click on the Exam Practice link at the top of the page to find past years' free response questions and scoring guidelines for AP Human Geography.

Next steps

- Enrolling in the course
- Understanding exam fees and reductions

Interested in taking AP Human Geography? Talk to your teachers and counselors about finding the right course for you.

AP & Your Future

AP Human Geography can lead to ...

71
Career Areas

20
College Majors

Explore your future

Related courses

- AP Comparative Government and Politics
- AP Environmental Science
- AP European History
- AP Macroeconomics
- AP Microeconomics
- AP Psychology
- AP United States Government and Politics
- AP United States History
- AP World History

Want to know the AP credit policy of a particular college or university?

Search AP credit policies

Did you just take the PSAT/NMSQT?

If you did, it can help you find the courses that are the best fit for you.

Visit My College QuickStart

Course not offered at your school?

page (3)   UNO APHG

3/31/2014

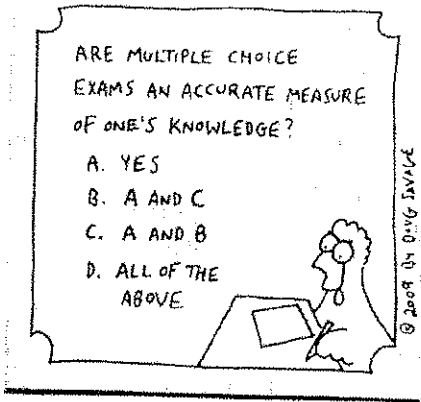KNOW YOUR VOCABULARY!   **Study Your Models!**   Be Prepared!!!!!!!!!!!!

Multiple Choice: Hints for Success

Savage Chickens   by Doug Savage

ARE MULTIPLE CHOICE
EXAMS AN ACCURATE MEASURE
OF ONE'S KNOWLEDGE?

A. YES
B. A AND C
C. A AND B
D. ALL OF THE
   ABOVE

@ 2009 by Doug Savage

◆ 75 Multiple Choice Questions in 60 minutes

- Take several practice exams. Make study guides using the questions/sections you didn't score well on.

- Each question in the multiple choice section has five possible answers.

- Read the question and answer choices thoroughly. Underline or circle key words in the question.

- 1 point is earned for each correct answer.

- Each question is analyzed and scaled based on how other students perform on the question.

- DO NOT leave questions blank. If you do not know the answer use your best guessing skills.

- Reduce the distracters first, if possible.

- If you get 50 of 75 correct and leave no questions blank, on most years' exams, this will score a 4 or 5 on this portion of the exam.

- There are different types of questions in the m.c. part of the test—definition, definition-example, theory and models, comparisons, map questions, graph and table questions.

- If the wording is confusing, try to reword/rephrase it. Break down the question and think about the parts. Eliminate what you can, then choose/guess and move on.

Remember to look for words such as:
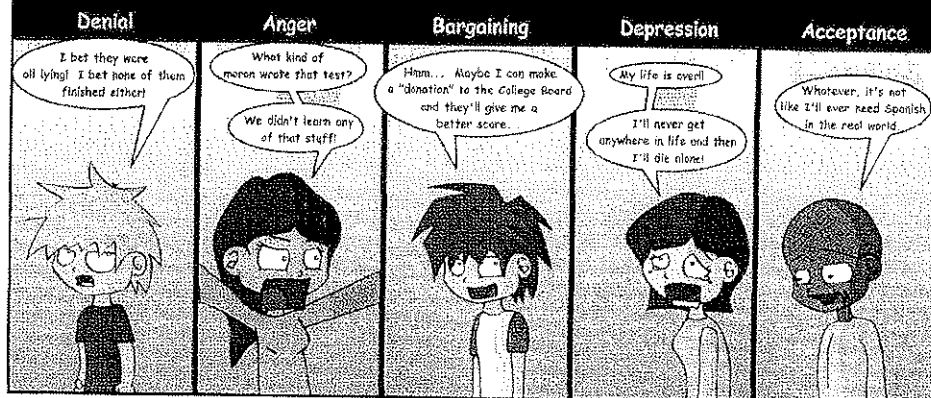
NOT

EXCEPT

ALWAYS

NONE

- Remember:

- 4 of 5 of the possible answers are wrong.

- Cross off on the test booklet (not on the bubble sheet) the answer choices you can eliminate to narrow your choices.

The Five Stages of Grief Applied to AP Testing

Denial	Anger	Bargaining	Depression	Acceptance

What Kind of "Q" are You?
A Guide to Answering FRQs/CRQs

- Some schools call them FRQs (Free-response Questions) and some schools call them CRQs (Constructed-response Questions) but they are exactly the same type of question.

- It's simple: Just answer the question!

- No opinions! No thesis statements! No closing statements! No bullet points!

- You are scored based on a rubric. You start at 0 and earn points. You are only scored on what you answer correctly.

- Do not scratch out or erase anything you have written.

- Readers of CRQs cannot deduct points, they only award points.

- At least one question will have a map, table, diagram or model.

- Another essay question will likely require you to make a critical argument regarding a theory, principle, or issue in human geography.

- A process question is possible: you would have to describe the details of a geographic theory, principle or issue.

- **ANSWER THE ONE YOU KNOW BEST....FIRST!**

Helpful Hint: <u>Outline</u> your answer on your question sheet before you begin to write your answer in the answer booklet. Be organized, concise and neat!

Circle the following words in your question booklet, then do what the word demands:

- **Describe** = write details or components.

- **Discuss** = write about both sides of an issue or concept. State the positives and negatives.

- **Analyze** = write about the relationship between factors and their impacts. Cause and effects.

- **Define** = define and write why the concept is significant to geographic thinking or in the real world.

- **Example** = give an example from a real world place or situation.

Bibliography

Lightbulb, D. (Artist). (2011). The Five Stages of Grief. [Image of painting]. Deviant Art. Retrieved April 18, 2012, from http://deluxe-lightbulb.deviantart.com/art/The-Five-Stages-of-Grief-94690436

Savage, D. (Artist). (2009). Multiple Choice. [Image of painting]. Savage Chickens. Retrieved April 18, 2012, from http://www.savagechickens.com/2009/04/multiple-choice.html

Princeton Review. (2010). Cracking the AP Human Geography Exam (2010th ed., pp. 1-20). Princeton, NJ: Random House Information Group

AP® Human Geography "Gotta Knows"

1. 1st Agricultural Revolution
2. 2nd Agricultural Revolution
3. 5 Themes—region, location, place, human-environment interaction, movement
4. 8 Urban Models (Borchert/Adams, Burgess, Hoyt, Harris & Ullman, Vance, Griffin-Ford, de Blij, & McGee)*
5. acculturation & assimilation
6. activity space*
7. agglomeration & deglomeration
8. Balkanization
9. Bid Rent Theory/Bid-Rent Curve
10. boundary disputes: definitional/territorial, locational/positional, operational/functional, allocational/resource
11. Boserup, Esther *
12. break-in/of-bulk cities
13. cartography*
14. Central Business District (CBD)
15. Central Place Theory (Christaller)
16. centripetal & centrifugal forces
17. commercial vs. subsistence agriculture*
18. conurbation & the Megalopolis
19. core-semi-periphery, periphery
20. cultural landscapes (C. Sauer)
21. culture: folk, popular, material, non-material
22. curves: "J", "S", bell *
23. demographic indicators(dependency ratio, CBR vs. GFR, CDR, LE, IMR, CMR, fecundity, TFR, sex ratio, RNI/NRI, doubling times, density + many others!) *
24. Demographic Transition Model
25. Dependency Theory
26. diffusion :expansion (stimulus, hierarchical, contagious) & relocation (migrant) *
27. distance decay
28. doctrines of major world religions & sects/denomination: Judaism, Christianity, Islam, Hinduism
29. economic indicators: GDP, GNP, GNP (a.k.a. GNI), GDP/GNP PPP, GDP/GNP per capita, HDI, etc.)
30. economic sectors: primary, secondary, tertiary, quaternary, quinary)
31. economic structures (free market/capitalism, mixed, command)
32. epidemic vs. pandemic*
33. ecumene*

34. edge city(ies)
35. enclaves & exclaves *
36. Epidemiological Transition Model *
37. ethnicity vs. race*
38. fair trade & free trade *
39. folk culture & popular culture *
40. forward capitals *
41. Genetically Modified [Organisms] (GM) [O]
42. gerrymandering
43. geopolitical theories: Organic (Ratzel), Heartland (Mackinder), Domino, Rimland (Spkyman) *
44. Global Information System (GIS)
45. globalization
46. Global Positioning System (GPS)
47. Glocalization
48. Gravity Model
49. Green Revolution (3rd Agricultural Revolution)
50. hearths (linguistic, religious, agricultural, urban) *
51. Industrial Revolution
52. irredentism
53. isotropic plane
54. language families
55. Levels of Development: DCs (≈ semi-periphery, Zone 1900, + other labels) *
56. Levels of Development: LDCs (≈ periphery, Zone 1800, + other labels) *
57. Levels of Development: MDCs (≈ core, Zone 2000, + other labels) *
58. Malthus, Thomas *
59. maquiladora
60. megacity(ies)
61. Meining (domain & sphere)
62. mental maps *
63. migration (forced, voluntary, chain, internal, external, intervening opportunities & obstacles/barriers, rural-to-urban)*
64. morphology: 5 shapes of states
65. nation vs. state *
66. nationalism vs. patriotism *
67. New Urbanism
68. population density (arithmetic vs. physiological vs. agricultural)*
69. population growth patterns
70. population pyramids (a.k.a. age-sex diagrams)
71. possibilism vs. environmental determinism
72. primate city
73. push and pull factors

74. rank-size-rule
75. religion classifications (mono- vs. polytheism vs. pantheism; universal vs. ethnic/folk) *
76. replacement rate *
77. Ravenstein's migration "laws"
78. Renfrew
79. resources: renewable vs. non-renewable
80. Rostow
81. scale
82. site & situation
83. sovereignty & autonomy *
84. space-time (& vice-versa) compression
85. spatial (thinking)
86. Special Economic Zones
87. survey patterns (long lots, metes and bounds, township-and-range)
88. supranational/transnational (economic & political) *
89. sustainable development
90. time-distance decay
91. Tobler's Law
92. topography
93. transhumance
94. transportation technology: H_2O, animal, rail, truck, air, space, pipeline*
95. Von Thünen Agricultural Location Theory *
96. Wallerstein's World Systems Theory*
97. Weber's Least Cost/Industrial Location Theory *
98. World (Global) Cities
99. world religions (basic tenets: Judaism, Christianity & its ≈ 2700 sects, Islam, Hinduism, Buddhism, atheism, agnostic, animism, Sikhism, others?) *
100. Zelinsky: mobility transition *
101. zero population growth *

MEW-P's 5 realms: economic, environmental, political, socio-cultural, technological *

Geographer's Questions:
What is there? Why is it there? Why do we care? *

* ▲s made after April 2013

KEY PEOPLE AND CONCEPTS IN HUMAN GEOGRAPHY

Borchert, John — Proposed a four-stage model of the evolution of the American urban system.

Burgess, Ernest — Sociologist that developed concentric ring model of urba urban structure Based on the city of Chicago.

Central Place Theory — Theory that explains how and where central places in the urban hierarchy would be distributed by space and function.

Christaller, Walter — Laid the foundation for central place theory in urban hierarchy.

Concentric Zone Model — Model of American urban area that divides the city into five concentric zones arrange around a common center.

Demographic Transition Model — Based on Western Europe's experience, population changes from high birth, high death rates to low birth, low death rates.

Environmental Determinism — Now disproved belief that human behavior is strongly affected by or even controlled and determined by the environment.

Harris, Chauncy — Along with Edward Ullman proposed the multiple nuclei model of urban structure.

Hartshorne, Richard — Pioneered a genetic boundary classification system. antecedent, subsequent, superimposed, relict

Hoyt, Homer — Published the sector model of urban structure, response to concentric zone model.

Koppen, Wladimir — Developed a system of climate classification based on temperature and precipitation.

Least Cost Theory — Location of manufacturing determined by minimization of three critical expenses: transportation, labor, and agglomeration.

Malthus, Thomas — Population grows at geometric rate and means of substanance grows at arithmetic rate.

Mackinder, Sir Halford — Heartland Theory—any political power based in the heart of of Eurasia could gain power enough to dominate the world.

Ratzel, Friedrich — Developed an organic theory of nations and states which held that a nation would function and behave as an organism. (geopolitics)(Nazi philosophy)

Ravenstein, Ernest — Developed several laws of migration still used today. (Gravity Model)

Sauer, Carl — Cultural landscape—the forms superimposed on the physical landscape by the activities of man.

Spykman, Nicholas — Rimland Theory—argues that the Eurasian rim not the heartland, holds the key to global power

Ullman, Edward — Along with Chauncy Harris proposed the multiple nuclei model of urban structure.

von Thunen, Johann — Explained the location of agricultural activities based on concept of economic rent.

Weber, Alfred — Developed a theory for the location of manufacturing established based on least cost theory.

Whittlesey, Derwent — Cultural landscape is shapted the succession of residents, each of whom leaves a lasting imprint. (sequent occupance)

Zelinsky, Wilbur — Developed a migration transition model which complemented the demographic transition.

AP Human Geography Notes

General Geography:

US road map is not a thematic map

Every meridian is the same length and has the same beginning and end

According to environmental determinism, the physical environment causes social development

Highest density: most in numbers

Highest concentration: closest together

Choropleth map uses shading

Five Themes of Geography:

Location:
  Relative location
  Absolute location

Place:
  Human Characteristics
  Physical Characteristics

Human-Environmental Interaction:
  Humans adapt to the environment
  Humans modify the environment
  Humans depend on the environment

Movement
  People
  Goods
  Ideas

Regions
  Formal (uniform)
  Functional (nodal)
  Vernacular (perceptual)

Culture:
Customary beliefs, social forms, and material traits of a group of people in tradition

Hearth:
Where an idea originates

Acculturation:
The spread of cultural traits from one society to another

Globalization of Culture:
Globalization due to interchanging beliefs and customs

Globalization of Economy:
Globalization due to business

Reference Maps:
Regular maps showing cities, boundaries, mountains, or roads

Thematic Maps:
Maps highlighting a particular feature or a single variable such as temperature, city, size, or acreage in potatoes (Gives extra information)

Isoline Maps:
Show lines that connect points of equal value
Isolines are on topographic maps

Choropleth Maps:
Show the level of some variable within predefined regions, such as counties, states, or countries

Dot Maps:
Use a dot to represent the occurrence of some phenomenon in order to depict variation in density in a given area

Cartograms:
Maps that have distorted population

Resolution:
The amount of details or depth of a map

Scale:
Generally, the relationship between the portion of Earth being studied and Earth as a whole, specifically the relationship between the size of an object on a map and the size of the actual feature on Earth's surface
The three main types of scales are ratio (fraction) scales, bar scales, and written scales

Small Scale:
Depicts a large area (such as the state of Arizona) but with less detail

Large Scale:
Depicts a small area (such as downtown Phoenix) with great detail

Cartography:
The science of making maps

Projection:
The system used to transfer locations from Earth's surface to a flat map
The most common type is the Robinson Projection
However, maps depicting the entire world can distort shape, distance, relative size, and direction

Toponym:
The name given to a portion of Earth's surface
Has to be a natural feature

Site:
The physical character of a place

Situation:
The location of a place relative to other places (relative location)

Meridian:
An arc drawn on a map between the North and South poles (longitude)
The two main meridians are the Prime Meridian and the International Date Line

Parallel:
A circle drawn around the globe parallel to the equator and at right angles to the meridians (latitude)

Time Zones:
There are four major time zones in the United States (Eastern, Central, Mountain, and Pacific). The time zones are based on Greenwich, England because at the time England was the most powerful country. There is a new time zone ever 15 degrees longitude. One degree longitude is 69 miles, so there is a new time zone every 1,035 miles. If you go east you go forwards in time. If you go west you go back in time.

Greenwich Mean Time:
The time in that time zone encompassing the prime meridian, or zero degrees longitude.

International Date Line:
An arc that for the most part follows 180 degrees longitude, although it deviates in several places to avoid dividing land areas. When you cross the International Date Line heading east (toward America), the clock moves back 24 hours, or one entire day. When you go west (toward Asia), the calendar moves ahead one day.

Spatial Association:
The distribution of one phenomenon that is related to another phenomenon. (The reason two things are placed where they are – if they're related they will probably be close)

Spatial Distribution:
The arrangement of phenomenon across the Earth's surface

Environmental Determinism:
A nineteenth- and early twentieth- century approach to the study of geography that argued that the general laws sought by human geographers could be found in the physical sciences. Geography was therefore the study of how the physical environment caused human activities. (States the physical terrain of the world dictates how the humans survive).

Possibilism:
The theory that the physical environment may set limits on human actions, but people have the ability to adjust to the physical environment and choose a course of action from many alternatives. (States people can overcome the physical problems/features – humans conquer land instead of land conquering humans).

Distribution:
The arrangement of something across Earth's surface

Density:
The frequency with which something exists within a given unit of area. Density does not tell you where something is, just strictly numbers

Arithmetic Density:
The total number of people divided by the total land area

Physiological Density:
The total number of people divided by all arable land (farmland)

Agricultural Density:
The total number of farmers (and family) divided by all arable land

Concentration:
The spread of something over a given area
Concentration tells you where something is
Can be clustered or dispersed

Pattern:
The geometric or regular arrangement of something in a study area

Diffusion:
The spreading of a feature or trend from one place to another over time

Relocation Diffusion:
The spread of a feature or trend through physical movement of people from one place to another. Does not have to grow in numbers. AIDS is an example of relocation diffusion.

Expansion Diffusion:
The spread of a feature or trend among people from one area to another in a snowballing process. Involves growing numbers.
   Hierarchical Diffusion – The spread of a feature or trend from one key person or node of authority or power to other people or places. Example- grunge music.
   Contagious Diffusion – The rapid, widespread diffusion of a feature or trend throughout a population. Example- influenza (flu).
   Stimulus Diffusion – The spread of an underlying principle or thought process, even though a specific characteristic is rejected. Examples- Apple computers/Martin Luther King Jr. (he is dead but his thought process still lives on).

Cartography:
The science of map making

Toponym:
A name given to a place on earth.

Scale:
The relationship to a feature's size on a map to its actual size on earth.
Fractional Scale – numerical ratio 1:24,000
Written Scale – description in words "1 inch equals 1 mile"
Graphic Scale – bar line showing distance

0   5   10   MILES

Site:
The physical characteristic of a place

Situation :
The relative location of a place

Meridian:
Lines of longitude running in the north-south direction ending at the poles

Parallel:
Lines of latitude parallel to the equator

Time Zone:
Greenwich Mean Time – The time at the prime meridian
International Date Line – 180 degrees from Prime Meridian – 24 hours
Telling time from longitude – every 15 degrees. From Prime Meridian going west loose 1 hour/15 degrees – east gain 1 hour/15 degrees

Regions:
Formal (Uniform) – Everyone shared distinct characteristics
Functional (Nodal) – Area organized around a focal point
Vernacular – A perceptual region – beliefs and cultural identity

Spatial Association:
The distribution of one phenomenon that is scientifically related to the location of another phenomenon

Spatial Distribution:
The arrangement of phenomenon across the earth's surface

Distribution:
The arrangement of a feature in a space
Three types – density, concentration, pattern

Density:
The frequency of which something occurs.
Arithmetic – the total number of objects in an area
Physiological – the number of persons per unit area of suitable agricultural land
Agricultural – number of farmers per area of farmland

Concentration:
The spread of something over a given area
Clustered – close together
Dispersed – far apart

Pattern:
The arrangement of objects in space

Culture:
Customary beliefs, social forms, and material traits of a group of people in tradition

Hearth:
Where an idea originates

Acculturation:
The spread of cultural traits from one society to another

Diffusion:
The spreading of a feature or trend from one place to another.
Relocation – spreading through physical movement.
Expansion – Spreading in a snowballing process
  Contagious– rapid widespread diffusion of a characteristic throughout the population – example - influenza
  Hierarchical– The spread from authority or power to other people – example – political leaders or hip hop music
  Stimulus– the spread of an underlying principal though the characteristic itself might diffuse – example –
  principals from Apple computer though the company diffused.

Globalization of Culture:
Globalization due to interchanging beliefs and customs

Globalization of Economy:
Globalization due to business

Environmental Determinism:
Physical environment dictates the social environment

Possibilism:
Humans have the ability to adjust to the environment

Population:

Demography:
The study of human populations

Over Population:
The definition of over population is having too many people and to little resources

Carrying Capacity:
The largest number of people that the environment of a particular area can support

Doubling Time:
The time it takes for a population to double

Four most over populated regions/Sparsely populated regions in the world (Over populated):
East Asia
South Asia
Southeast Asia
Western Europe

East Asia:
One fifth of the world's people live in east Asia.
The region borders the pacific ocean.
East Asia includes: eastern China, Japan, the Korean Peninsula, and Taiwan.

South Asia:
Another one fifth of the world's population lives in south Asia.
South Asia includes: India, Pakistan, Bangladesh, and Sri Lanka.

Southeast Asia:
The world's third largest population cluster is in southeast Asia.
A half billion people live in southeast Asia.
The islands are: Indonesia (Java, Sumatra, Borneo), Papua New Guinea, and the Philippines.

