Models – AP Human Geography

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| **Model** | **Geographer** |
| **Population and Migration** | |
| Demographic Transition | Warren Thompson |
| Epidemiologic Transition | Abdel Omran |
| Malthusian Theory | Thomas Malthus |
| Laws of Migration | E. G. Ravenstein |
| Migration Transition | Wilbur Zelinsky |
| Gravity Model of Migration |  |
| **Political/Geopolitical** | |
| Heartland Theory | Halford Mackinder |
| Rimland Theory | Nicholas Spykman |
| Sea Power Theory | Alfred Thayer Mahan |
| Organic Theory of Nations | Friedrich Ratzel |
| Domino Theory |  |
| Containment (Communism during Cold War) |  |
| **Agriculture** | |
| Boserup Hypothesis | Esther Boserup |
| Von Thunen’s Agricultural Location Theory | Johann Heinrich Von Thunen |
| **Development/Modernization** | |
| Modernization/Development Model | W. W. Rostow |
| Core-Periphery Model  World Systems Theory | Immanuel Wallerstein |
| Location of Industry (Least Cost Location) | Alfred Weber |
| Locational Interdependence | Harold Hotelling |
| **Urbanization** | |
| Multiple Nuclei Model | E. L. Ullman and Chauncy Harris |
| Sector Model | Homer Hoyt |
| Concentric Zone Model | Ernest Burgess |
| Rank Size Rule | Mark Jefferson |
| Primate City Rule | Mark Jefferson |
| Central Place Theory | Walter Christaller |
| Evolution of the American Metropolis | John R. Borchert |
| Bid Rent Theory |  |
| **Miscellaneous Geographic Approaches** | |
| Environmental Determinism | Ellsworth Huntington |
| Possibilism | Vidal de la Blache |
| Cultural Landscape | Carl Sauer |
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**Key Geographic Models –** Each model is listed with the geographers responsible for developing that model. Additionally, the category that each model falls in to is listed to aid review/recall.

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| **Geographer** | **Topic** | **Model and Brief Description** | **Importance** |
| John Borchert | Urban | Stages of Evolution of the American Metropolis (Based on transportation)  1. Sail-Wagon Epoch (1790 – 1830)  2. Iron Horse Epoch (1830 – 1870)  3. Steel Rail Epoch (1870 – 1920)  4. Auto-Air-Amenity (1920 - ????)  5? High Technology | Explains development of urban centers based on different types of transportation; cities develop differently based on different advancements in transportation |
| Esther Boserup | Agriculture & Rural Land Use | Agricultural Productivity Advances are made in order to provide for growing populations  1. Forest Fallow  2. Bush Fallow  3. Shortened Fallow Periods  4. Annual Cropping  5. Double Cropping/Multi-Cropping | Formalized the transition from extensive subsistence agriculture to more intensive cultivation; Drawback is that increased use of land leads to loss of fertility |
| Lester Brown | Agriculture and Rural Land Use | Ecological effects of increasing population on agriculture and rural land use | Soil Degradation – Pressure to produce leads to soil depletion |
| Ernest Burgess | Urban Land Use | Concentric Zone Model – Cities grow out from CBD – Five Zones  1. CBD  2. Industry/Poor Housing  3. Stable Working Class  4. Middle Class/Commuter Zone  5. Suburbs | Explains the distribution of population based on land use and price of land. Transportation has impacted this model |
| Judith Carney | Agriculture and Gender | Studied changing agricultural practices in Gambia – as agriculture changed/progressed, so did the culture (especially women’s roles) |  |
| Manuel Castella and Peter Hall | Industry and Development | Technopoles – Higher technology Industry locates near sites of higher education and agglomerate to utilize highly skilled workers | EX: Boston – M. I. T. and Harvard have attracted a lot of technology based industries to the area |
| Walter Christaller | Rural/Urban Land Use | Central Place Theory – Urban Hierarchy, Range, Threshold, High/Low Order Settlements and Goods  Hexagonal shape – Identifies trade areas | Spatial Distribution of cities of different sizes  (Hamlets, Villages, Towns, Cities, Metropolis – Urban Hierarchy) |
| Ahron Dogopolsky | Culture & Language | Nostratic Language Family is a Proto-Indo-European Language | Helped to explain the origins of modern Russian |
| Clifford Geertz | Culture & Religion | Culture is Learned – Agreed with Hoebel.  Culture creates varied patterns and landscapes based on who lives where | “The Interpretation of Culture” |
| Chauncy Harris and E. L. Ullman | Urban Land Use | Multiple Nuclei Model – Modern cities develop with many nodes and function as cities within cities; Similar activities are attracted to one another and will cluster inside of cities based on need/access |  |