Western Europe:
World's fourth largest population cluster.
Contains one ninth of the world's population.

Most of Europe's people live in cities.
This region ranges from Monaco to Russia.

Sparsely Populated Regions:

Dry Lands-
When an area is dry for farming not many people want to live there.
These areas cover about 20% of the earth's land surface.
The largest desert region is the Sahara.
Deserts lack sufficient water to grow crops to feed many people.

Wet Lands-
Wet lands are lands that receive high levels of precipitation.
These areas are unfavorable for human life.
A combination of rain and heat depletes nutrients from the soil which prevents growing crops.

Cold lands-
Cold lands are areas that are covered with ice or have permanently frozen ground.
These regions have less precipitation than some deserts.
These polar regions are unsuitable for crops and animals.

High lands-
Few people live at high elevations.
The highest mountains in the world are steep, snowy, and sparsely settled.
Some people prefer to live at higher elevations if the temperature and precipitation are uncomfortable at lower elevations.

Population Increase:

Doubling time- The number of years needed to double a population.

Total fertility rate- The average number of children a woman will have during her childbearing years.

Infant mortality rate- The annual number of deaths of infants under one year old.

Life expectancy measures the number of years a newborn will be expected to live.

The current estimated world human population is 6,379,157,361. This figure is extremely precise, however, since there is no complete database on the world's population, and humans are constantly being born (at the rate of about 3 per second) and dying. However, it is clear that the world's population continues to grow, in other words, more people are being born than people dying.

Causes of Population Increase:

Crude birth rate (CBR)- The total number of live births in a year for every 1,000 people alive in the society.
Ex: a (CBR) of 20 means that for every 1,000 people in a country, 20 babies are born over a one year period.

Crude death rate (CDR)- total number of deaths in a year for every 1,000 people alive in the society. The annual number of deaths per 1,000 population.

Natural increase rate (NIR)- the percentage by which a population grows in a year. To compute you subtract CBR from CDR.

Natural increase:
Natural- means a country's growth rate excludes migration.
About 80 million people are added to the world's population each year.
The historic high was in 1989 with 87 million.
The number of people added each year has dropped slower than the NIR because the population base is much higher now than in the past.

Fertility:
TFR total fertility rate- the average number of children a woman will have throughout her childbearing years (15-49).

Mortality:
Two useful measures of mortality in addition to the crude death rate already discussed are the infant mortality rate and life expectancy.

Infant mortality rate (IMR)-the annual number of deaths of infants under one year of age, compared with total live births.

Life expectancy- the average number of years a newborn infant can expect to live at current mortality levels.

Population Pyramid:
A bar graph representing the distribution of population by age and sex
Population pyramids can be used to demonstrate the demographics of a certain area, and can be used as an indication of the development of a certain area

The Demographic Transition:
The Basics:
There are four stages to the demographic transition:
Stage 1:- Low Growth
Stage 2: High Growth
Stage 3: Moderate Growth
Stage 4: Low Growth
All countries are in one stage or another of the demographic transition.
Once a country has entered a stage, it cannot go back down to a previous stage.

Stage 1:
No countries are still in stage 1.
Most of humanity's several-hundred-thousand-year occupancy of Earth was characterized by stage 1 of the demographic transition.
Crude birth and death rates vary yearly but over time they were comparable.
National increase rate was essentially zero, and world population was constant at about half a million. During this period primary food relied on hunting and gathering.
As food became easier to obtain, population increased, but when food became more difficult to obtain, the population decreased.
About 8000 BC the population became to grow by several thousand per year.
Between 8000 BC and 1750 AD the population from 5 million to about 800 million. This was caused by the agricultural revolution.
This was the first time humans domesticated plants and animals.

Stage 2:
From about 10,000 years after the agricultural revolution, world population grew at a modest pace.
Around 1750 AD the population began to grow ten times as fast.
The natural increase rate rose from 0.05 to 0.5
Some demographers divide stage 2 of the demographic transition into 2 parts.
The first part is the accelerating population growth.
During the second part the population begins to slow, although birth and death rates remain very separated.
The sudden population boom was caused by the industrial revolution which began in England in the late 18th century. This brought about a lot of wealth which was used to make communities healthier.
New machines helped farmers increase agricultural production. The improved agricultural efficiency allowed more people to work in factories. This caused industrialization in communities.
European and North American countries entered stage 2 around 1750 or 1800. Countries elsewhere didn't enter stage 2 till much later. Many African countries didn't enter stage 2 until the late 1950's due to the medical revolution.
The natural increase rate for stage 2 countries was about 1.7 at the time.
The population increased by about 80 million in 2000 compared to 8 million in 1900.

Stage 3:
A country enters stage 3 when the crude birth rate begins to drop sharply. The death rate continues to fall but not as much as in stage 2.
Natural increase is more moderate than stage 2 as well.
European and North American nations entered stage 3 in the early twentieth century. Latin American and Asian countries have entered rather recently, while most African countries still have not entered stage 3.

The decrease in death rates in stage 2 is caused by technological advances, while the decrease in births during stage 3 is a result of changes in social customs.
People in stage 3 countries are more likely to live in cities than in rural areas.

Stage 4:
A country achieves stage 4 when birth and death rates are nearly equal and natural increase is almost zero.
This is known as ZPG or Zero Population Growth. This term is usually applied to stage 4 countries. Here the primary factor is women who enter the labor force.
Social changes again dictate the change between stages 3 and 4.
Life style changes also tend to lead to smaller families in stage 4, and people with more birth control options tend to use them more in stage 4 countries.
Due to discrepancies, ZPG is not always accurate. Scientists use the more accurate term TFR or Total Fertility Rate.
Typically a TPR of 2.1 is equal to the ZPG.

There are 4 stages in the Demographic Transition.
Low growth, high growth, moderate growth, and low growth.
When a country enters stage 4, it has in a sense completed a cycle. It began with low natural increase in stage 1, in stage 2 there is a huge increase in technology and population. During stage 3 it begins to slow down, though advances continue. In stage 4 the growth is minimal. The only difference is that at the end of stage 4 the country has a vast amount of technology and the population is much higher.

Stage 5:
Currently no Stage 5
Experts suggesting that there will be in the near future
Characterized by a negative population growth
This will first occur in Western Europe and make its way through most MDCs.

Malthus Theory:
States that the world will get wiped out by over population, starvation, and disease (mainly the ratio of people to food).
Thomas Malthus stated this in 1798 in his book- An Essay on the Principle of Population.
Today: 1 person, 1 unit of food
25 years from now: 2 people, 2 units of food
50 years from now: 4 persons, 3 units of food
75 years from now: 8 people, 4 units of food
100 years from now: 16 people, 5 units of food

Back in the 17 & 1800s, they didn't have the same farming technology and methods we have today.
There wasn't as much medicine to cure diseases.
Lester Brown a Stanford University biologist, said Malthus made critical points but missed a couple important points, gains in land productivity, and the preference for eating "higher up the food chain".

Example-
In Sub-Saharan Africa, drought, poverty, and disease (mainly AIDS) are reducing life expectancy.
The population is bigger than the amount of arable land-which causes more than half of the children to be under-nourished or mal-nourished.

Neo-Malthusians:
Study Malthus' theory
They point out that the amount of farmland is decreasing while the population is increasing.
Global Warming could interfere with food production.
Both extensification and intensification of agriculture will lead to land degradation.

Malthus's Critics:
Many geographers believe Malthus' theory is very pessimistic because they based on a belief that the world's supply is fixed not expanding.
Malthus did not foresee the advancement in technology that would help mankind survive.

Census- A complete enumeration of a population.

Crude Birth Rate- The total number of live births in a year for every 1,000 people alive in the society.

Crude Death Rate- The total number of deaths in a year fro every 1,000 people alive in the society.

Demographic Transition- The process of change in a society's population from a condition of high crude birth and death rates and low rate of natural increase to a condition of low crude birth and death rates, low rate of natural increase, and a higher total population.

Demography- The scientific study of population characteristics.

Dependency Ratio- The number of people under the age of 15 and over age 64, compared to the number of people active in the labor force.

Doubling Time- The number of years needed to double a population, assuming a constant rate of natural increase.

Epidemiologic Transition- Distinctive causes of death in each stage of the demographic transition.

Epidemiology- Branch of medical science concerned with the incidence, distribution, and control of diseases that affect large numbers of people.

Ecumene- The portion of Earth's surface occupied by permanent human settlement.

Industrial Revolution- A series of improvements in industrial technology that transformed the process of manufacturing goods.

Infant Mortality Rate- The total number of deaths in a year among infants under one year old for every 1,000 live births in a society.

Life Expectancy- The average number of years an individual can be expected to live, given current social, economic, and medical conditions. Life expectancy at birth is the average number of years a newborn infant can expect to live.

Medical Revolution- Medical technology invented in Europe and North America that is diffused to the poorer countries of Latin America, Asia, and Africa. Improved medical practices have eliminated many of the traditional causes of death in poorer countries and enabled more people to live longer and healthier lives.

Natural Increase Rate- The percentage growth of a population in a year, computed as the crude birth rate minus the crude death rate.

Overpopulation- The number of people in an area exceeds the capacity of the environment to support life at a decent standard of living.

Pandemic- Disease that occurs over a wide geographic area and affects a very high proportion of the population.

Population Pyramid- A bar graph representing the distribution of population by age and sex.

Sex Ratio- The number of males per 100 females in the population.

Total Fertility Rate- The average number of children a woman will have throughout her childbearing years.

Zero Population Growth- A decline of the total fertility rate to the point where the natural increase rate equals zero.

Migration:

Migration:
Form of relocation diffusion involving permanent move to a new location

Mobility:
All types of movement from one location to another

Circulation:
Constant, short term, repetitive movements by an individual

Emigration:
Migration away from country

Immigration:
Migration into a country

Net Migration:
The difference between the number of immigrants and the number of emigrants
Net In-Migration & Net Out-Migration

Counterurbanization:
Net migration from urban to rural areas in MDCs

Reasons For Migration:
Usually people migrate for economic reasons
Although not as frequently, cultural and environmental reasons also induce migration
Push factor: when people are forced out of an area
Ex: Hurricane Katrina destroyed many peoples' houses, so they were forced to move somewhere else.
Pull factor: when people desire to move into a new location
Ex: Better job opening in a new area, a good place to retire. Usually promises a better situation than the present one.

Economic Push and Pull Factors:
Pull- People emigrate to places with better job opportunities. They will also emigrate because of better natural resources.
Metal and coal deposits might attract miners. A brand new industry or store could attract technicians, scientists, engineers, or other workers.
Push- When a industry goes bankrupt, workers will lose their jobs and might be forced to move to a different area because of a job opportunity.

Environmental Push and Pull Factors:
Pull- people are attracted to areas with warm climates, mountainsides, and seasides.
Push- certain physical conditions cause people to move to different areas like too much or too little water in an area can force people to move. Also an area that is storm prone can force people to migrate.

Cultural Push and Pull Factors:
The 2 main push factors are slavery and political instability. Millions of people were captured and shipped to many different countries as prisoners or slaves.
People called refugees are forced to migrate form their countries because of fear of persecution because of their race, nationality, religion, or political opinion.
Pull- people migrate for especially the lure of freedom. People are attracted to democratic countries that encourage individual choice in education, career, and a place of residence.

Brain Drain:
Large-scale emigration by talented people

International & Internal Migration:
International Migration- The permanent movement from one country to another.
Internal Migration- Permanent movement within a particular country.

Examples -
International Migration- Moving to Russia from the United States, or from Africa to Australia.
Internal Migration- Moving to Arkansas from Michigan, or from Georgia to California.
Internal Migration- People living in India must migrate to a different part of India to escape the flooding that occurs near them.
International Migration- Some Jewish people were able to escape the Nazis by migrating to the different countries away from them.

Internal Migration:
Permanent movement within a country.
Divided into two types-
Interregional migration- movement from one region of a country to another.
Rust Belt and Sun Belt
Intraregional migration- movement within on region

International Migration:
Divided into two types-

Voluntary migration- implies that migrant has chosen to move for economic improvements.
Forced migration- the migrant has been compelled to move by cultural factors.
Economic push and pull factors usually induce voluntary migration. Whereas cultural factors usually compel forced migration

Net Migration:
The difference between the level of immigration and the level of emigration.
In-Migration: synonym of immigration, moving into a country
Out-migration: leaving a country
Countries with net out-migrations include Asia, Africa, and Latin America.
Countries with net in-migrations include North America, Europe, and Oceania.

Guest Workers:
Workers who migrate to the MDCs of Northern and Western Europe, usually from Southern and Eastern Europe or from North Africa, in search of higher-paying jobs

Temporary Migration for Work:
1. Guest Workers – Citizens of poor communities who obtain jobs in Western Europe and the Middle East.
2. Time – Contract Workers -Recruited for a fixed period of time to work in mines or on plantations.
European Guest Workers
  • In Europe, these workers are protected by Minimum Wage laws and union contracts
  • About 700,000 of these workers enter Europe legally
  • 500,000 workers enter illegally
  • The United Kingdom restricts the ability for foreigners to get work permits.
  • If you are allowed to work in another country there is usually a time limit for how long you can stay for your desired assignment.
Distinguishing Between Economic Migrants and Refugees
  • Very difficult to distinguish between those seeking economic opportunities and refugees fleeing from persecution etc.
  • In Western Europe, Canada, and the US economic migrants are not usually admitted however refugees receive priority in admission.
Intervening Obstacles
  • Immigrants may not always get to there destination because of an environmental or cultural obstacle.
  • Also, transportation is a problem with immigration. It is difficult to meet all the requirements to be able to travel in any way to a new country.
  • Oceans and lakes are an obstacle in migration because people are unable to cross the bodies of water.
  • Motor vehicles and airplanes are the easiest way to go from one place to another, but it is also the hardest requirements to meet when traveling.
Countries Attitudes Towards New Immigrants
  • Making it to the desired country isn't always the end of the complications, once the immigrants reach the country, the citizens may dislike the new people because of cultural differences.
  • The guest workers are not always excepted and can be treated unfairly.

Vietnam:
The long Vietnam War ended in 1975 when Communist-controlled North Vietnam captured South Vietnam's capital city of Saigon. The US evacuated from Saigon several thousand people who had been closely identified with the American position during the war and who were therefore vulnerable to persecution after the Communist victory. A second surge of Vietnamese boat people began in the late 1980s. Their most popular destinations were Malaysia, Hong Kong, and Thailand. 800,000 Vietnamese have reached the US since the end of the Vietnam War; another 1 million in other countries.

Pop & Folk Culture:

Popular Culture:
Culture found in a large, heterogeneous society that shares certain habits despite differences in other personal characteristics

Folk Culture:
Culture traditionally practiced by a small, homogeneous, rural group living in relative isolation from other groups

Origin of Folk Cultures:

Folk customs often have anonymous hearths, originating from anonymous sources, at unknown dates, through unidentified originators

Origin of Pop Cultures:
Popular culture is most often a product of the economically more developed countries, especially in North America, Western Europe, and Japan

Transition from Folk to Pop Culture:
Most of the world turns from folk to pop culture.
Folk culture diffuses slowly to other locations through the process of migration. Popular culture diffuses rapidly across Earth to locations with a variety of physical conditions.

Taboo:
A restriction on behavior imposed by social custom

Diffusion Associated With Pop Culture:
Rapid diffusion depends on a group of people having a sufficiently high level of economic development to acquire the material possessions associated with popular culture

Language:

Language Family:
A collection of languages related to each other through a common ancestor long before recorded history

Language Branch:
A collection of languages related through a common ancestor that existed several thousand years ago. Differences are not as extensive or as old as with language families, and archaeological evidence can confirm that the branches derived from the same family.

Language Group:
A collection of languages within a branch that share a common origin in the relatively recent past and display relatively few differences in grammar and vocabulary

Dialect:
A regional variety of a language distinguished by vocabulary, spelling, and pronunciation

Old English Speakers:
West Germanic invaders from Jutland (Denmark) known as the Anglos, Saxons, and Jutes began populating the British Isles in the 5th and 6th centuries AD
Pushed the native Celtic speaking people into Scotland, Whales, and Ireland

Creolized Language:
A language that results from the mixing of a colonizer's language with the indigenous language of the people being dominated

French Creole in Haiti
Papiamento (Creolized Spanish) in Netherlands Antilles (West Indies)
Portuguese Creole in the Cape Verde Islands off the African Coast

Indo-European Language Family:
The world's most extensively spoken language family by a wide margin
Nearly 3 billion people speak an Indo-European language as their first language
Eight Branches:
Indo-Iranian
Romance
Germanic
Balto-Slavic
Albanian
Armenian
Greek
Celtic

10 most Spoken Languages in the World:

Position	Language	Family	Script Used	Speakers (Millions)	Where Spoken (Major)
1	Mandarin	Sino-Tibetan	Chinese Characters	885	China, Malaysia, Taiwan
2	English	Indo-European	Latin	332	USA, UK, Australia, Canada, New Zealand
3	Spanish	Indo-European	Latin	322	South America, Central America, Spain
4	Arabic	Afro-Asiatic	Arabic	235	ME, Arabia, North Africa
5	Bengali	Indo-European	Bengali	189	Bangladesh, Eastern India
6	Hindi	Indo-European	Devanagari	182	North and Central India
7	Portuguese	Indo-European	Latin	170	Brazil, Portugal, Southern Africa
8	Russian	Indo-European	Cyrillic	170	Russia, Central Asia
9	Japanese	Altaic	Chinese Characters and 2 Japanese Alphabets	125	Japan
10	German	Indo-European	Latin	98	Germany, Austria, Central Europe

Ideograms:
The system of writing used in China and other East Asian countries in which each symbol represents an idea or a concept rather than a specific sound, as is the case with letters in English

Religion:

Religion, Culture, and Physical Environment
People care deeply about their religion and draw from religion their core values and beliefs, an essential element of the definition of culture. Religious values are important in understanding not only how people identify themselves, as was the case with language, but also the meaningful ways that they organize the landscape. Like language, migrants take their religion with them to new locations, but although migrants typically learn the language of the new location, they retain their religion.

Religion Hierarchy:
A hierarchical religion has a well-defined geographic structure and organizes territory into local administrative units (has "rankings" amongst the religion). A good example is Roman Catholicism (Pope, Cardinals, Bishops).

Universalizing Religion:
A religion that attempts to appeal to all people, not just those living in a particular location
3 Biggs -- Christianity, Islam, Buddhism
Christianity:
Origin -- Israel
2 billion adherents
Known as Christians

Mainly in Western Hemisphere and Europe
Foundation based on the Ten Commandments
Major branches- Catholics (50%), Protestants (25%), Eastern Orthodox (10%)
Islam:
Origin -- Saudi Arabia
1.3 billion adherents
Known as Muslims
Foundation based on the Five Pillars
Major branches- Sunnis (83%), Shiites (16%), Kurds (1%)
Buddhism:
Origin -- NE India/Nepal
370 million adherents
Known as Buddhists
Mainly in China and SE Asia
Foundation based on the Four Noble Truths
Major branches- Mahayanists (56%), Theravadists (38%), Tantrayanists (8%)
Different from Christianity and Islam- you may also participate in another existing religion

Ethnic Religion:
A religion with a relatively concentrated spatial distribution whose principles are likely to be based on the physical characteristics of the particular location in which its adherents are concentrated
2 Biggs -- Hinduism and Judaism
Hinduism:
Origin -- India/Pakistan
800 million adherents (3rd largest overall)
97% live in India (80% of India's pop.)
Believe in several gods -- Brahma being the main one
Follow the Caste System
Believe in Karma and Reincarnation
Judaism:
Origin -- Israel
14 million adherents
Mainly clustered in Israel and the US
Also prevent in former USSR (Russia, Ukraine, Belarus, Lithuania)
Have similar roots as Christianity and Islam

Ireland:
The most troublesome religious boundary in Western Europe lies on Ireland. Most of Ireland is Roman Catholic, but Northern Ireland is 58% Protestant and 42% Roman Catholic.

Israel/Palestine:
After the 1973 war, the Palestinians emerged as Israel's principle opponent. Israelis have no intention of giving up control of the Old City of Jerusalem, and Palestinians have no intention of giving up their claim to it.

Religious Architectures:
Christians -- Churches
Muslims -- Mosques
Hindus -- Temples
Buddhism -- Pagodas
Jews -- Synagogues

Religion Versus Communism:
Organized religion was challenged in the 20th century by the rise of communism in Eastern Europe and Asia. The three religions most affected were Eastern Orthodox Christianity, Islam, and Buddhism.

Ethnicity:

US Distribution of Ethnicities:
African American -- (13%) Southeast
Hispanic American -- (13%) Southwest
Asian American -- (4%) West
American Indian (Native American) -- (1%) Southwest and Plains States

Clustering of Ethnicities:
Within a country, clustering of ethnicities can occur on two scales. Ethnic groups may live in particular regions of the country, and they may live in particular neighborhoods within cities.

Sharecropper:
A person who works fields rented from a landowner and pays the rent and repays loans by turning over to the landowner a share of the crops

Ghettos:
When the African American immigrants reached the big cities, they clustered in the one or two neighborhoods where the small numbers who had arrived in the 19th century were already living. These areas became known as ghettos. The ghettos today have been through expansion.

Ethnicity and Race:
Race is biological. An example would be skin color, but its not just skin color. Ethnicity is the cultural aspect/category. An example would be a hearth.

Separate But Equal Doctrine:
The Separate But Equal Doctrine occurred in 1896. It allowed segregation of Blacks, Jews, and Roman Catholics.

"White Flight":
"White Flight" comes from the Brown vs. Brown of Education doctrine in 1954, which eliminated segregation. "White Flight" is when whites left their homes to where they knew would be a dominate white area because they were scared of the blacks.

South Africa Apartheid:
Apartheid is the physical separation of different races into different areas. The white-dominated government of South Africa repealed the apartheid laws in 1991. In 1994, Nelson Mandela became president of South Africa.
South Africa the country-
Black- 76%
White- 13%
Asian- 3%
Mixed- 13%
Each with different legal status

Nationality/Nationalism:
Nationality is identity with a group of people that share legal attachment and personal allegiance to a particular place as a result of being born there.
Nationalism is loyalty and devotion to a particular nationality.

Nation-State:
A state whose territory corresponds to that occupied by a particular ethnicity that has been transformed into a nationality
Have by far one dominate ethnicity/nationality – 1 country, 1 ethnicity

Self Determinism (Separatism):
The concept that ethnicities have the right to govern themselves
Quebec (Province in Canada) – early 1980s strong French
Australia
Israel/Palestine
Native Americans

Multi-Ethnic States/Multi-National States:
Multi-Ethnic state – state that contains more than one ethnicity
Don't necessarily try to appeal to every ethnicity – sometimes happy, sometimes not
Belgium = (Dutch = Flemish = North + French = Walloons = South)

Multi-National state – state that contains two or more ethnic groups with traditions of self-determination that agree to coexist peacefully by recognizing each other as distinct nationalities
Try to appeal to every nationality/ethnicity (by giving them jobs) – get along just fine
United Kingdom = England + Scotland + Whales + N. Ireland

Block Busting:
Real estate agents telling people that blacks or Indians were going to move next door to them so they could buy the peoples' house for very cheap and sell it for double.

Balkanization:
States/countries breaking down through ethnic conflict – constant conflict

Balkanized:
A geographic area that can't be stable/happy because there are too many ethnicities and too much ugly history between them.
Servia
Boznia
Balkan Peninsula

Political Geography:

Colonies, Early European States, and Ancient and Medieval States:
A colony is a territory that is legally tied to a sovereign state rather than being completely independent.

The modern movement to divide the world into states originated in Europe.
Political unity in the ancient world reached its height with the establishment of the Roman Empire, which controlled most of Europe, North Africa, and Southwest Asia. The European portion of the Roman Empire was fragmented into a large number of estates owned by competing kings, dukes, barons, and other nobles.

The development of states can be traced to the ancient Middle East, in an area known as the Fertile crescent. The first states to evolve in Mesopotamia were known as city-states – sovereign states that comprise a town and the surrounding countryside.

Modern Colonies:
Today only a handful of colonies remain. Nearly all are islands in the Pacific Ocean or Caribbean Sea

State Shapes:
Compact State- a state in which the distance form the center to any boundary does not vary significantly
Fragmented State- a state that includes several discontinuous pieces of territory
Elongated State- a state with a long, narrow shape
Prorupted State- an otherwise compact state with a large projecting extension
Perforated State- a state that completely surrounds another one

Boundaries:
Can see on a map:
Physical- natural boundaries (oceans, rivers, mountains)
Geometric- main official lines

Can't see on a map:
Culture
Religious
Language

Federal State:
An internal organization of a state that allocates most powers to units of local government (have a say so)
Centripetal forces
Example- US

Unitary State:
An internal organization of a state that places most power in the hands of central government officials (not necessarily bad, but no say so- only government)
Centrifugal forces
Example- UK

United Nations:
A cooperation under the political category
Deals with military, economic, agricultural, etc.

Agriculture=farming+livestock

Before 12,000 BC- hunting and gathering- no agriculture

Agricultural Hearths:

Fertile Crescent- historical region watered by the Nile, Jordan, Euphrates, and Tigris Rivers. It is here that agricultural is thought to be first developed. Wild wheat and barley grew in abundance and tribes of nomad hunters and herders settled down along the banks of the rivers and became the world's first farmers. As population increased irrigation was developed. Around 5,000 B.C. the first cities were constructed in the southern part of the crescent valley, near the Persian Gulf, by people who became known as the Sumerians.

Ethiopia (horn of Africa)- Before embracing full scale farming Ethiopians were mainly hunters and gatherers. They began to cultivate crops which eventually led to farming. When farming became more dependable and common irrigation was exploited.

Nile Valley- the Nile Valley civilization developed along the banks of the Nile River in Egypt. Its long narrow floodplain provided ideal conditions for settlement and development of stable communities. The annual flooding of the river (which was viewed as a gift from the gods) deposited nutrient rich silt over the land. The silt made the soil excellent for growing wheat flax and other crops. It is believed that many nomadic hunters settled the land. Around 5500BC hunting was mostly replaced by domesticating animals such as cattle, sheep, pigs, and goats, as well as growing cereal grains.

China- By 5000 BC there were many agricultural communities spread throughout what is now China. There were many villages along rivers such as the Great Yellow River (Huang He). They hunted deer and other game, fished, and gathered food. They also raised domestic dogs, pigs, and chickens. With the flooding of rivers irrigation was an important thing to master. The Chinese also farmed rice.

Southeast Asia- Prior to agriculture, hunting and gathering sufficed to proved food in Southeast Asia. It was here that the chicken and pig were domesticated and rice was farmed. Agricultural technology was exploited when population increased to the point that systematic intensive farming was necessary for survival. River plains and delta regions helped the process of agriculture and trade.

Mesoamerica- From 8000 – 2000 the hunter gatherers in the region began to cultivate wild plants. This probably began so they would have food to rely on if hunting became bad or in the event of a drought. As time went on the cultivated plant foods became increasingly important to the people of Mesoamerica. The plants they grew were more reliable. Mesoamerica eventually went into a subsistence pattern based on the cultivation of plants. Probably the most important Mesoamerican agriculture is maize.

Subsistence Agriculture:
Self-sufficient, small in scale, low technology,
Food production for local consumption- not for trade or sale
Some are confined to small fields- very likely they do not own the soil they till
Small fields-share cropper, low end money pull for agriculture
Can promote cohesiveness within society, share land, food surpluses, personal wealth is restricted
Cultivators are poor but free

Subsistence farming is growing enough food for one person and their family. Not to make a profit or sell. Lots of subsistence farms grow things like tomatoes, corn, potatoes, cucumbers, and spinach. Some subsistence farms also have livestock.

Plantation Farming:
Regional, bigger scale, but not yet commercial

Plantation farming is on a bigger scale than subsistence, but not yet commercial. These farms are for profit. Many plantations farm rubber, pine, spruce, and eucalyptus trees, oil palm, cotton, tea, and tobacco. Some are orchards, in which they would grow fruit, (that grow on trees).

Shifting Cultivation:
A form of subsistence agriculture in which people shift activity from one field to another; each field is used for crops for a relatively few years and left fallow for a relatively long period
Cultivation where tropical forests are removed by cutting and burning, ash contributes to soil fertility

European Union:
A cooperation under the economic category
Promotes development through economic cooperation (free trade, Euro, subsidizing)

Sovereignty:
Ability of a state to govern its territory free from control of its internal affairs by other states

Development:

Gross Domestic Product (GDP):
The value of the total output of goods and services produced in a country in a given time period (normally one year)

Gross National Product (GNP):
Similar to GDP, except that it includes income that people earn abroad, such as a Canadian working in the United States

Human Development Index (HDI):
Indicator of level of development for each country, constructed by United Nations, combining income, literacy, education, and life expectancy

Job Types (Sectors):
Primary- extracting from Earth (agriculture, mining, fishing, forestry)
Secondary- manufacturing raw materials- taking something from the land and making it a product
Tertiary- Services, Banking, Retailing, Education

Rostow's Stages of Development Model:
Rostow, in the 1950's, made a 5 stage model of the international trade development approach.

1. The traditional society: the country has not yet started process of development
2. The preconditions for takeoff: the country initiates innovative economic activities
3. The takeoff: there is rapid growth in economic activities
4. The drive to maturity: modern technology diffuses
5. The age of mass consumption: the economy shifts to consumer goods

The model assumes that LDCs will achieve development by moving to a higher stage in the model.

The Four Dragons:
Some of the first countries to adopt the international trade alternatives were South Korea, Singapore, Taiwan, and the then-British colony of Hong Kong (known as the four dragons). They promoted development by concentrating on producing manufactured goods, especially clothing and electronics.

Self Sufficiency:
The more popular development alternative for LDCs for most of the 20th century
Incomes in the countryside keep up with those in the city
Reducing poverty is more important than creating wealthy consumers
Fragile businesses can be independent and protected from businesses and governments in MDCs
Set barriers limiting goods being imported

International Trade:
A country can develop economically by concentrating scarce resources on expansion of its distinctive local industries

Transnational Corporation:
A company that conducts research, operates factories, and sells products in many countries, not just where its headquarters or shareholders are located

Centripetal Force:
An attitude that tends to unify people and enhance support for a state

Centrifugal Force:
An attitude that tends to break or make people fall apart- fight

Agriculture:

Clearings are usually abandoned after a few years for newly cleared land (150-200 million people)

Intensive Subsistence Agriculture:
A form of subsistence agriculture in which farmers must expend a relatively large amount of effort to produce the maximum feasible yield from a parcel of land

Pastoral Nomadism:
A form of subsistence agriculture based on herding domesticated animals
They live in dry climates

Ranching:
A form of commercial agriculture in which livestock graze over an extensive area
Semi-arid or arid land
MDC's

Transhumance:
The seasonal migration of livestock between mountains and lowland pastures

Commercial Farming:
Aka agribusiness- a system of economic and political relationships that organize food production from the development of the genetic makeup of the seeds to the retailing and consumption of the agricultural product- not just farming also development, harvesting, canning, and selling of crops- is an example of a company that incorporates primary, secondary, and tertiary job sectors
Mass profit, almost all dairy products are from commercial farming
Ex Mayfield

These farms are made for mass profit. They use genetically modified plants, and sometimes animals. They grow the worlds largest crops like wheat, rice , corn, and pretty much everything you find in Kroger. They also raise animals like cows, pigs, and chickens. Almost all dairy products come from a commercial farm.

The Von Thunen Model:
Agricultural land use
1826
The black dot represents a city
1 (white)- dairy and market gardening
2 (green)- forest for fuel
3 (yellow)- grains and field crops
4 (red)- ranching
Dark green=wilderness where agriculture is not profitable
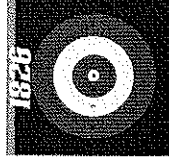
Crop Rotation:
The practice of rotating use of different fields from crop to crop each year, to avoid exhausting the soil

Slash-and-burn Agriculture:
Another name for shifting cultivation, so named because fields are cleared by slashing the vegetation and burning the debris

Desertification:
Degradation of land, especially in semiarid areas, primarily because of human actions like excessive crop planting, animal grazing, and tree cutting

1st Agricultural Revolution:
12,000 yrs ago, Neolithic era
Fertile Crescent, China, North Africa, Southeast Asia, and Latin America
Accompanied by a modest population explosion
Domestication- animals (about 40 species today) occurred after people became more sedentary

2nd Agricultural Revolution:
1871-1914
Resulted from the Industrial Revolution- produced new technology that helped with the agricultural progress a lot
Ex. tractor, cotton gin

3rd Agricultural Revolution:
Aka Green Revolution- benefiting LDC's by introduction and production of fertilizers and pesticides into LDC's
1960 to present
Based on higher yielding strains using genetic engineering

Double Cropping:
Harvesting twice a year from the same field

Industry:

The Industrial Revolution:
Started in the north of the UK around 1750
A series of improvements in industrial technology that transformed the process of manufacturing goods
Transformed how goods are produced for society and the way people obtain food, clothing, and shelter

World's Largest Industrial Production Regions:
Approximately ¾ of the world's industrial production is concentrated in four regions: eastern North America, northwestern Europe, Eastern Europe, and East Asia.

Industries in US:
New England, Middle Atlantic, Mohawk Valley, Pittsburgh-Lake Erie, Western Great Lakes

Bulk-Reducing Industry:
An industry in which the final product weighs less or comprises a lower volume than the inputs
Example- Copper concentration (pennies)

Bulk-Gaining Industry:
An industry in which the final product weighs more or comprises a greater volume than the inputs
Example- Soft-drink bottling

Break-of-Bulk Point:
A location where transfer is possible from one mode of transportation to another

Urban:

Filtering – Urban Decay – Inner-City Decay:
The slow digression of a city, usually occupied by low-income people
The peripheral model helped to promote this because of the middle-class people moving to the outskirts

Redlining:
Banks purposely not giving loans to a certain low-income area of a city
Illegal, but still happens because it's hard to prove

Urban Renewal:
Done by the government
To attract businesses
To clean up the city and help their reputations

Public Housing:
Housing owned by the government; in the United States, it is rented to low-income residents, and the rents are set at 30 percent of the families' incomes

Gentrification:
Done privately
The process of high income people going to low income places and kicking the people out
Usually areas where houses are worn down, looks very trashy
The high income people build houses in edgy areas because they want to cut down on their commute

Annexation:
Official adding of land
Can be on national scale or state scale

Peripheral Model:
Latest version- most up to date
Developed in the 1990s (other three developed in early 1900s – outdated)
Has to contain a beltway/ring way/ring road
A ring road is a road that surrounds the core of the city
The purpose is to take this road without going through the city
The core of the city – major part – is in the ring road
Must contain an edge city
Promotes greenbelts

Sprawl:
The adding of land- not necessarily official
Adding/spreading to the metropolitan area (the city and surrounding areas)
Taking up arable land
Spreads outwards
Promotes greenbelts

Greenbelts:
Designated areas not allowed to be touched by development (parks, nature trails)
Sections of land that are designated natural areas- they cannot be built upon

Smart Growth:
Instead of building outwards they build upwards to save land
Increases population density
Saves natural areas

Central Business District (CBD):
Where all big businesses take place in a city
Node
Nuclei

Edge City:
Little mini cities on the outskirts that are like the big cities
Lots of edge cities in Atlanta
Ex. Roswell and Alpharetta – has most of the services as in big cities
A.K.A. "suitcase cities"
Typically a place without a high residence area
Sandy Springs- used to be part of Atlanta, and then became its own official city
To become an edge city, the city has to be newly developed and business oriented- more jobs than homes

Ghettoization:
Started in Europe
Legal restriction of people to certain areas
Used to be legalized but not anymore
Ghettos refer to areas where populations of mixed income are confined to a certain area even though they might have the means and desire to move
Can be economic or social "ghettos"

Industrialization and Urbanization:
The growing of industry and the growing of population and population density of a city
One promotes the other
The Industrial Revolution promoted Urbanization

Megalopolis:
A Greek word meaning great city
D.C. Geographer Jean Gottmann named the region in the northeastern US- large metropolitan areas so close together that they now form one continuous urban complex, extending from north of Boston to south of Washington- Megalopolis

Primate Cities:
Having more than twice the population of the second largest city
Center of culture for country
Draws citizens because they feel they have to be apart of the city to be successful

Most likely to become capital (ex. Paris, France)
Not every country has a primate city
Can have primate cities on large and small scales
California's primate city is Los Angeles
America lacks a primate city

Rank Size Rule:
2nd largest city is ½ of 1st
3rd largest city is 1/3 of 1st
4th largest city is ¼ of 1st

World Cities:
Have a large population density because of technology high rise
They are cities that have great influence on the whole world
They become a world city because they are in the center of the global economic system
Highest Tier of World Cities- London, Tokyo, and New York (world's business capital)
2nd Tier- Chicago, Washington and Los Angeles

Megacities:
Over 10 million people
Experience a sudden rise in population where the infrastructure can't support the population for a time
For the most part Megacities are in LDC's because the people there are forced to go to urban areas to find work

Central Place Theory:
Walter Christaller created the central place theory to explain the size and spacing of cities that specialize in selling goods and services
The theory consisted of two basic concepts:
1. Threshold- the minimum market
2. Range- the maximum distance- the amount of distance a person is willing to drive to the threshold

Concentric Zone Model:
A general model that cities are based upon that Burgess developed in 1925
The plan of a city (urban planner) may be based on the concentric zone model
Relates the distance to the city to how wealthy a family is
The wealthier you are the bigger land you have and the farther away from the city you are
6 Concentric Zones:
Zone 1- CBD
Zone 2- immediately adjacent to CBD (factories and manufacturing plants- where things are produced without much pollution- not nasty)
Zone 3- contains poorest segments of the urban population, low income housing areas, low income people have factory jobs and do not use car for transportation
Zone 4- working class
Zone 5- middle class, not struggling, higher quality housing
Zone 6- high class, expensive housing
The zones expand- build out not up
The concentric zone model has two main problems: outdated and only applies to America

Sector Model:
Has arms that extend from the CBD instead of circles
CBD still in center of city
Lower income still near manufacturing areas
Transportation and manufacturing most likely along an "arm"

Multiple Nuclei Model:
Attributes:
Differential Accessibility- people don't just go to the same CBD all the time- they go to different places
Land Use Compatibility- related businesses are close together, centripetal forces
Land Use Incompatibly- conflicting businesses are sent apart from each other, centrifugal forces
Location Suitability- suitable for certain activities

Transportation;

40 percent of all trips made into or out of a CBD occur during four hours of the day- two in the morning and two in the afternoon

In larger cities, public transportation is better than motor vehicles- cheaper, less polluting, and more energy-efficient

Americans prefer to commute by car

Infrastructure:
What makes a city work or operate
Example- electricity, sewers, road ways

Suburbanization:
The growth of suburbs was constrained by transportation problems
The invention of the railroad in the 19th century enabled people to live in suburbs and work in the central city
Many so-called streetcar suburbs built in the 19th century still exist and retain unique visual identities

Hinterland:
Same as range in the central place theory
Area around the city that the city serves
The farthest distance a city is willing to serve

MAP PROJECTIONS

- ALL MAPS LIE! Representing our 3-dimentional planet in 2-dimentional form requires cartographers to create distortions of size, direction, scale, and/or shape. However, they remain powerful tools for Human Geographers because, considered carefully and critically, they convey a great deal of information.
- Map projections fall into four general classes: cylindrical, conic, azimuthal, & "other."
    - Cylindrical
        - Examples include the Mercator & Behrmann, Peters, & Robinson Projections

Mercator Projection

Behrmann Cylindrical Equal-Area

Peters

Robinson Projection
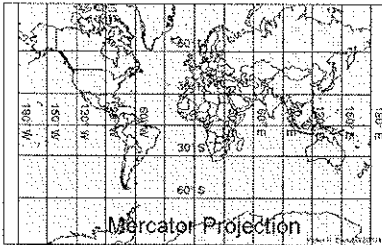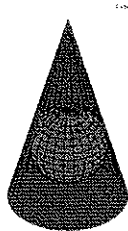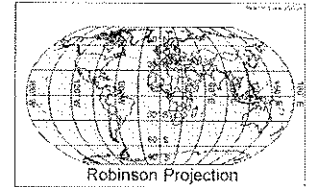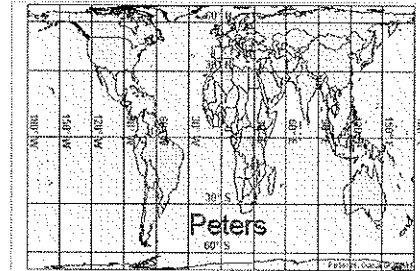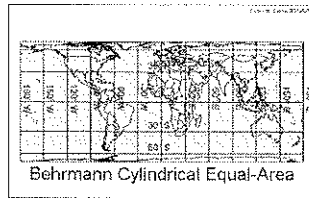
    - Conic

Conical Projection Surface
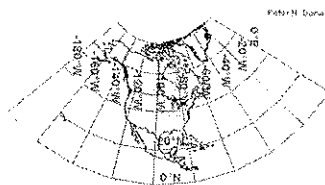
North America
Albers Equal-Area Conic
Origin: 23N, 96W
Standard Parallels: 20N, 60N
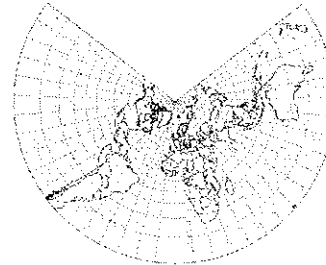
    - Azimuthal
        - When directional relationships from a given central point (called an azimuth) are important, Azimuthal projections are typically used. They provide differ result from projecting a spherical surface onto a plane. Examples include the Azithmul Equidistant and the Lambert Azimuthal Equal Area
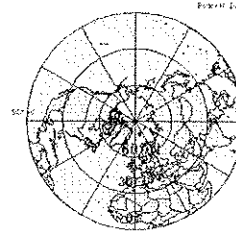
Azimuthal Equidistant
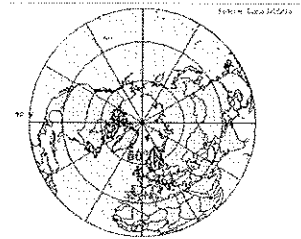
Lambert Azimuthal Equal Area

    - Others:
        - Fuller: accurately depicts the size and shape of landmasses, but rearranges direction (below, left)

Goode's Homolosine Projection
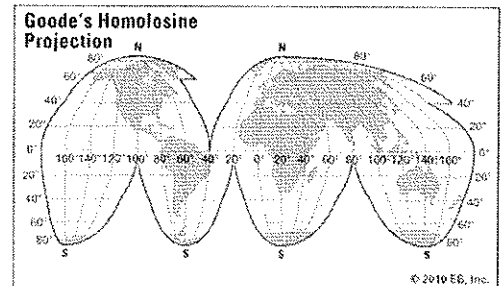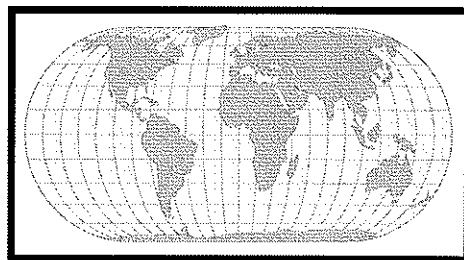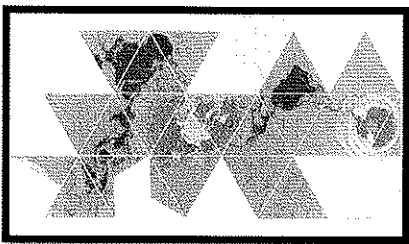
        - Eckert IV: equal area-map, but distorts shapes near the poles (above, center)
        - Goode's homolosine projection: shows size of continents accurately for comparison, but distorts shape and size of oceans (above, right)

Demographic Transition Model

Stage	1 High stationary	2 Early expanding	3 Late expanding	4 Low stationary	5 ? Declining?
			Birth and death rates (per 1000 people per year) graph — Birth rate, Death rate, Natural increase, Natural decrease, Total population		
Examples	A few remote groups	Egypt, Kenya, India	Brazil	USA, Japan, France, UK	Germany
Birth rate	High	High	Falling	Low	Very low
Death rate	High	Falls rapidly	Falls more slowly	Low	Low
Natural increase	Stable or slow increase	Very rapid increase	Increase slows down	Stable or slow increase	Slow decrease
Reasons for changes in birth rate	Many children needed for farming. Many children die at an early age. Religious/social encouragement. No family planning.		Improved medical care and diet. Fewer children needed.	Family planning. Good health. Improving status of women. Later marriages.	
Reasons for changes in death rate	Disease, famine. Poor medical knowledge so many children die.	Improvements in medical care, water supply and sanitation. Fewer children die.		Good health care. Reliable food supply.	

The Demographic Transition Model

	Stage 1 – High fluctuating	Stage 2 – Early expanding	Stage 3 – Late expanding	Stage 4 – Low fluctuating	Stage 5 – Decline?
	UK pre 1760	UK 1760 to 1870	UK 1870 to 1950	Post 1950	Soon?
	Amazon Basin tribes	Ethiopia	India	UK	Russia
Population Pyramid shape					

Resultant population totals
Death rate
Birth rate
Dashed line indicates predictions

Rate per 1000 inhabitants — Year: 1700, 1740, 1780, 1820, 1860, 1900, 1940, 1980, 2020

Core-Domain-Sphere Model

D.W. Meinig

Defining Culture Regions

Core / Domain / Sphere
of a Culture Region

Figure 2.3 (p. 39)
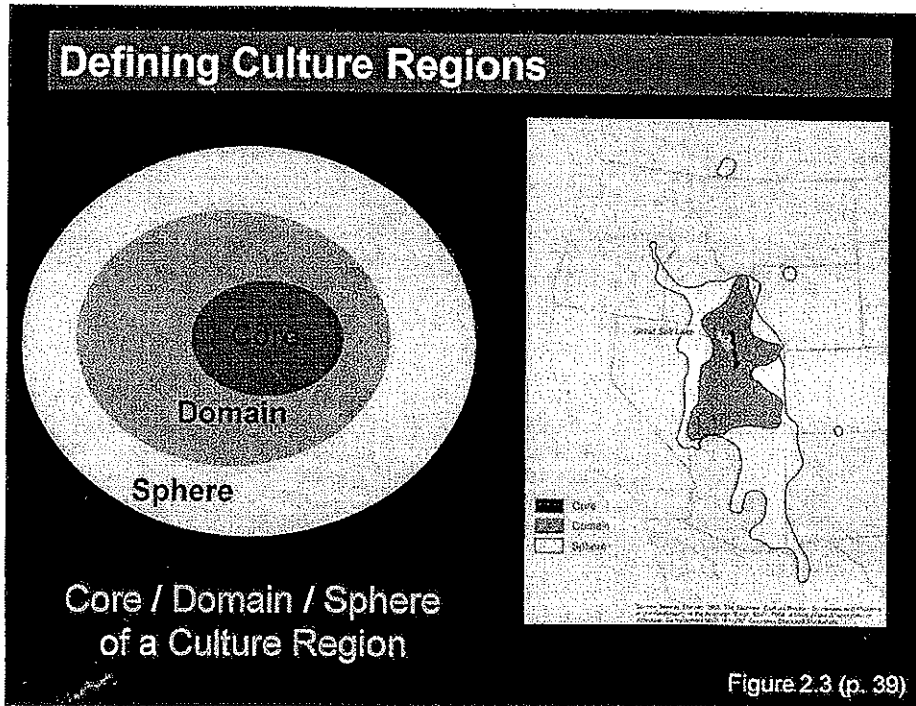
(Mormon Culture Region)

CORE - The zone of greatest concentration or homogeneity of the culture traits that characterize a region. (most "pure" region)

DOMAIN - The area outside of the core of a culture region in which the culture is still dominant but less intense.

SPHERE - The area outside of the core of a culture region in which the culture is still dominant but less intense.

Keep two things in mind when thinking about cores, domains, and spheres.

1.) One culture's core can lie within another culture's sphere. For instance, the core of Tibetan Buddhist culture, the Tibetan plateau, is also part of the Chinese cultural sphere because China conquered Tibet in the eighteenth century and has occupied it since 1950.

2.) The transitions between core, domain, and sphere can be gradual or abrupt. Barriers to movement (physical/political) have historically created abrupt transitions. On the other hand transitions can also be gradual. In Southeast Asia, a very gradual transition occurs over a thousand miles between the curry-based flavors of Indian cuisine to the soy-based flavors of Chinese cuisine with Thai cuisine halfway between featuring major influences of both.

D. Meinig's Core-Domain-Sphere Model

The most famous example of a region based on religious association was proposed by Donald Meinig, that of a distinct Mormon Landscape. These traits of a visible landscape are most evident in the core of settlement (core-domain-sphere model proposed by Meinig) or the place of initial settlement. Beyond this core lays the domain where many of these distinct traits can be found, but not all of them. These traits to the Mormon landscape include: Evenly distributed homesteads and settlements, not nucleated settlement; wide streets within the towns and cities; a central Temple or church that also serves as a meeting hall; parallel irrigation ditches, to roads, with branches into fields (no longer in use due to modern irrigation. Example of a relic trait). These traits can all be found within what Meinig called the domain and help to separate this region from other neighboring regions.
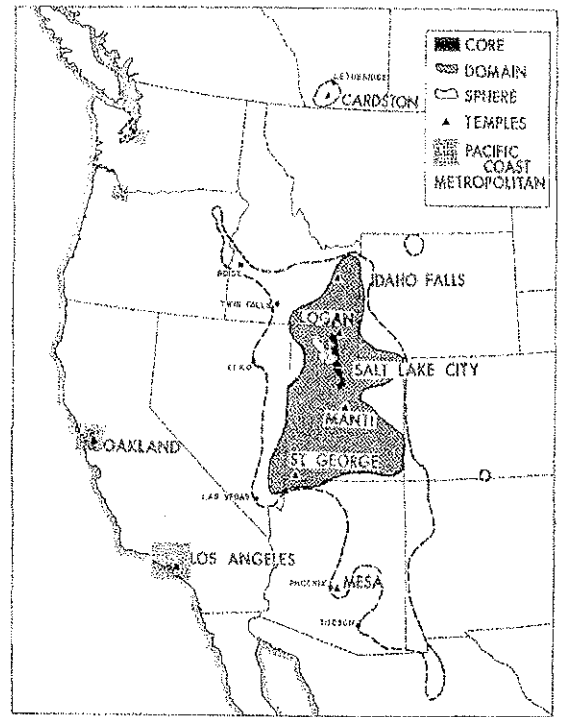

FIG. 7. The Mormon culture region.

Diffusion Models

The concept of a phenomenon spreading through geographic space is considered in many diverse subject areas such as the spread of infectious disease, growth of an urban center, the spread of wildfires, diffusion of innovation, and ripple effects in the natural world. And yet, a thorough understanding of the mechanisms of spread remains elusive. "The dynamics by which a phenomenon originally located at one point becomes transferred to another is a question which is as difficult to answer as it is easy to pose" (Cliff *et al*, 1981 p. 191). Our current information systems and tool kits are not able to represent easily a dynamic process like spatial diffusion. The linking of environmental models, often the workhorses that describe spread, to geographic information systems (GISs) still seems to be some way from being a smooth operation and contributes to the hurdles that users face as they attempt to use a GIS in their research (Nyerges 1993; Wesseling *et al*, 1996). The move away from stand-alone GISs towards open or interoperating systems also suggests that the capability to represent basic spatial processes such as diffusion will become increasingly important.

A consideration of the underlying concepts of spatial diffusion and how humans reason about diffusion in space, is important as a first step in building a conceptual model for spreading phenomenon. Conceptual models form the basis for the development of computational models upon which information systems are built. The conceptual model needs to reflect the spatial patterns of spread and yet, must also reflect how different user groups perceive and understand the process. For instance, an individual can takes steps to avoid the spread of an infectious disease by keeping away from an infected individual, whereas an epidemiologist might not be concerned with individual cases, but rather is interested in the overall distribution of illnesses in a geographic area in order to better plan control measures such as vaccination programs. These naive views can be captured in conceptual schemata and provide an important foundation for future implementations in a GIS. This research abstract describes a study which will develop the conceptual models for how humans reasons about the process of spatial diffusion in space, and extend this work with a formal specification of the model based on an algebraic approach.

Classes of Spatial Diffusion

Cliff *et al.* (1981) classified spatial diffusion into four basic categories which represent the characteristics of the spread. This categorization into classes comes from a familiarity with spatial diffusion as garnered from the results of research involving spreading phenomena. Firstly, *expansion diffusion* is the term given to that class of spread where the spreading phenomena has a source and diffuses outwards into new areas. The spread of a wildfire or diffusion of an innovation are examples of expansion diffusion. Secondly, *relocation diffusion* describes the spread that occurs when the spreading phenomena moves into new areas, but leaves behind its origin or source. A common example of relocation diffusion is that of migration, for instance the movement of persons from rural to urban areas. The third category is that of *contagious diffusion*. The spread of an infectious disease, such as measles, that requires direct contact between individuals for infection to occur, is commonly given as an example of this type of spread. Finally, spatial diffusion may also occur through an ordered sequence of classes or places, and may be described as *hierarchical diffusion*. For instance, Gould *et al.*(1991) describes the spread of AIDS from large urban centers to smaller towns in the U.S. as an example of hierarchical diffusion. Figure 1 illustrates these four categories of spatial diffusion.
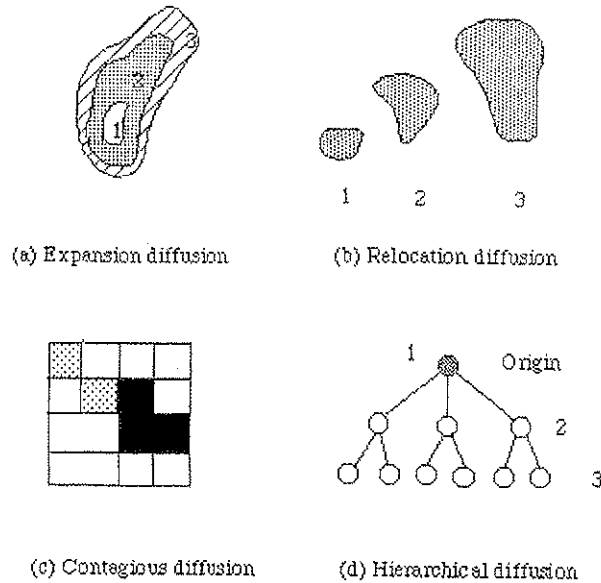
Figure 1. Types of spatial diffusion: (a) expansion diffusion, (b) relocation diffusion, (c) contagious diffusion, and (d) hierarchical diffusion (Cliff *et al.* 1981).

This classification of spatial diffusion into four basic types, is a starting point to describing the form which this process takes. It provides an overall framework, but is devoid of any consideration of how humans reason about diffusion. We can extend this analysis by looking at the objects and operations that work together to create the process of spread from a human perspective, and consider what is the integrating framework between geographic space, the process, the entities that are affected by the process. That is, whether certain characteristics are shared among the classes depending on the user perspective or whether certain types of spread are a subset or superset of the others. We can also consider how geographic space is treated in each case, for instance, how is diffusion affected by constraints to space or barriers? From this work, a conceptual schemata for spatial diffusion will be developed.

1. Expansion Diffusion

- o Strictly defined, expansion diffusion is the process of spreading something from one place to another in an ever-expanding "snowballing" process. Expansion diffusion is used to explain a variety of phenomena in numerous disciplines, from the spread of disease in medicine to the process of human settlement in the study of geography. Expansion diffusion is distinguished from regular diffusion when something spreads outward from a central point. Technology such as television and the Internet, for example, have been instrumental in spreading ideas from place to place, while the advent of air travel has had a similar effect on contagious diseases.

Contagious Diffusion

- o As its name suggests, contagious diffusion occurs when a particular characteristic is rapidly transmitted throughout the population. In this form of expansion diffusion, most adjacent individuals will be affected. An example of contagious

diffusion is the early spread of Christianity, which spread from the Middle East to Europe. Another example can be seen in the spread of the bubonic plague that ravaged London during the 16th century, or the widespread influenza pandemic of 1918.

o

Hierarchical Diffusion

o Hierarchical diffusion occurs when an idea is spread from a person or organization that holds authority over others. This type of diffusion is typically seen in cases where an idea is communicated by a political leader or person of influence and spreads. This typically begins in an urban setting before eventually reaching less populated areas. An example of hierarchical diffusion can be seen in the popularity of rap and hip-hop music, which began in low-income black neighborhoods in densely populated urban areas before spreading out and gaining widespread acceptance among members of other socio-economic and geographical groups. Hierarchical diffusion also explains the widespread imitation of the hairstyle worn by actress Jennifer Aniston on the hit sitcom "Friends."

Stimulus Diffusion

o Stimulus diffusion is when an idea, principle or innovation underlying a phenomenon spreads to a small portion of a population, even though the phenomenon itself may not be diffused. This typically occurs when, due to cultural differences, certain aspects of a phenomenon become diffused as opposed to the phenomenon as a whole. An example of this can be seen in U.S.-based fast-food restaurant McDonald's expanding its operations to India, a country in which the chain's primary product --- beef hamburgers --- are culturally repellent to the country's millions of Hindus. As a result, McDonald's serves no beef in its Indian restaurants, offering vegetarian patties instead. In this way, the phenomenon of McDonald's has spread to India although the fundamental principle underlying the company's success has not.

http://www.ehow.com/info_8614359_types-expansion-diffusion.html
Read more: What Are the Types of Expansion Diffusion? | eHow.com
http://www.ehow.com/info_8614359_types-expansion-diffusion.html#ixzz1sPYKGiT9

Von Thünen's Model of Agriculture (1826)

Johann Von Thünen (1783-1850) observed in northeast Germany that each town or market center was surrounded by concentric rings with a commodity or crop dominating each ring:

1. Market gardening and dairy (perishable and high priced)
2. Forest (wood for fuel and building)
3. Extensive field crops (wheat, corn and other grains)
4. Ranching and livestock
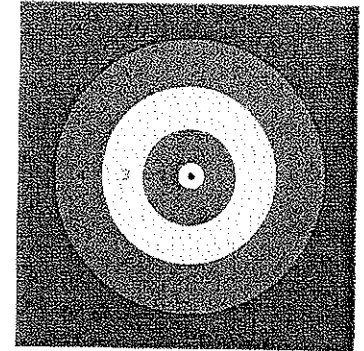
From his observations, he formulated a theory based on the perishability of products and the cost of transportation. Given this is a theory, Von Thünen had to establish some basic assumptions: terrain was flat, conditions were all the same, no barriers to transportation, and it was an isolated state that had no ties to the outside world. Von Thünen stated that as you moved out into each ring, farther and farther away from the central city, the cost of transportation of goods would go up and the cost of land would go down.

Intensive farming was in the second zone because items like dairy products, products that perish easily, had to be grown near their market. Also, any product that could bring a large profit was grown in this second zone. Because the land in this zone was so accessible to the central city, the cost of land in this zone was very high.

The third layer out was called the Extensive farming zone. In order for the farming of these crops to be profitable, they must be grown on large tracts of land, therefore farmers that grow these crops are using sections of land much larger than those found in the Intensive farming zone. Transportation costs are higher in this region, but the quantity of the product helps spread out the overall cost of transportation. Eventually, the cost of transportation cannot be spread out enough over the quantity of the product grown and farming of this type will cease to be profitable.

Ranching is the fourth ring in Von Thünen's model. Ranching requires an enormous amount of land for all the cattle needed to make a ranch profitable. Because of the enormous amount of land required, ranching is the farthest out in Von Thünen's model.

Beyond the ranching ring in the model, there is nothing but wilderness, it is not profitable for any economic activity to go on this far away from the central city or marketplace and still overcome the cost of transporting goods to market.

We can learn two geographic principles from Von Thünen's model; first, the more land required to make an operation profitable, the farther away from the city center it will be located. Secondly, the size of the operation must be balanced with the cost of transportation.

The Von Thunen model of agricultural land use was created by farmer and amateur economist J.H. Von Thunen (1783-1850) in 1826 (but it wasn't translated into English until 1966). Von Thunen's model was created before industrialization and is based on the following limiting assumptions:

- The city is located centrally within an "Isolated State" which is self sufficient and has no external influences.
- The Isolated State is surrounded by an unoccupied wilderness.
- The land of the State is completely flat and has no rivers or mountains to interrupt the terrain.
- The soil quality and climate are consistent throughout the State.
- Farmers in the Isolated State transport their own goods to market via oxcart, across land, directly to the central city. Therefore, there are no roads.

Central City
Intensive Farming/Dairying
Forest
Extensive Field Crops
Ranching/Animal Products

In an Isolated State with the foregoing statements being true, Von Thunen hypothesized that a pattern of rings around the city would develop. There are four rings of agricultural activity surrounding the city. Dairying and intensive farming occur in the ring closest to the city. Since vegetables, fruit, milk and other dairy products must get to market quickly, they would be produced close to the city (remember, we didn't have refrigerated oxcarts!)

Timber and firewood would be produced for fuel and building materials in the second zone. Before industrialization (and coal power), wood was a very important fuel for heating and cooking. Wood is very heavy and difficult to transport so it is located as close to the city as possible.

The third zone consists of extensive fields crops such as grains for bread. Since grains last longer than dairy products and are much lighter than fuel, reducing transport costs, they can be located further from the city.

Ranching is located in the final ring surrounding the central city. Animals can be raised far from the city because they are self-transporting. Animals can walk to the central city for sale or for butchering.

Beyond the fourth ring lies the unoccupied wilderness, which is too great a distance from the central city for any type of agricultural product.

Even though the Von Thunen model was created in a time before factories, highways, and even railroads, it is still an important model in geography. The Von Thunen model is an excellent illustration of the balance between land cost and transportation costs. As one gets closer to a city, the price of land increases. The farmers of the Isolated State balance the cost of transportation, land, and profit and produce the most cost-effective product for market. Of course, in the real world, things don't happen as they would in a model.

Von Thunen
Part II

http://geography.about.com/od/urbaneconomicgeography/a/vonthunen.htm

Rostow's Model - the Stages of Economic Development

http://www.bized.co.uk/virtualto/dapper/theory/th9.htm

In 1960, the American Economic Historian, WW Rostow suggested that countries passed through five stages of economic development.

Stage 5 High Mass Consumption
consumer oriented, durable goods flourish, service sector becomes dominant

Stage 4 Drive to Maturity
diversification, innovation, less reliance on imports, investment

Stage 3 Take Off
industrialisation, growing investment, regional growth, political change

Stage 2 Transitional Stage
specialization, surpluses, infrastructure

Stage 1 Traditional Society
subsistence, barter, agriculture

According to Rostow development requires substantial investment in capital. For the economies of LDCs to grow the right conditions for such investment would have to be created. If aid is given or foreign direct investment occurs at stage 3 the economy needs to have reached stage 2. If the stage 2 has been reached then injections of investment may lead to rapid growth.

Rostow's development model was based on two factors.

1.) The developed countries of Western Europe and Anglo-America? had been joined by others in Southern and Eastern Europe and Japan.

2.) Many LDCs contain an abundant supply of raw materials sought by manufacturers and producers in MDCs. In the past, European colonial powers extracted many of these resources without paying compensation to the colonies, as core countries do to periphery. In a global economy, the sale of these raw materials could generate funds for LDCs to promote development.

- According to the model, each country is in one of these five stages of development. With MDC's in stage 4 or 5, whereas LDCs are in one of the three earlier stages. The model asserts that today's MDC's passed through the other stages in the past. For example, the U.S. was in stage 1 prior to independence, stage 2 during the 1st half of the 1800's, stage 3 during the middle of the 1880's, and stage 4 during the late 1800's, before entering stage 5 during the early 1900's. The model assumes that LDCs will achieve development by moving along from an earlier to a later stage.

- A country that concentrates on international trade benefits from exposure to consumers in other countries. To remain competitive, the takeoff industries must constantly evaluate changes in international consumer preferences, marketing strategies, production engineering, and design technologies.

- Examples of countries adopting this method of development include areas in East/Southeast Asia and Arabian Peninsula, "Four Asian Dragons", & India

Weber's Location Model
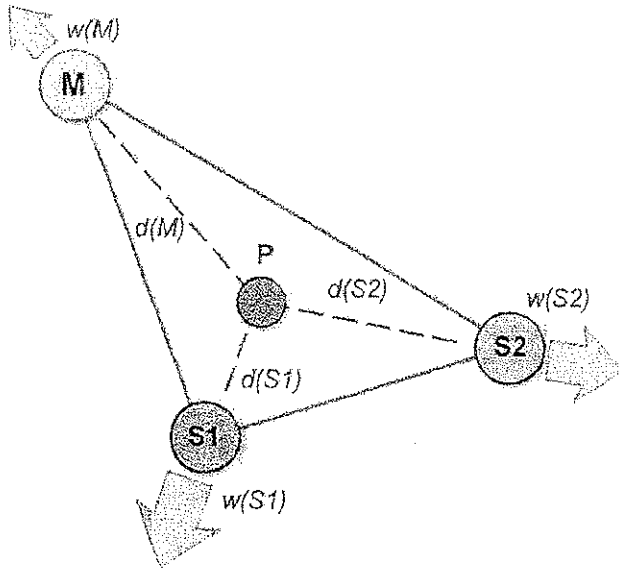
According to Weber, three main factors influence industrial location; transport costs, labor costs and agglomeration economies. Location thus implies an optimal consideration of these factors.

Solving Weber's location model often implies stages; finding the least transport cost location and adjusting this location to consider labor costs and agglomeration economies. Transportation is the most important element of the model since other factors are considered to only have an adjustment effect. To solve this problem, Weber uses the **location triangle** within which the optimal is located. The above figure illustrates the issue of minimizing transport costs. Considering a product of **w(M)** tons to be sold at market **M**, **w(S1)** and **w(S2)** tons of materials coming respectively from **S1** and **S2** are necessary. The problem resides in finding an optimal factory location **P** located at the respective distances of **d(M)**, **d(S1)** and **d(S2)**. Several methodologies can be used to solve this problem such as drawing an analogy to a system of weights and pulleys (Varignon's solution) or using trigonometry. Another way preferred among geographers, particularly with GIS, is to use **cost surfaces** which are overlaid.

Weber's location theory explains well the location of heavy industries, particularly from the industrial revolution until the mid twentieth century (the sector that Weber was looking at). Activities having a high level of use of raw materials tend to locate near supply sources, such as aluminum factories will locate near energy sources (electricity) or port sites. Activities using ubiquitous raw materials, such as water, tend to locate close to markets. To assess this issue, Weber developed a **material index** which is simply the weight of the inputs divided by the weight of the final product (output). If the material index is higher than 1, location tends to be toward material sources. If it is less than 1, location tends to be toward the market. Contemporary developments in manufacturing, the reduction of transport costs and new economic sectors (high technology) has changed locational behavior substantially as it locates without much consideration to Weber's principles. Still, these principles apply well for industries with a very high material index.

Weber's Model of Industrial Location (aka Least Cost Theory) (1909)

Developed to choose a location for manufacturing plants. Assumes that the owner has three categories of costs:

- Transportation
- Labor
- Agglomeration (shared talents, services, and facilities – advantage to clustering)

Industries use Alfred Weber's least cost theory which emphasizes that firms seek a site of minimum transport and labor costs. To Weber, transportation was the most important cost factor. The reason why manufacturers try to locate near their buyers and sellers is to reduce the costs of transportation. At the same time, they would try and minimize the costs of transporting in raw materials to their factories. The further away you are located from your buyer and dealer, the higher the cost of your transportation to travel to and from them will be.

Industries will also look at the cost of labor, they will be willing to locate somewhere where they can hire people who will work for small wages because their jobs are not specialized, and do not take much skill. If cheaper labor made up for transport costs, you would locate further away but only so far from your market as you had to in order to get cheap labor. An example would be of the United States which locates its factories in places like Mexico where outsourcing workers means lower wages as well as still being close to the market and also taking advantage of a trading agreement (NAFTA). By taking advantage of NAFTA, products from Mexico can be transported across the borders for free.

Agglomeration is also a factor that industries look at, because they will have fewer costs if they locate near other factories because each factory will in some way share the costs. Of course, if things get to be expensive because too many factories wanted to be located in one area (increasing rents), de-agglomeration would occur.

-Weight-losing case: (bulk reducing) if the finished product costs less to transport, the firm will be located closer to the raw materials to reduce cost.

-Weight-gaining case (bulk gaining) if the finished product costs more to transport, the firm will be located closer to the market to reduce cost.

Borchert's systems are based on the impact of the evolution of transportation and communication technology on the development of the North American system and also make use of the concept of the system of hierarchy. Borchert discusses the way cities' growth and decline affects their position in the hierarchy. He has been able to define different periods or epochs in North America based on the technology that significantly impacted urbanization. Students should also pay close attention to the concept of innovation waves so they can understand how technology will have great impact on the location and nature of urbanization in the future.

Borchert's system starts with the Sail and Wagon Epoch from 1790-1830. During this period, the movement of people was limited and slow because of the difficulty of overland transportation; primary goods were moved along waterways. The system changed with the development of steam and its application to boats and early railroads. Hence the second epoch is called the Steamboat Iron Horse Epoch and runs from 1830 to1870. The third epoch is called the Steel Rail or long haul, which runs from 1870 to1920, which coincided with the Industrial Revolution. Cities expanded their hinterlands dramatically; goods were moved long distances, making it possible to develop intensively industrialized areas. The fourth period -- running from roughly from 1920 to1970, but really continuing into the present -- is called the Auto/Air Amenity Epoch. The urban system has been transformed dramatically by the use of automobiles, which opened up new locations for development. Many people believe now we are in our fifth epoch, the so-called High Technology Epoch or Telecommunications Epoch, since both are shaping cities in many ways.
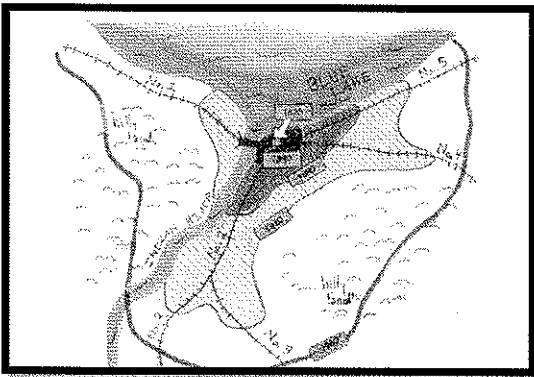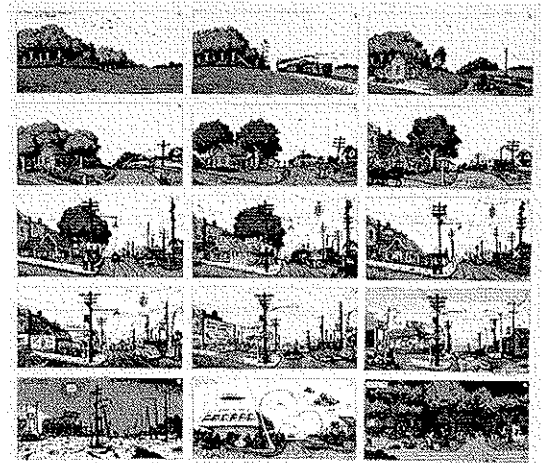
Adams Model for urbanization
explains changes over time in spatial form of cities. Based on changes in transportation technology. Four Stages:
1. Walking- Horsecar Era (pre-1888)
- pedestrian city, horse drawn trollies, compact urban structure (had to be within 30 min walking distance), grid pattern of cities (logical, tight structure)
- little specialization of land use
- no distinct ethnically distinct neighborhoods - must live near where they worked
2. Electric Streetcar ERa (1888-1920)
- streetcar - didn't have to walk everywhere - street travel wider
- cities expanded beyond trolley lines
- "starburst shaped city"
- more differentiation of land use - didnt have to live near where you worked
- city had industrial area and residential area
3. Recreation Automobile Era (1920-1945)
- cars and highways, suburbanization, more individual mobility
- dont have to live near transportation corridors - filled in those starburst shapes
- center city at its peak - "downtown"
- residential areas broken up into distinct neighborhoods - tried to live near people like themselves.. apart from people they weren't like
4. Freeway Era (1945-present)
-big impact from cars, interstates
- beltways bypass cities altogether, businesses moving out now too
- creation of suburban downtown
- "edge cities" - on perimeter of city limits
- multi centered metropolis
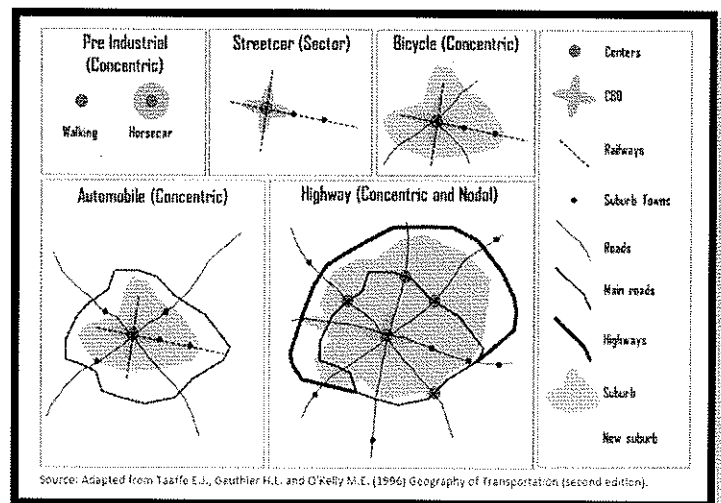
Burgess Concentric Zone Model – 1920s

Key characteristics of this model:

- Developed based on Chicago to represent American cities of that time.
- 5 Concentric or Circular Zones—each with a different function in the city (purpose).
- As the city expands, the zones expand and merge into the next adjacent zone. "Invasion and succession".
- CBD="downtown", high land values, skyscrapers, traffic, mass transit, mostly non-residential activities.
- Zone of Transition=residential deterioration, high density, more renters, possibly ethnic ghettoes, business and light manufacturing might be mixed in.
- Zone of Independent Workers' Homes=blue-collar workers primarily. Small, older single-family dwellings on small lots.
- Zone of Better Residences=middle class. Less densely populated. Newer single-family dwellings and higher-rent apartments.
- Commuters' Zone=Suburbs, white collar workers.

1 Central business district
2 Zone of transition
3 Zone of independent workers' homes
4 Zone of better residences
5 Commuter's zone
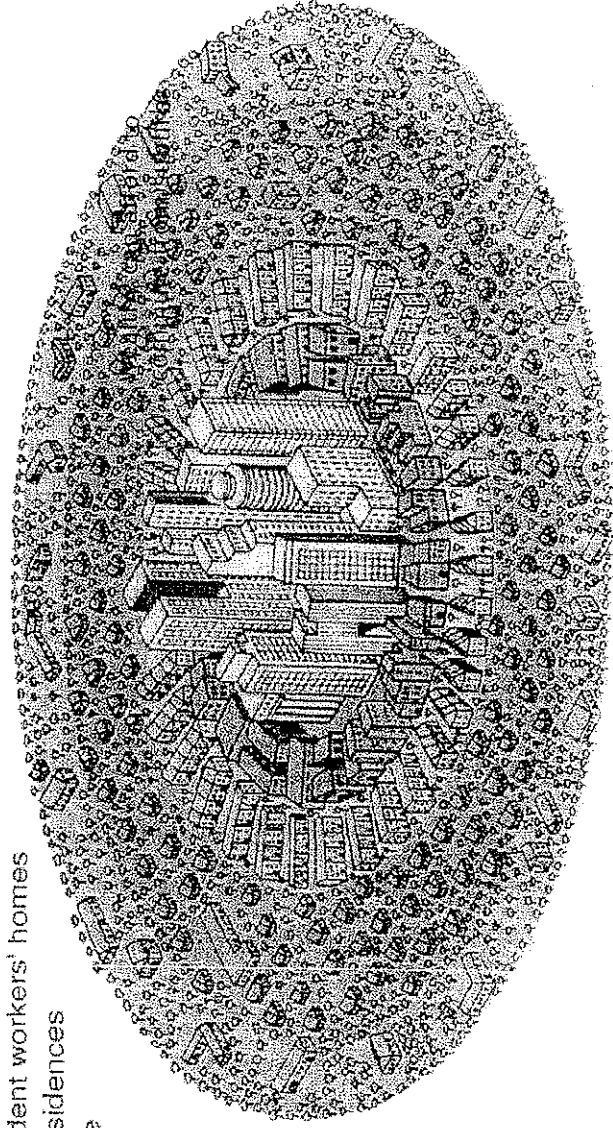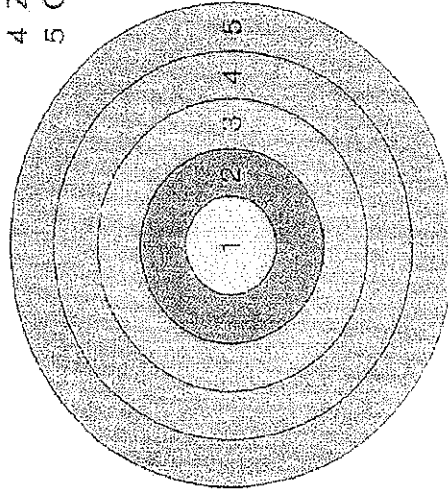
Hoyt Sector Model – 1930s

Key characteristics of this model:

- Also based on Chicago. Adaptation to the Burgess Concentric Zone Model.
- Pizza slice or pie-shaped. The expansion is radial, not circular as in the concentric zone model.
- Transportation and communication infrastructure improving so needed to include this artery as it extends out. Industry and manufacturing would develop along transportation routes.
- Said in some circumstances land value could remain consistent from the CBD to the edge of a city.
- Lower-class will reside adjacent to the major transportation arteries and along the industrial zone.
- A high-class residential zone could extend out along a streetcar or suburban commuter route or possibly due to an attractive environmental feature, ie. a river or lake.
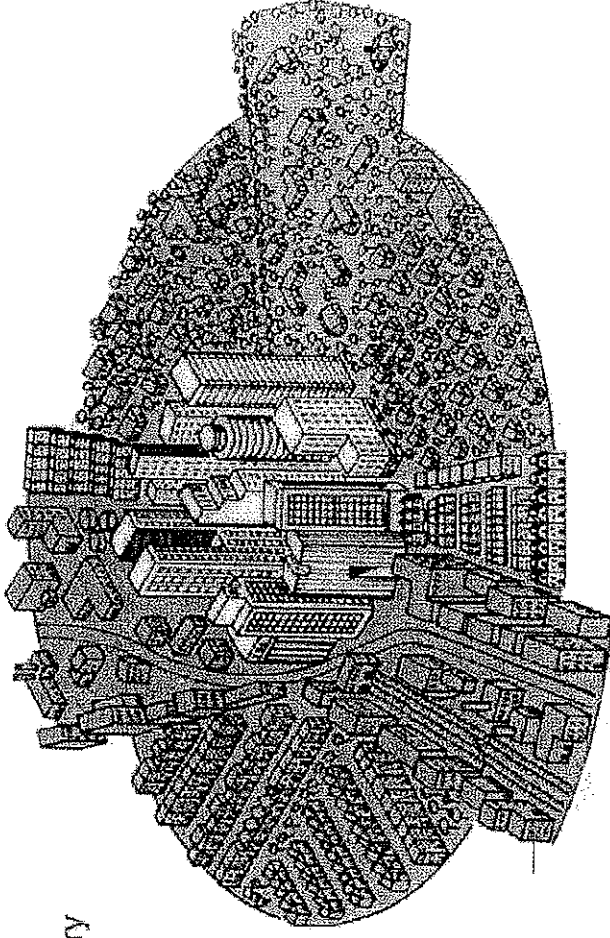
1. Central business district
2. Transportation and industry
3. Low-class residential
4. Middle-class residential
5. High-class residential
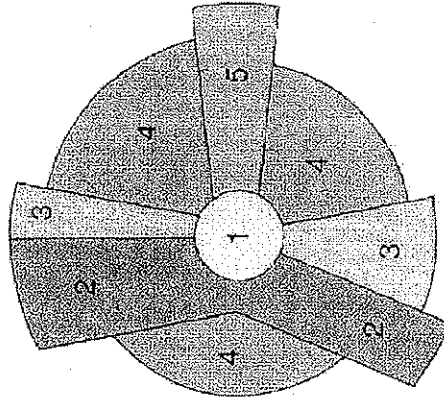
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Harris/Ullman Multiple Nuclei Model–Late 1940s

Key characteristics of this model:

- Said first two models were becoming outdated.
- Key component—CBD is becoming less dominant as a node of economic and cultural activity. Are competing nuclei or nodes.
- City development is spreading from several nodes, not just the CBD. Each node or nuclei might have a different function—port, education, retail, medical. Land-use activities that are not compatible tend to not cluster in the same locations.
- Note that some industrial and low-class residential is near the CBD; high-class residential is in the outlying suburbs.
- New manufacturing is on outside of city—more space for one-story manufacturing plants.
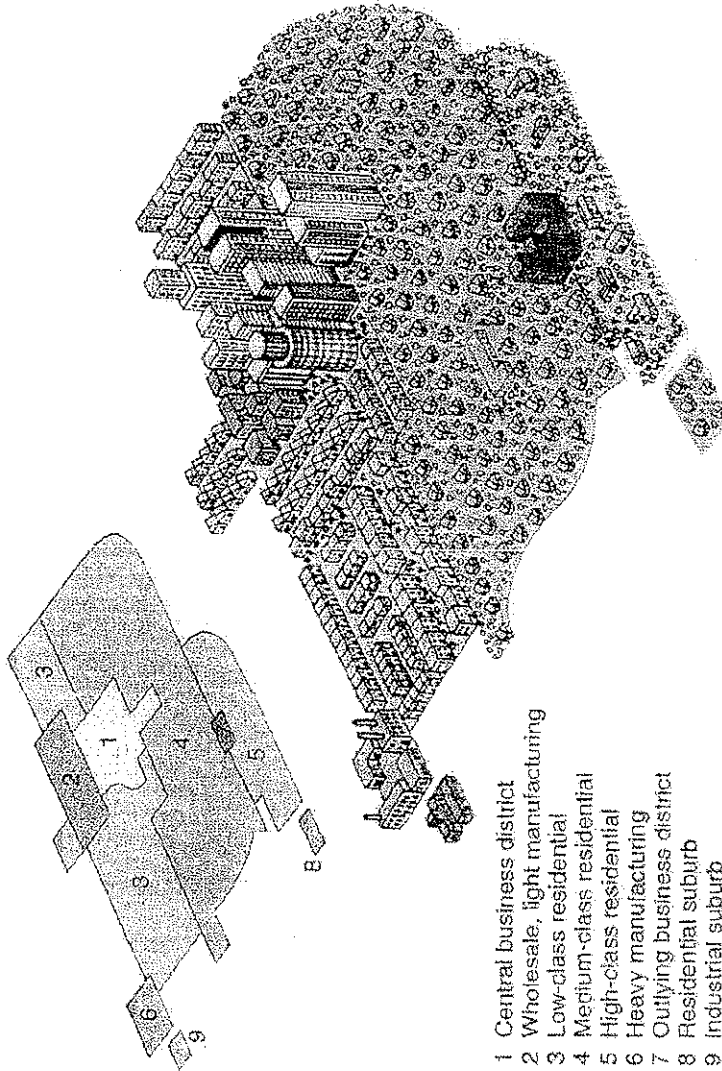
1 Central business district
2 Wholesale, light manufacturing
3 Low-class residential
4 Medium-class residential
5 High-class residential
6 Heavy manufacturing
7 Outlying business district
8 Residential suburb
9 Industrial suburb

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Vance Urban Realms Model – 1970s

Key Characteristics of this model:

- Cities today are conurbations—connected urban areas that can function separately in many ways but are linked together in one large metropolitan area.

- Are many nuclei with business and commercial areas (malls) surrounded by outlying residential suburbs.

- More beltways and other road infrastructure, as well as more personal cars, contributes to this urban structure.

- Less interaction and connectivity to the CBD. More independent suburbs, exurbs and edge cities.

- Suburban downtowns have big shopping centers, industrial or office parks, entertainment facilities, sports stadiums, restaurants, hotels. Often near key interstate highways or intersections.

URBAN REALMS MODEL

URBAN
DOWNTOWN

NEW
DOWNTOWN

CENTRAL CITY

CBD

Legend	
	City
	Urban Realm Boundary
CBD	Central Business District
✈	Airport

Projection 58
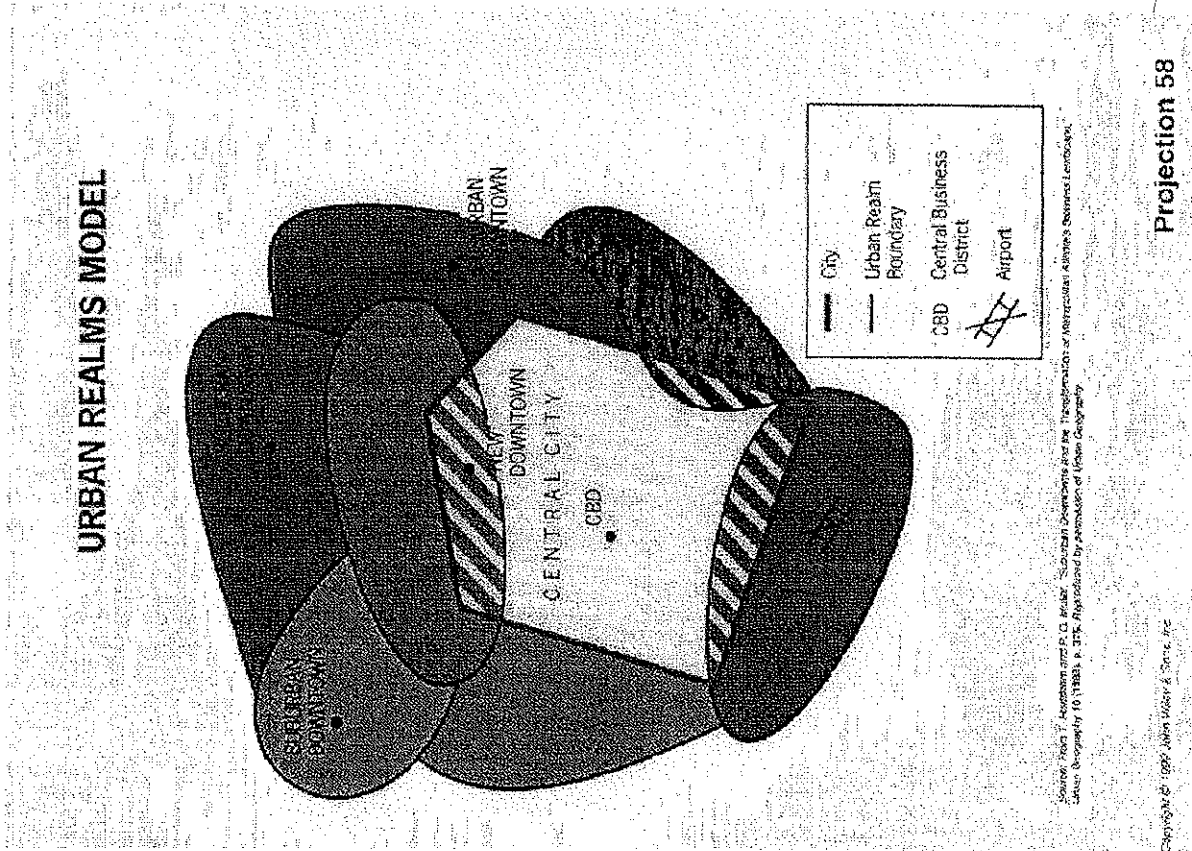
Model of a typical Latin American City

Commercial/Industrial Areas
CBD = Central business district, the original colonial city
SPINE = High-quality expansion of the CBD, catering to the wealthy

Elite Residential Sector

Zone of Maturity
Gradually improved, upgraded, self-built housing

Zone of Accretion
Transitional between zones 3 and 5, modest housing, improvements in progress

Zone of Peripheral
Squatter settlements
Slum housing

Figure 1.3
The Human Mosaic, Eleventh Edition
© 2010 W. H. Freeman and Company

Urban structure differs from one culture to another, and in many ways the cities of Latin America are distinctive, sharing much in common with one another. Geographers Ernst Griffin and Larry Ford developed the model diagrammed here to help describe and explain the processes at work shaping the cities of Latin America. In what ways would this model not be applicable to cities in the US and Canada?

- Cities outside the US are often very different than those found in the US
- Downtowns are often very animated
- Poor people are more likely to live in suburbs
- Cities in lower-income countries have grown rapidly, because of a combination of a high natural increase rate and immigration from rural areas
- Here, the poor are more likely to live in the suburbs, whereas the wealthy leave near the center of cities, as well as in a sector extending from the center
- Many of these poor suburban areas are squatter settlements
- Squatter settlements have few services because neither the city nor the residents can afford them

A GENERALIZED MODEL OF LAND USE AREAS IN THE LARGE SOUTHEAST ASIAN CITY

A. Squatter areas
B. Suburb
AC. Alien commercial zone
WC. Western commercial zone
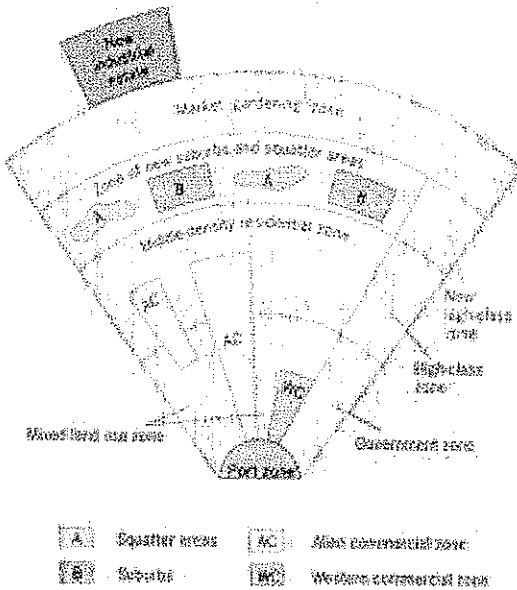
Model of Southeast Asian City

Sometimes referred to as the McGee Model after urban geographer T.G. McGee. Focal point is the old colonial port zone and the large commercial district that surrounds it. No formal CBD but elements of it clustered around the old colonial port zone: government zone, Western commercial zone, alien commercial zone (often dominated by Chinese merchants), mixed land-use including light industry. There is a market-gardening zone on the city's outskirts. Even further out, a recently built industrial park or estate. (DeBlij)

Model of Subsaharan African City

Difficult to formulate a model African city. Subsaharan Africa currently has some of the world's fastest growing cities. The imprint of European colonization can be seen in many of these cities. Some were laid out by Europeans (such as Kinshasa, Nairobi and Dakar. Others display more Western influences, such as Johannesburg, Cape Town, and Durban, with elements of European as well as American models.

Studies indicate that the African central city has three CBDs: a remnant of the colonial CBD, and informal market zone, and a traditional business center. Highest buildings are usually in the colonial CBD. Traditional CBD is usually single-story buildings. Market zone tends to be open air and informal. Around these CBDs, are sectors of ethnic and mixed neighborhoods, marked by strong ethnic identities. Some mining and manufacturing can be found near the neighborhoods. Encircling the cities are rapidly growing shantytowns.

A MODEL SUBSAHARAN AFRICAN CITY

Colonial CBD
Traditional CBD
Market Zone
Major road
Local road

Gravity Model(s)

Illustration of the Gravity Model
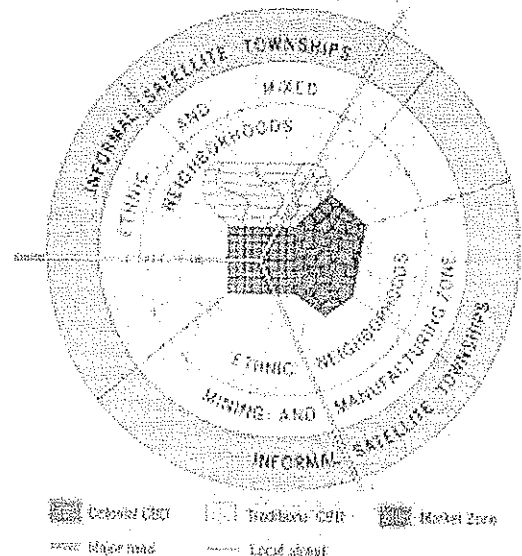
The shorter the distance between two objects, and the greater the mass of either (or both) objects, the greater the gravitational pull between the objects.
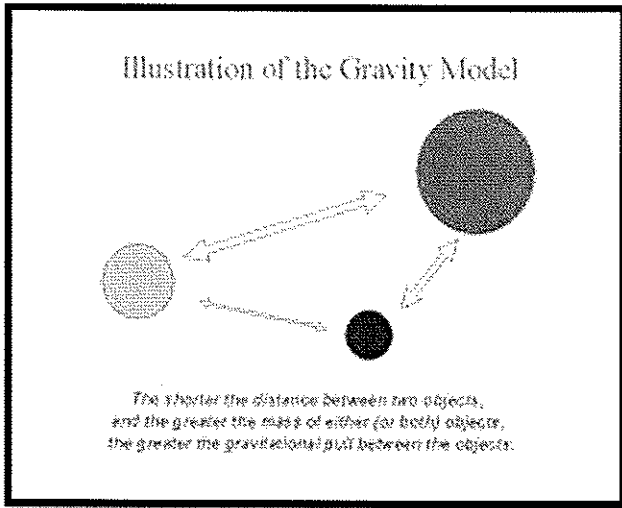
$$\frac{\text{population}_1 \; \times \; \text{population}_2}{\text{distance}^2}$$

The gravity model, as social scientists refer to the modified law of gravitation, takes into account the population size of two places and their distance. Since larger places attract people, ideas, and commodities more than smaller places and places closer together have a greater attraction, the gravity model incorporates these two features.

The relative strength of a bond between two places is determined by multiplying the population of city A by the population of city B and then dividing the product by the distance between the two cities squared.

C. **'Reilly's Law of Retail Gravitation'** (Reilly 1931) considers not only distance but also attractiveness of alternative shopping opportunities. The notion that agglomeration tends to increase the attractiveness of stores is key to Reilly's "law" —stores located in centres with greater populations draw customers from farther distances than those in smaller-order centres. The focus of this model is the intermetropolitan trading area boundaries between neighbouring cities in a region, rather than the trade area boundaries of individual stores. Based on the Newtonian law of planetary attraction, it was the first to explicitly recognise that consumers trade off the cost of travel with the attractiveness of alternate shopping opportunities. Thus, it is the precursor of the gravity type of spatial choice models commonly used today.

Figure 2: Illustration of Reilly-Converse's Breaking-Point formula.

$$D_A = \frac{D_{AB}}{1 + \sqrt{\dfrac{P(B)}{P(A)}}}$$

where: D_A: Distance from city A to breaking point
D_{AB}:   Distance between cities A and B
P (A):   Population of city A
P (B):   Population of city B.

D_A

City A
P (A)

Breaking Point

City B
P (B)
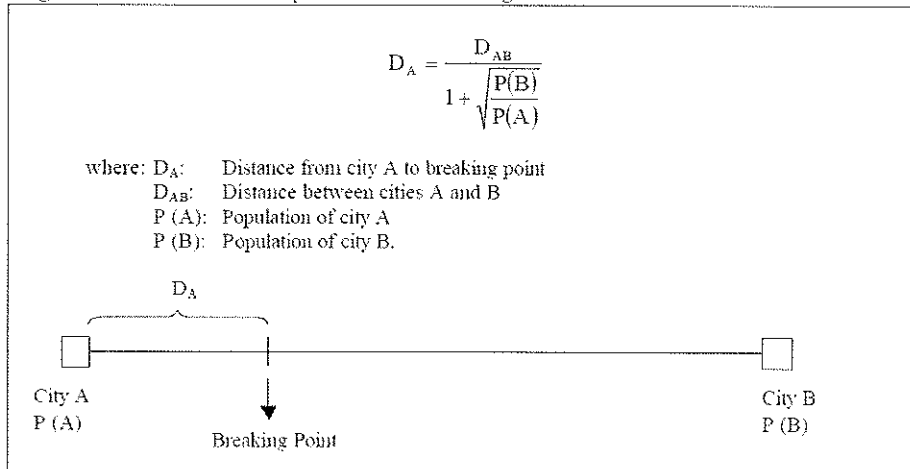
Source: Location Strategies for Retail and Service Firms (Ghosh et al., 1987).

Rank-size rule

The theory of **rank-size rule** explains the size of cities in a country. *

- The second and subsequently smaller cities should represent a proportion of the largest city.
- For example:
    - If the largest city in a country contained one million citizens
    - the second city would contain one-half as many as the first, or 500,000
    - the third would contain one-third or 333,333
    - the fourth would be home to one-quarter or 250,000
    - and so on...

The population of a town ranked n will be $1/n$th of the size of the largest city

- For example:
    - the 2nd ranked town, will have a population 1/2 of the 1st ranked town.
    - the 3rd ranked town, will have a population 1/3 of the 1st ranked town
    - the 4th ranked town, will have a population 1/4 of the 1st ranked town
    - the 5th ranked town, will have a population 1/5 of the 1st ranked town
    - And so on...

    o In other words, the rank of the city represents the denominator in the fraction

Germany

Actual Population		Rank-Size Rule Expectations	
1.Berlin	3,390,000	1.Berlin	3,390,000
2.Hamburg	1,700,000	2.Hamburg	1,195,000
3.Munchen	1,300,000	3.Munchen	1,130,000
4.Koln	965,000	4.Koln	847,500
5.Frankfurt	640,000	5.Frankfurt	678,000
6.Essen	590,000	6.Essen	565,000
7.Dortmund	589,000	7.Dortmund	484,000
8. Stuttgart	587,000	8. Stuttgart	424,000

The cities of Germany follow the Rank-Size Rule fairly closely

*This is not always the case in many countries!

A country's leading city is always disproportionately large and exceptionally expressive of national capacity and feeling. The **primate city** is commonly at least twice as large as the next largest city and more than twice as significant. - Mark Jefferson, 1939

The law of the primate city explains the phenomenon of huge cities that capture such a large proportion of a country's population as well as its economic activity.

- o These primate cities are often, but not always, the capital cities of a country.
    - ▪ Example: Paris, which truly represents and serves as the focus of France.

Primate cities dominate the country in influence and are the national focal-point.

- o Their sheer size and activity becomes a strong pull factor, bringing additional residents to the city and causing the primate city to become even larger and more disproportional to smaller cities in the country.*

Peru

Actual Population		Rank-Size Rule Expectations	
Lima	7,000,000	Lima	7,000,000
Arequipa	700,100	Arequipa	3,500,000
Trujillo	600,000	Trujillo	2,333,000
Chiclayo	470,000	Chiclayo	1,750,000
Iquitos	335,000	Iquitos	1,400,000
Piura	310,000	Piura	1,166,000
Huancayo	305,000	Huancayo	1,000,000
Chimbote	300,000	Chimbote	875,000

Peru does not follow the Rank-Size Rule, however Lima would be considered a Primate City

*However, not every country has a primate city

Sources:
http://www.docstoc.com/docs/17298175/Rank-Size-Rule
http://geography.about.com/od/urbaneconomicgeography/a/primatecities.htm

Central Place Theory - Christaller

The rank order of central places is:

-Hamlet
-Village
-Town
-City
-Regional Capital

Central Place Theory (CPT) is an attempt to explain the spatial arrangement, size, and number of settlements. The theory was originally published in 1933 by a German geographer Walter Christaller who studied the settlement patterns in southern Germany. In the flat landscape of southern Germany Christaller noticed that towns of a certain size were roughly equidistant. By examining and defining the functions of the settlement structure and the size of the hinterland he found it possible to model the pattern of settlement locations using geometric shapes.

Explanation of Terms:

A Central Place is a settlement which provides one or more services for the population living around it.

◻ Simple basic services (e.g. grocery stores) are said to be of low order while specialized services (e.g. universities) are said to be of high order.

◻ Having a high order service implies there are low order services around it, but not vice versa.

◻ Settlements which provide low order services are said to be low order settlements. Settlements that provide high order services are said to be high order settlements.

◻ The sphere of influence is the area under influence of the Central Place.

The theory consists of two basic concepts:

• **threshold:** the minimum population that is required to bring about the provision of certain good or service

• **range** of good or services - the average maximum distance people will travel to purchase goods and services
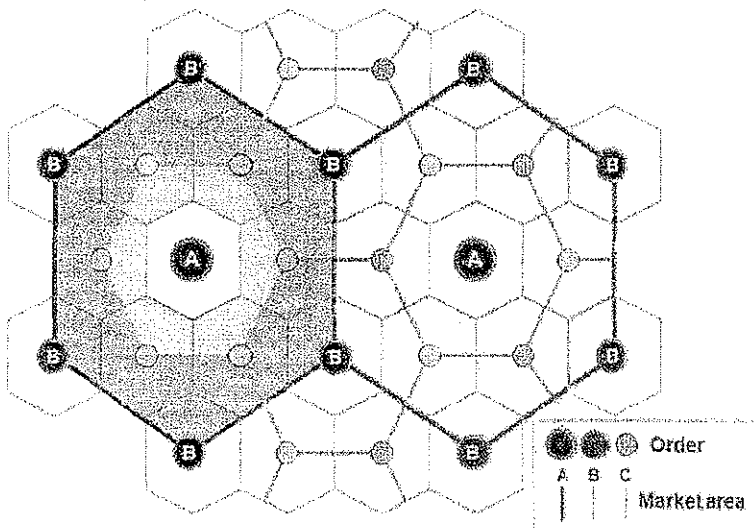
Central Place Theory (Walter Christaller)
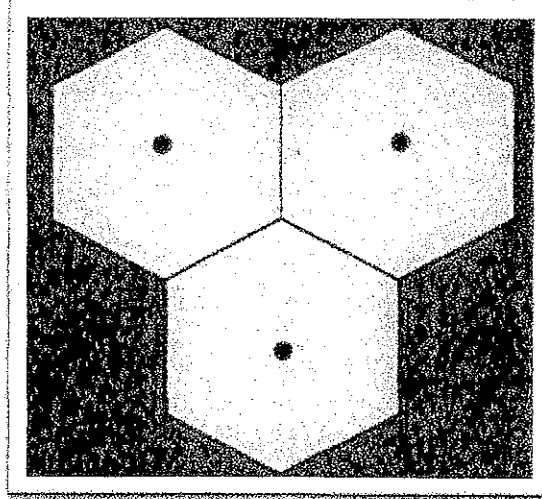
A **central place** is a market center for the exchange of goods and services by people attracted from the surrounding area.

- o The central place is so called because it is centrally located to maximize accessibility from the surrounding regions.

Central place theory explains how services are distributed and why a regular pattern of settlements exists - at least in high-income economies such as the US

- o This theory was first proposed in the 1930s by German geographer Walter Christaller, based on his studies of southern Germany

Central places compete against each other to serve as markets for goods and services

- • This competition creates a regular pattern of settlements, according to central place theory

The area surrounding a service from which customers are attracted is the **market area** or **hinterland**

- • Because most people prefer to get services from the nearest location, consumers near the center of the circle obtain services from local establishments
- • The closer to the periphery of the circle, the greater is the percentage of consumers whole will choose to obtain services from other nodes
- • People on the circumference of the market-area circle are equally likely to use the service, or go elsewhere

To determine the extent of a market area, geographers need 2 pieces of information about a service:

- o The **range** is the maximum distance people are willing to travel to use a service
    - • How far are you willing to drive for a pizza? Probably not too far – short range.
    - • To watch a ballgame? Probably far – long range

- o **Threshold**, which is the minimum number of people needed to support the service
    - • Every enterprise has a minimum number of customers required to generate enough sales to make a profit

Human Geography – Section II Free-Response Booklet

This bookmap shows how questions and space for answers generally are distributed throughout the Section II exam booklet. Please share this information with students to help them prepare for the exam.

- Student should write responses on answer pages and in designated answer spaces only.
- Students may use any blank space on directions and question pages to take notes and plan written responses.

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Answer Page for Q2 Continued	Answer Page for Q2 Continued	Question 3	Answer Page for Q3	Answer Page for Q3 Continued	Answer Page for Q3 Continued
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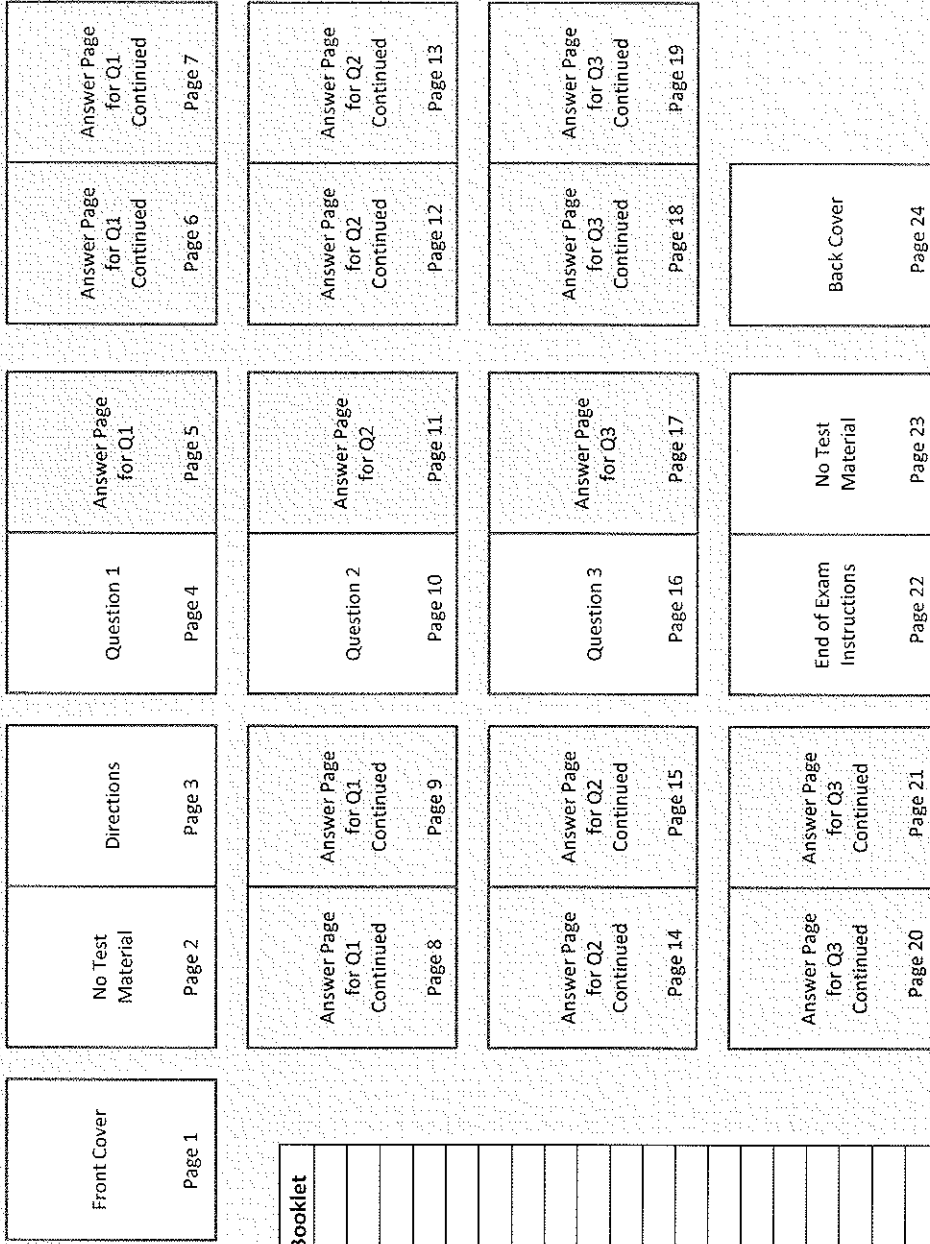
AP® Human Geography
2011 Free-Response Questions

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HUMAN GEOGRAPHY
SECTION II
Time—75 minutes
Percent of total score—50

Directions: You have 75 minutes to answer all three of the following questions. It is recommended that you spend approximately one-third of your time (25 minutes) on each question. It is suggested that you take up to 5 minutes of this time to plan and outline each answer. While a formal essay is not required, it is not enough to answer a question by merely listing facts. Illustrate your answers with substantive geographic examples where appropriate. Be sure that you number each of your answers, including individual parts, in the answer booklet as the questions are numbered below.

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POPULATION OF MEXICAN CITIES, 2007
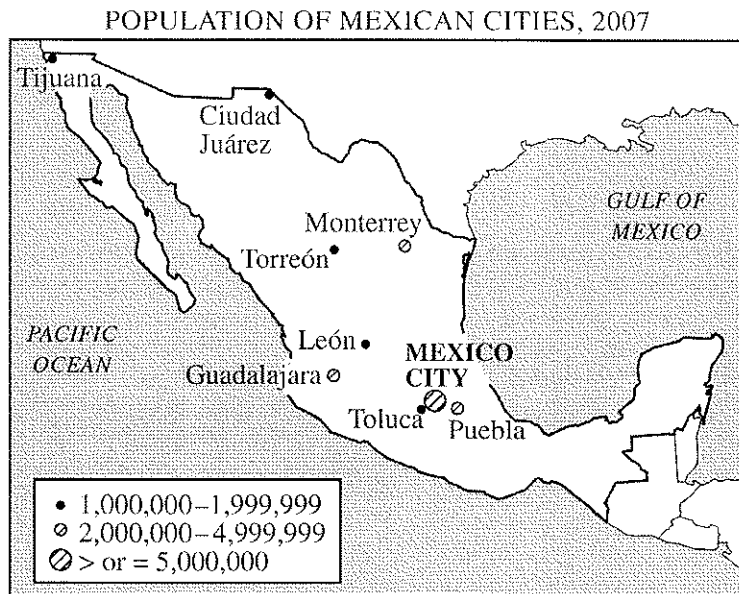
MEXICO'S MOST POPULOUS CITIES

City	1975	2007	2015
Ciudad Juárez	474,000	1,343,000	1,478,000
Guadalajara	1,850,000	4,198,000	4,673,000
León	589,000	1,488,000	1,682,000
Mexico City	10,690,000	19,028,000	20,189,000
Monterrey	1,589,000	3,712,000	4,140,000
Puebla	858,000	2,195,000	2,474,000
Tijuana	355,000	1,553,000	1,799,000
Toluca	309,000	1,531,000	1,671,000
Torreón	556,000	1,144,000	1,280,000

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2006 Revision* and *The 2007 Revision,* http://esa.un.org/unup.

1. The map and table above show the geographic location, population growth, and projected growth of Mexico's most populous cities.

    A. Define the following terms and describe how each relates to Mexico's urban geography.

    - Primate city

    - Rank-size rule

    B. Explain TWO positive effects of primate cities on a country's economic development and TWO <u>different</u> negative effects of primate cities on a country's economic development.

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GO ON TO THE NEXT PAGE.

2. In 1798 Thomas Robert Malthus published *An Essay on the Principle of Population* in which he argued that population growth will inevitably outpace food production, resulting in widespread famine.

    A. Identify and explain TWO reasons why some geographers today believe Malthus' theory can be used to predict future population issues.

    B. Identify and explain TWO reasons why some geographers today believe Malthus' theory cannot be used to predict future population issues.

The map and table above show the geographic location, population growth, and projected growth of Mexico's most populous cities.

Part A (3 points)

Define the following terms and describe how each relates to Mexico's urban geography.

Primate city (1 point)
Magnitude (it is more than two times the size of the next-largest city) AND significance (it exerts social, political, economic dominance).

Rank-size rule (1 point)
Nth largest city is 1/n smaller than the largest city; more small cities, fewer larger cities

Note: Do not grant credit if student misrepresents the proportion by saying ½ for all relationships.

Describe how each relates to Mexican urban geography (1 point)
Mexico does not comply with the rank-size rule (there is a poorly developed urban hierarchy because Mexico City is a primate city).
OR
Mexico City is an example of a primate city because it is disproportionately larger than other Mexican cities and dominates the country.

Note: Either argument will earn the point, but students cannot contradict themselves.

Part B (4 points)

Explain TWO positive effects of primate cities on a country's economic development ...

Positive effects (1 point each; total of 2 points)
- Advantages of agglomeration of economic activity.
- Large market for goods and services.
- Ability to offer high-end goods and services (including education) because of larger threshold population.
- Advantages of enhanced flow of information and ideas in large population.
- Advantages of centralized transportation and communication network.
- Global trade opportunities; primate cities can compete on a global scale and attract foreign investment.

Note: The response must focus on and explain the positive impact on economic development; for example, tourism in primate cities must be linked to economic benefits to the nation's economy.

... and TWO different negative effects of primate cities on a country's economic development.

Negative effects (1 point each; total of 2 points)
- Unequal distribution of investments deters national economic development.
- Unequal economic and/or resource development.
- Unequal distribution of wealth and/or power.
- Transportation network (hub and spoke) prevents equal accessibility to all regions.
- Impact of centrifugal forces and difficulties of political cohesion on economic development.
- Brain drain — migration and unequal distribution of education, entrepreneurship, opportunities.
- Disproportionate effect of disaster in the primate city on entire country.
- Negative externalities, e.g., unsustainable urban growth/slums/environmental impacts if these are related to economic development, e.g., burden on national economy to cope with problems.

Write in the box the number of the question you are answering on this page as it is designated in the exam.

1B) [Continued from 1st page] The large population in primate cities includes many poor people. There underclass cannot afford proper lodgings so they build squatter settlements. These developments drain recourse from the government because it must address the many consequences/environmental consequence of such slums.

Since Mexico City is such a big city, it has great significance in the global economy (By the gravity model). Thus, Primate cities give countries economic power in the global economy.

The large number of people involve a large number of services which leads to the positive effects of agglomeration. Business benefit from being located next to each other and by having such a wide pool of consumers.

Write in the box the number of the question you are answering on this page as it is designated in the exam.

1A) A primate city is a city in a state that is more than twice as big as another city in terms of population in that state. Since Mexico City has a population more than twice the other populated cities in Mexico, Mexico City is therefore a primate city. It was in 1975, in 2007, and is projected to be one in 2015. (10,000,000+ vs 1,000,000+ people)

The rank-size rule states that the n-th most populous city in a rank-sized economy/urban distribution will be $1/n$ th of the most populous city in terms of population. The 2nd most popular city in Mexico is Guadalajara with a 2007 population of 4,198,000 compared to Mexico City's 19,028,000. Since it is not half of Mexico City's population, Mexico therefore doesn't have a rank urban distribution that allows for even urban growth throughout the country. (This holds for 1975 and 2015 as well)

1B) Primate cities are booming economic centers. Mexico City provides Mexico with a way into the global economy and allows Mexico to attract the support of international companies. Primate cities offer many jobs for locals. Many people will migrate to Mexico City because of the jobs available there. It help to build up economic opportunities.

Primate city's however, make it difficult for other cities to develop. Because of the gap in population, Guadalajara can't compete with Mexico City and grow. Primate cities lead to the development of squatter settlements and cause of poverty. These areas cause major economic issues for governments to resolve.

Write in the box the number of the question you are answering on this page as it is designated in the exam.

A. A primate city is a city that is a center of economic business and trade. It is an exception to the Rank-Size rule. The Rank-Size rule states that the relation to the most populous city and 2nd most populous is 1/n "n" being the rank of the city in terms of population. An example would be if a country's largest city had a population of 1 million the second largest would be 500,000 3 third largest approximately 333,333 and so on. Mexico City appears to be both a primate city the capital and most populous. Since Mexico City is the primate city, its population is well above the other cities so the Rank-Size rule does not effectively apply.

B. A positive effect of primate cities is that it creates one large center of economic business in a country and with that a larger percentage of the population. This allows more employees to have jobs and increase income out the country's economy. Another benefit of primate cities is that they allow the population to be in different economic waters. This means that not everyone will only have one large centralized area of business and public services. It allows the population/civilization to spread out over more cities rather than just the capital.

A negative effect of primate cities is they develop more rapidly than other cities causing income inequality between regions in a country. Income inequality causes conflict in the country and slows down economic development because it will cause political conflict in which the government might have to take action on. Another negative effect is that it takes away attention from the country's capital. Thus leaving national pride. If people are only attracted to the primate.

Write in the box the number of the question you are answering on this page as it is designated in the exam.

It leaves the cities of some region to more there.

An example of Mexico city being a primate city is the fact that it had a population of 19,028,000 in 2007 but the 2nd largest were only 1,248,000, not what the Rank-Size rule states.

1

A) A Primate City is a city that is the largest city in a country and is atleast double the size of the second largest city. Mexico City is a primate city in Mexico. It has a Projected population in 2015 to be about 30,189,000 which is a little less then 5 times larger than the second largest City, Guadalajara who's population is 4,193,000. The fact that Mexico City is that much larger than Guadalajara makes Mexico City a Primate City. The Rank-size Rule goes along with a Primate City meaning that as you go down the list the cities must be that many times smaller than the largest city. Meaning that the Second largest City should be 1/2 of the largest City and the third largest city should be 1/3 of the largest Cities population and so on. Mexico however does not follow the Rank-Size Rule. Mexico City is to large for it to be even close to working. In any of the years shown half of Mexico City's population is no where

1

near the population of Guadalajara which makes the one invalid for Mexico right there.

B) Private cities can positively affect the countries economic development by having a high labor force which means more manufacturing which then turns into more. Also Private cities are mainly where people want to invest. No matter where you are the bigger the better. There are also negative affects of Private cities such as cultural conflicts due to the amount of people there and also an increase in slums or ghettos.

Overview

This question was intended to determine students' understanding of the model of urban hierarchy and its application to an actual system of cities. Rank-size rule and primacy are fundamental to the cities and urban lands use section of the course. The question asked students to provide definitions for rank-size rule and primate city and to determine which one best described Mexico's system of cities. They were then asked to provide a discussion of both the positive and the negative impacts of primate cities on a nation's economy.

Sample: 1A
Score: 7

The essay demonstrates a comprehensive understanding of primate cities, rank-size rule, and the effects that primate cities have on a country's economic development. It earned full credit in part A (3 points) and part B (4 points). In part A the response received 1 point for correctly stating that primate cities are more than twice the size of the next-largest city and for noting (at the beginning of part B) that they "are booming economic centers." The response was awarded another point for its definition of the rank-size rule: "the n-th most populous city in a rank-sized economy/urban distribution will be 1/nth of the most populous city in terms of population." One more point was earned for stating that Mexico "doesn't have a rank urban distribution." In part B the essay received 1 point for describing a positive effect of a primate city on economic development — that "Mexico City provides Mexico with a way into the global economy," which can attract international companies. It gained an additional point (at the end of the response) for explaining that "a large number of services … leads to the positive effects of agglomeration" and "a wide pool of consumers." The essay merited 2 more points for correctly identifying two negative effects: that "[p]rimate citys [sic] … make it difficult for other cities to develop" and that a primate city's squatter settlements "drain resources from the government because it must address the social consequences/environmental consequences of such slums."

Sample: 1B
Score: 5

The essay received full credit in part A (3 points) and partial credit in part B (2 points). In part A the response earned 1 point for correctly identifying a primate city as "a center of economic business and trade" and for stating that "its population is well above the other cities." It received an additional point for defining the rank-size rule thus: "the relation to the most populous city and 2nd most populous is 1/nth, 'n' being the rank of the city in terms of population." The response gained another point for categorizing Mexico City as a primate city. In part B the essay received 1 point for observing that one positive effect of a primate city is to create "one large center of economic business in a country." No additional point was granted, as the response focuses more on the definition rather than on the positive effects of a primate city. The essay was awarded 1 point for explaining a negative effect of primate cities: "they develop more rapidly than other cities causing income inequality between regions in a country." No additional point was earned for naming a negative effect, because the response incorrectly focuses on issues such as loss of national pride.

Sample: 1C
Score: 3

The essay received partial credit in part A (2 points) and partial credit in part B (1 point). In part A the definition provided for a primate city did not receive credit, as it discusses only the size and not the magnitude, significance, or dominance of the city within the country. The response earned 1 point for defining the rank-size rule by indicating that the lesser cities must be many times smaller than the largest city ("Meaning that the second largest city should be ½ that of the largest city, and the third largest city should be ⅓ of the largest cities [sic] population and so on"). The response was awarded another point for understanding that Mexico "does not follow the Rank-Size Rule." In part B the essay gained 1 point for noting, as a positive effect on a country's economic development, that "primate cities are mainly where foreigners want to trade or invest [sic] in." No additional point was received for a positive effect, as the response incorrectly states that primate cities have "a high labor force, which means more manufacturing." No points were awarded for the explanations of negative effects, because the response incorrectly focuses on issues such as "cultural conflicts" that result from increased population.

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Question 2

In 1798 Thomas Robert Malthus published *An Essay on the Principle of Population* in which he argued that population growth will inevitably outpace food production, resulting in widespread famine.

Part A (4 points: 1 point for each reason identified [ID] and 1 explanation point per ID)

Identify and explain TWO reasons why some geographers today believe Malthus' theory can be used to predict future population issues.

ID: Population has been rising quickly.　　**OR**
Population has generally grown as predicted by Malthus.

Explanation
- Limited use of contraception.
- Political policies, economic decisions, cultural beliefs that support population growth.
- Demographic transition model, referring to Stage 2 and/or early Stage 3.

ID: Food supply has increased, but it has not kept up with population increase.　　**OR**
Food supply has generally grown as predicted by Malthus.

Explanation
- Failure to adopt agricultural innovation, owing to political policies, economic decisions, cultural beliefs.
- Conversion of farmland for urban use.
- Environmental degradation such as desertification, overgrazing, clear cutting, soil erosion, unavailability of fresh water.
- Conversion of life-supporting crops to cash crops (tobacco, sugar, cotton, tea, coffee).
- Rising fuel costs will slow down growth of food production and distribution.
- Climate change will decrease production.

ID: There are other limiting factors on population in addition to food.

Explanation
- Because of resource overuse and/or environmental degradation, we are in danger of exceeding the carrying capacity (clean air, fossil fuel, water, and other resources).

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Question 2 (continued)

Part B (4 points: 1 point for each reason identified [ID] and 1 explanation point per ID)

Identify and explain TWO reasons why some geographers today believe Malthus' theory cannot be used to predict future population issues.

ID: Population growth has not been rising geometrically/exponentially.　　**OR**
Population has generally not grown as predicted by Malthus.

Explanation
- Expanded use of contraception.
- Political policies, economic decisions, cultural beliefs that limit population growth.
- Demographic transition model, referring to late Stages 3, 4, and/or 5 (declining birth rate).

ID: Food supply has grown faster than predicted by Malthus.　　**OR**
Carrying capacity has expanded.

Explanation
- New technologies, such as: mechanization, factory farming, industrial agriculture, agribusiness, use of chemicals, irrigation, GPS.
- Greater efficiencies, such as: larger farms, consolidation of farms, mechanization, multicropping.
- Green Revolution, genetically modified crops, multicropping, improved seeds, high-yielding cultivars.
- Expansion of agricultural lands.
- Human ability to create new techniques.

ID: Our ability to preserve food and/or distribute food to areas of need is much greater than during Malthus' time.

Explanation
- Improvements in any and all methods of transportation (highways, containerization, refrigerated trucks).
- Improvements in food preservation (refrigeration, packing, processed food).

Write in the box the number of the question you are answering on this page as it is designated in the exam.

| 2 |

A Geographers believe that Malthus's theory can be used to predict future population issues because for many countries in the lower stages (2-3) of the demographic transition model the population of people is still growing exponentially, despite the decreases in birth rate for some of the countries. For countries in Africa such as Mali there is not a high population. Commercial farming industry but there is a steadily growing population of people due to a lack of contraceptive use. This could potentially lead to the widespread famine Malthus predicted.

Additionally, it could be argued that because of the growing advancements in medical treatment across the world much fewer people are dying from disease and even old age than ever before. This leads to the natural rotation of people in the world to become unbalanced because of the high life expectancy. More people are having to be fed for longer amounts of time than ever before, which could lead to a lack of available food.

B The third agriculture revolution is still in place meaning that commercial farming is still extremely prominent in society. People are able to produce a greater amount of food than ever before thanks to large monoculture farms, feedlots, and GMOs. Although there is not a great variety in the food produced compared to the past, there is plenty of it which will easily cover as substitence for the

Write in the box the number of the question you are answering on this page as it is designated in the exam.

| 2 |

growing population of people.

Additionally, many country/countries are developed and have reached the later stages of the DTM (late stage 4; some considered to have reached 5.) This means that in those countries such as Italy there is actually a negative population growth where there is fewer than two children being produced per family. If other countries follow along this path, the world population will no longer continue to grow exponentially, but instead decline requiring much less food to be produced and potentially a surplus of food.

Write in the box the number of the qu on this page as it is designated in the exam.

B. past. On the global level, population increased exponentially up until the 1960s, but now the rate of population growth is slowing down indicating that the population will eventually stabilize since ... Some geographers think Malthus' theory cannot be used to predict future population issues because food production has recently become more efficient. During the Green Revolution, increased use of fertilizers, hybrid seeds and irrigation led to greater food production. These geographers argue that hunger is caused by improper distribution of food not because of a growing population with not enough food like Malthus stated.

Write in the box the number of the question you are answering on this page as it is designated in the exam.

2. A. Some geographers believe Malthus' theory can be used to predict future population issues because historically food production has increased at an ordinate way and not population has grown exponentially. These two concepts were the basis/foundation of Malthus' theory therefore geographers feel if the population growth and food production grow in the way Malthus proposed, his conjecture that a eventually population will surpass food production causing problems. Geographers also believe Malthus' theory still applies because certain areas struggle from the problems Malthus predicted. For example, sub-Saharan Africa has trouble producing enough food due to environment and climate conditions. However this region has high population growth. As Malthus predicted, Sub saharan African experiences much famine due to food shortages.

B. Some geographers believe Malthus' theory does not hold true today because population is not increasing everywhere. In places like Western Europe, population is starting to decline. Contradicting Malthus' statement that population growth is exponential. Even the countries who are experiencing population growth are not growing at as fast a rate as in the

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AP® HUMAN GEOGRAPHY
2011 SCORING COMMENTARY

Question 2

Overview

This question was structured in a way that required students to present both sides of the discourse on the future of world population growth and food supply. Students were asked to frame their discussion around the precepts of the Malthusian essay on population growth. Students were given a summary of the Malthusian argument and did not need to base their essays on recall. The question did not force students to choose sides in this debate but rather to present evidence that they understood both views about the future relationships between population growth and food supply.

Sample: 2A
Score: 8

This essay demonstrates a comprehensive understanding of Thomas Malthus' theory about population growth and food production and earned full credit (4 points in part A and 4 points in part B). In part A the response received 1 identification point for stating that "the population of people is still growing exponentially" and 1 explanation point for understanding that "Malthus's theory can be used to predict future population issues because [of the] many countries in the lower stages (2–3) of the demographic transition model." The response was awarded 2 points for correctly indicating that a steadily growing population "could potentially lead to the widespread famine Malthus predicted" and for the related explanation that in some countries "there is not a high production commercial farming industry." In part B the essay received 1 point for correctly identifying a reason that does not support Malthus' theory: "there is plenty of it [food] which will easily serve as subsistence [sic] for the growing population of people." An additional point was gained for explaining that "[p]eople are able to produce a greater amount of food than ever before thanks to large monoculture farms, feedlots, and GMOs." The response merited 1 point for noting that "the world population will no longer continue to grow exponentially," and 1 more point was earned for the explanation that "many countries are developed and have reached the latter stages of the DTM (late Stage 4; some considered to have reached 5)."

Sample: 2B
Score: 6

The essay received partial credit in part A (3 points) and partial credit in part B (3 points). In part A 1 point was received for correctly stating, "population has grown exponentially" as a reason that Malthus' theory has predictive value. An additional point was awarded for explaining that "historically, food production has increased in an arithmetic way." The response received no credit for an additional identification point in this part, but 1 point was granted for explaining that "sub-Saharan Africa has trouble producing enough food due to environment and climate conditions." In part B the essay received 1 point for correctly identifying a reason that does not support Malthus' theory: "population is not increasing everywhere." Thus, population is starting to decline in some areas, which contradicts Malthus' ideas. No explanation was provided in support of this statement, however, so no point was earned. The response merited 2 points for identifying the greater efficiency in food production as another reason to question the theory, along with a corresponding explanation that attributes the increase in production to the Green Revolution and the "increased use of fertilizers, hybrid seeds, and irrigation."

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Write in the box the number of the question you are answering on this page as it is designated in the exam.

#2

A. People *who* still *believe* that Thomas Malthus's theory is still a problem because the population is growing exponentially. While food production's growing arithmetically. This is a *huge* problem because the population growth of the world is growing so much faster than food production, which is growing at a steady rate. Therefore, many people still *believe* that we will soon run out of food because we can't produce *for* enough to sustain the *size* of a population.

Also, *people who think this way, Neo-Malthusians*, who *are people really* that still think Malthus's theory is possible, think that this is a *huge* problem because of *over-population*, meaning we will run out of supplies and food products, and the world population will eventually die off due to *a* lack of nutrition.

B. Although many people now *believe* that Malthus' theory *may* is inaccurate because, with *increasing* population growth, we have begun to use chemical fertilizers and *technology* to produce *food* to produce bigger and better products, faster. The *Green* Revolution has upon the use of chemical fertilizers *and other products, meaning that we* began to come into play. This Revolution has *relied* on *dealing* with our food production and *agriculture* and has *helped* in new *agribusinesses*. In *agribusiness*, we have begun to think *less* about the quality of the *product* and more about the quantity and mass-production, with the use of chemical fertilizers.

Also, Malthus's theory is inaccurate because of the increase in technology and *biotechnology. Meaning that in agriculture has resulted in* mass consumption by biotechnology *with food*. Biotechnology has *been an increasing* factor to sustain the population, with food. *Bio*Revolution, with the use of new technology, to create bigger and better products that can be *more* and produce much *faster.*

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Question 2 (continued)

Sample: 2C
Score: 4

The essay received partial credit in part A (2 points) and partial credit in part B (2 points). In part A the response received 2 identification points for correctly observing in support of Malthus' theory that "population is growing exponentially while food production is growing arithmetically." No explanation points were merited. In part B the essay earned 1 identification point for correctly stating, in opposition to the theory, that "agriculture has turned into mass consumption to sustain the population with food." An additional point was awarded for explaining, "we have began [sic] to use chemical fertilizers and learned how to produce bigger and better products, faster." No additional identification or explanation points were granted.

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Question 3

Industrial location models are used to explain geographic patterns of economic activity. The maps above show automobile factories built before and after 1986 in the United States.

Part A (2 points)

Identify TWO changes in the geography of automobile factory construction shown by the maps.

1. International-based change in the geography of plant construction
   a. Increase in the number/investment of foreign-owned automobile plants **OR**
   b. Increase in both small and especially larger-size, foreign-owned automobile plants

Note: Students cannot earn 2 points for listing two international-based changes.

2. Domestic-based change in the geography of plant construction
   a. Increase in the number/investment of automobile plants in the South or Southeast part (Sun Belt) of the United States
   b. Increase in number/investment of automobile plants built away from the traditional core of the American manufacturing belt (Rust Belt)
   c. Decrease in the number of American-owned automobile plants
   d. Decrease in the number/investment of automobile plants west of the Mississippi River

Notes
- Students cannot earn credit by simply counting the change in number of plants per state.
- Students may earn 2 points for identifying TWO domestic-based changes.

Part B (4 points)

Identify and explain TWO factors related to industrial location that may have contributed to the changes.

Identification (1 point each)	Explanation (1 point each)
1. Low-cost labor (not low-skilled or uneducated workforce)	• More nonunionized labor in the South (or Southeast or Sun Belt) • Right-to-work states in the South (or Southeast or Sun Belt).
2. Market	• More foreign-owned companies to minimize shipping costs (cheaper transportation costs). • More foreign-owned companies to avoid paying federally imposed tariffs. • United States represents one of the world's largest markets for automobile consumption
3. Deindustrialization (North only)	• Shifting or relocation of automobile plants because of high labor costs (unions) in the North. • Obsolete infrastructure in the North (or Rust Belt). • Outsourcing — domestic companies shifting from states in the North to Mexico.

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Question 3 (continued)

4. Government policies	• Economic and development incentives — pro-industrial policies. • Connection to preexisting infrastructure systems — e.g., access to interstate highways, rail spurs, water/sewage/electricity. • State and local taxes — lower in the South, higher in the North. • Variances on zoning and environmental regulations.
5. Cheap land	• Accessible and available sites in the South cost less than accessible and available sites in the North.
6. Available infrastructure	• Cost-efficient interstate highway systems in the South (or Southeast or Sun Belt). • Cost-efficient rail system in the South (or Southeast or Sun Belt). • Allows quick and inexpensive assembly of supplies for the manufacture of automobiles and efficient distribution of automobiles to car dealerships. • Facilitates just-in-time production.
7. Cheap energy	• Abundant, inexpensive supplies of energy in the South. • South (or Southeast) is below the national average for $/kWh.

Note. No identification or explanation points should be awarded for the mention of raw materials.

Write in the box the number of the question you are answering on this page as it is designated in the exam.

Question 3
3A 1of2

(A) The geography of automobile factory construction has changed as more foreign-owned factories have relocated in the United states. Many small-scale factories have been eliminated, giving rise to larger-scale production factories and some automobile factories have relocated in Southern states including Alabama and Mississippi.

(B) Several factors related to industrial location have led to these changes. Government incentives by state governments, including tax incentives (lower taxes), the construction of infrastructure (roads) and manufacturing plants) and looser environmental regulations have encouraged automobile factories to relocate, in order to State government often try to attract these factories in order to provide more job opportunities and in turn receive more money (through the income tax of the workers.) Economic incentives have also

Write in the box the number of the question you are answering on this page as it is designated in the exam.

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Question 3

contributed to the relocation of car manufacturing factories. (situational factor) Foreign companies benefit from relocating to the United States in order to be closer to their market (they sell their cars in the United States) and increase profit by cutting down on transportation costs. Because wage rates are lower, on the average, in states like Alabama and Mississippi, these Southern states have been particularly attractive places for automobile companies to build new factories. (site factor)

Write in the box the number of the question you are answering on this page as it is designated in the exam.

3

A. In recent years there has been an increase in foreign owned automobile factories in the United States. There has also been a decrease in United States owned automobile factories.

B. More foreign owned automobile factories have been built because they will be closer to the market area and consumers.

The foreign owned automobile factories are owned by usually German or Japanese companies. Both German and Japan are located very far away from the consumers in the United States. The transportation costs to get the automobiles to the United States would be extremely high. Since transportation costs is one of the key factors in determining where to locate a factory, the cost has a major impact on these companies on where to locate their factories. By locating their factories in the United States they are saving on transportation costs, so they can lower their prices for the product, and doing so thus more people will be willing to buy the product. Therefore, they will get a better profit by locating their factories in the United States.

Also, foreign owned automobile factories

Write in the box the number of the question you are answering on this page as it is designated in the exam.

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are being located in the United States because that is where the majority of the consumers or customers are located. The United States is the number one number one consumer of automobiles in the world. So it would be smart for foreign owned automobile companies to locate their factories there so they get more consumers, and thus more sales.

In conclusion, foreign owned automobile factories have been moving into the United States because they are closer to the market area so they would have lower transportation costs and so they are near more consumers so more of the product will be sold. In both ways the factories location contributes to the economic development of the company.

Write in the box the number of the question you are answering on this page as it is designated in the exam.

3

are needed to make a car. In conclusion, the United States has adapted to the needs of ~~our~~ automobile manufacturing.

Write in the box the number of the question you are answering on this page as it is designated in the exam.

3

3C 1 of 2

These two maps are examples of industrial location models, which are used to explain geographic patterns ~~and movement~~ of economic activities. There are many ~~differences between~~ differences between the two maps.

When looking at the map showing before 1980 the majority of the automobile factories were United States owned and widely dispersed. However, the after 1980 map depicts that the bulk of the factories are owned by foreign country's and are mainly clustered in the Mid-West.

There are many factors in which this change was provoked. Automobile manufacturing is a bulk-gaining industry. Meaning that to lower transportation costs the factories would have to be near the market. If foreign car companies were to ship the cars from their country's it would raise the cost of the car dramatically. The Mid-West is also in close proximity to natural resources such as steel that

Overview

This question required students to identify locational factors that pertained to the expansion of the automobile industry in the United States. They were then asked to explain how the factors they identified worked in combination to create a pattern of investment in new automobile assembly plants. The students were expected to use the Weber model of industrial location to frame their response to this question.

Sample: 3A
Score: 6

This essay demonstrates a comprehensive understanding of the geography of automobile plant construction and industrial location factors and earned full credit (2 points in part A and 4 points in part B). In part A the response received 1 point for correctly identifying an international change: "more foreign-owned factories have relocated in the united states [sic]." An additional point was awarded for identifying a domestic change: "some automobile factories have relocated in southern states including Alabama and Mississippi." In part B the essay earned 1 point for identifying government policies as a factor in these changes. Another point was gained for explaining that government policies "including tax incentives (lower taxes), the construction of infrastructure (roads and manufacturing plants) and looser environmental regulations" have attracted factories "in order to provide more job opportunities." The essay also received 1 point for identifying the market as a factor for foreign companies considering relocation. One more point was merited for the explanation that foreign companies would "increase profits by cutting down on transportation costs."

Sample: 3B
Score: 4

The essay received full credit in part A (2 points) and partial credit (2 points) in part B. In part A the response earned 1 point for correctly identifying an international change by stating, "In recent years there has been an increase in foreign owned automobile factories in the United States." An additional point was awarded for identifying the "decrease in foreign owned automobile factories." In part B no location factors were identified. Two points were granted for explanations implicitly tied to the market. The essay received 1 point for making the point that companies would save on transportation costs by locating their factories in the United States. One point was merited for the understanding that the United States represents one of the world's largest markets for automobile consumption by stating that "foreign owned automobile factories are being located in the United States because that is where the majority of the consumers or customers are located." The response received no further credit, as the discussion continues to highlight points previously made (that is, foreign-owned automobile factories are moving to the United States).

Sample: 3C
Score: 3

The essay received partial credit in part A (1 point) and partial credit (2 points) in part B. In part A the response merited 1 point for correctly identifying an international change: "the after 1986 map depicts that the bulk of the factories are owned by foreign countrys' [sic]." No domestic change identification point was earned, as the response merely describes the wide dispersal of automobile factories on the map. In part B the market identification and explanation points were awarded for indicating, "to lower transportation costs [1 point for explanation] the factories would have to be near the market [1 point for identification]." The response received no further credit because the discussion centers on the proximity of raw materials to automobile plant location.

THE EXAM

The AP Human Geography Exam is approximately 2 hours and 15 minutes in length and includes both a 60-minute multiple-choice section and a 75-minute free-response section. Each section accounts for half of the student's AP Exam score.

Sample Multiple-Choice Questions

The following are examples of the kinds of multiple-choice questions that appear on the AP Human Geography Exam. Additional sample questions can be found at AP Central (apcentral.collegeboard.org). The distribution of topics and the levels of difficulty are illustrative of the composition of the exam.

Multiple-choice scores are based on the number of questions answered correctly. Points are not deducted for incorrect answers, and no points are awarded for unanswered questions. Because points are not deducted for incorrect answers, students are encouraged to answer all multiple-choice questions. On any questions students do not know the answer to, students should eliminate as many choices as they can and then select the best answer among the remaining choices. Answers to the multiple-choice questions can be found on page 21.

Directions: Each of the questions or incomplete statements below is followed by five suggested answers or completions. Select the one that best answers the question or completes the statement.

1. Physiological population density is viewed as a superior measure of population density for which of the following reasons?

    (A) It is more reflective of population pressure on arable land.
    (B) It yields the average population density.
    (C) It is more reflective of the world's largest population concentrations.
    (D) It measures the average by dividing total land area by total number of people.
    (E) It best reflects the percentage of a country's population that is urbanized.

2. Which of the following regions has little dairying in its traditional agriculture?

    (A) Eastern Europe
    (B) Western Europe
    (C) South Asia
    (D) East Asia
    (E) North America

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3.
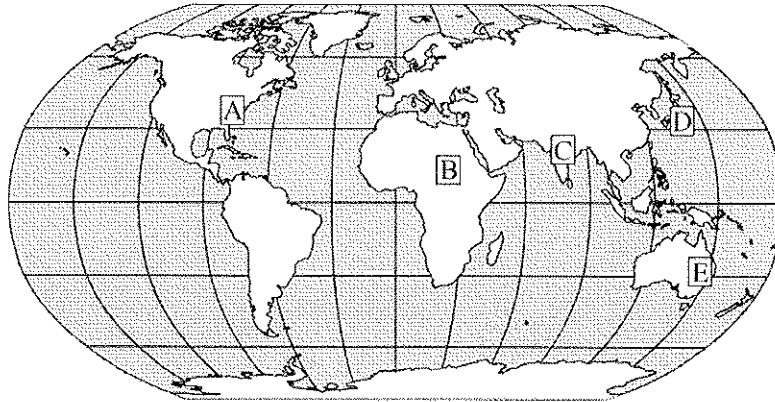
On the map above, which one of the following boxes is in an area where the population density is high and the level of economic development is low?

(A) A
(B) B
(C) C
(D) D
(E) E

4. According to central place theory, the threshold is defined as the

(A) economic base of a central place
(B) distance away from a central place
(C) gross value of the product minus the costs of production
(D) minimum number of people needed to support a service
(E) point at which consumer movement is at a minimum

5. Outsourced industrial production in less-developed countries often relies on female labor because

(A) men are engaged mainly in agriculture
(B) wage rates for women are much lower than for men
(C) women are more skilled at operating machinery than men are
(D) social taboos prevent women from working in the service sector
(E) women are not protected by international labor laws

6. The spread of specialty coffee shops across the United States in the 1990s is an example of

(A) hierarchical diffusion
(B) contagious diffusion
(C) stimulus diffusion
(D) periodic movement
(E) relocation diffusion

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7. Which of the following is a subsistence crop?

   (A) Corn
   (B) Cotton
   (C) Rubber
   (D) Cocoa
   (E) Timber

8. All of the following statements about the geography of meat production in the United States and Canada are true EXCEPT

   (A) Industrial farmers are raising ever-increasing numbers of animals on their farms.
   (B) Animal slaughtering and meat-processing activities are dominated by a few large corporations.
   (C) The development of the poultry industry has made chicken the least expensive kind of meat consumed in the United States and Canada.
   (D) Fast-food restaurants have created a demand for increased standardization and homogeneity of animals raised for meat.
   (E) Consumer demand for organic foods has significantly decreased the amount of meat produced by most agribusiness firms.

9. Compared with more-developed countries, which of the following statements is true of less developed countries?

   (A) A higher percent of the labor force is engaged in food production.
   (B) The population pyramids exhibit narrower bases.
   (C) The per capita consumption of energy is higher.
   (D) The natural increase of the population is lower.
   (E) Fertility rates are lower.

10. Free-trade zones such as the countries of the North American Free Trade Agreement (NAFTA) are established to increase the ease and volume of international trade by

    (A) increasing diplomatic relations between member states
    (B) opening borders to migrant guest workers from member states
    (C) establishing a common monetary unit among member states
    (D) offering large economic-development loans to poorer member states
    (E) eliminating tariffs on goods that cross borders between member states

11. Which of the following best describes the process of gentrification in United States and Canadian cities?

    (A) An increase in construction of new housing for elderly and retired persons
    (B) Privately funded redevelopment of existing commercial and residential buildings
    (C) Government-led planning of public spaces such as parks and riverfronts
    (D) The sale of naming rights for stadiums and arenas
    (E) The expansion of suburban housing developments on the urban periphery

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12. A formal region defines an area in which

    (A) a core dominates its surrounding hinterland
    (B) a transportation network links different types of land use
    (C) there is uniformity in one or more physical or human characteristics
    (D) there are significant geographic variations in physical or human characteristics
    (E) a unified government system has been established

13. Squatter settlements exist in cities of less-developed countries because

    (A) city governments set aside vacant areas for new migrants
    (B) people want to live near the center of the city, where jobs are located
    (C) affordable housing is not available elsewhere for new migrants to the city
    (D) new migrants prefer to live in squatter settlements with other recent migrants
    (E) new migrants need to be isolated from other city residents until they adjust to urban life

14. What would be the most profitable location for an ethanol manufacturing plant that converts corn into alcohol for use as an additive for gasoline?

    (A) Near a large university to facilitate recruitment of highly trained chemists
    (B) Near a break-of-bulk point for ease of transportation
    (C) Near a navigable river to reduce transportation costs to distant markets
    (D) Near a prime corn-producing area to minimize transportation costs of raw materials
    (E) Near a large metropolitan area to serve a major market

15. It is generally agreed that the current trend in climate change is caused by

    (A) sea-level rise
    (B) increased use of fossil fuels
    (C) reduction in biodiversity
    (D) tilt of Earth's axis
    (E) changes in the velocity of ocean currents

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16. Which of the following originated in South Asia and subsequently spread throughout much of Southeast and East Asia?

    (A) Hinduism
    (B) Christianity
    (C) Buddhism
    (D) Sikhism
    (E) Confucianism

17. According to the rank-size rule, if the largest city in a region has a population size of 900,000, then the third largest city will have a population of

    (A) 3,000
    (B) 9,000
    (C) 45,000
    (D) 300,000
    (E) 900,000

18. Since 1960 Brazil, Kazakhstan, Myanmar, Pakistan, and Tanzania have relocated their capital cities. Which of the following statements about the new locations is true for all five countries?

    (A) A militarily strategic location was chosen.
    (B) An isolated location was chosen.
    (C) An ethnically mixed location was chosen.
    (D) A more central location was chosen.
    (E) A coastal location was chosen.

19. Since the 1970s changes in the social roles, lifestyles, and employment patterns of women in Europe, Canada, and the United States have affected the overall population through which of the following?

    (A) Increased total fertility rates
    (B) Decreased total fertility rates
    (C) Increased death rates
    (D) Decreased death rates
    (E) Increased infant mortality rates

20. Which of the following is the primary assumption of environmental determinism?

    (A) Human destiny is controlled by the cultural environment.
    (B) The physical environment has little influence on humans.
    (C) Humans have complete control over the physical environment.
    (D) Many human adaptations are possible within a specific physical environment.
    (E) The physical environment controls human culture.

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21. Environmental laws, labor availability, and access to markets are major factors affecting which of the following?

    (A) Political affiliation
    (B) Gross domestic product
    (C) Property tax rates
    (D) Manufacturing locations
    (E) Transportation costs

22. Which of the following is an example of a supranational organization with the main mission of increasing economic integration?

    (A) The North Atlantic Treaty Organization
    (B) The European Union
    (C) The United Nations
    (D) The International Red Cross and Red Crescent Movement
    (E) The United States Federal Reserve

23. Which of the following can be an example of a centrifugal political force?

    (A) Homogeneous ethnic population
    (B) Strong central government
    (C) Variation of language within the country
    (D) Shift to tertiary economy
    (E) Concentrated ownership of media

Answers to Multiple-Choice Questions					
1 – A	5 – B	9 – A	13 – C	17 – D	21 – D
2 – D	6 – A	10 – E	14 – D	18 – D	22 – B
3 – C	7 – A	11 – B	15 – B	19 – B	23 – C
4 – D	8 – E	12 – C	16 – C	20 – E	

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