| Richard Hartshorne | Political & Boundaries | The Evolution of Boundaries  1. Antecedent – Prior to human settlement/development  2. Superimposed – Laid over top of existing cultural boundaries, typically by colonizers  3. Subsequent – After human settlement of the “frontier”  4. Relict – Ancient, no longer in use (typically marked by walls or other historical markers, i.e. The Great Wall of China, Hadrian’s Wall in at the edge of the Roman Empire) | Conflicts exist over boundaries for several key reasons.  1. Definitional dispute  2. Locational dispute  3. Operational dispute  4. Allocational dispute |
| **Geographer** | **Topic** | **Model and Brief Description** | **Importance** |
| Homer Hoyt | Urban Land Use | Sector Model – Cites are laid out in sectors, not rings, and certain areas of cities are more attractive than others. As a city grows it grows in wedges outward from the CBD. Best housing is connected to CBD, Industry and Retail areas develop in sectors along transportation routes | Serves as a refinement of the Concentric Ring/Zone Theory; Claimed to represent the social patterns of Chicago |
| E. Adamson Hoebel | Culture | Culture is a learned behavior  “Culture is wholly the result of social intervention and is maintained solely through communications and learning” |  |
| Ellsworth Huntington | Political & Development | Environmental Determinism – Climate and Terrain were major determinant of the development of Civilization (in the past) | Temperate climate of Europe led to greater human efficiency, better standards of living, greater development to be able to conquer later (supported by J. Diamond) |
| Mark Jefferson | Urban Land Use | Primate City vs. Rank-Size Rule  Every country has a “Primate City” (Dominated economics, social/cultural, politics, population)  Rank-Size Rule – Second Largest city is 1/2 the size of Primate City, Third Largest city is 1/3 the size, x-th city is 1/x the size of the Primate City |  |
| Halford Mackinder | Political & Geopolitical | The Heartland Theory  1. Whoever rules Eastern Europe commands the Heartland  2. Whoever rules the Heartland commands the “World Island” (Eurasia)  3. Whoever rules the World Island commands the world | Explains the attempts by Germany to command Eastern Europe, Explains the emergence of NATO and the Warsaw Pact during the Cold War and the conflict over those Eastern Bloc states during/after WW1, WW2 and Cold War |
| Thomas Malthus | Population | Malthusian Theory – Relationship of Food Supply to Population Growth  1. Food production increases arithmetically (1, 2, 3, 4)  2. Population increases exponentially (1, 2, 4, 8, 16)  3. Eventually, population will surpass our ability to produce food, leading to natural checks on population like war, disease, famine, death  **Malthus was proven wrong – we develop techniques & technology to keep up with population growth** | Neo-Malthusians – Agree with Malthus, but expand argument to resources |
| Critics of Malthus – Boserup & Kuznets (Increase food production to feed growing population); Engels & Marx (Government/Society will find a way to distribute resources for all) |
| T. G. McGee | Cities and Urban Land Use in LEDCs | Land Use in Southeast Asian Cities  Old colonial port cities are surrounded by new commercial districts with no formal CBD | EX: Manilla, Jakarta, Kuala Lumpur |
| Friedrich Ratzel | Political & Geopolitical | Organic Theory of Nations  States function like living organisms – Birth, Formative Development, Maturation, Decline, Death – and they are eventually replaced by something new |  |
| E. G. Ravenstein | Population & Migration | Laws of Migration (11 in total)  1. Most people move for economic reasons  2. Most long distance migrants are young, single men  3. Most long distance migrants head for major commercial centers in foreign countries, seeking greatest economic opportunities | Push-Pull Factors of Migration focus on Economic, Environmental and Cultural factors, with Economic factors serving as the primary determinant of migration. |
| **Geographer** | **Topic** | **Model and Brief Description** | **Importance** |
| W. W. Rostow | Development and Modernization | Modernization Model – Five Stages of Development  1. Traditional Society  2. Pre-conditions to Take-off  3. Take-off  4. Drive to Maturity  5. High Mass Consumption | Used to explain how countries can achieve different levels of economic development (in the past and in the present) |
| Carl Sauer | Culture | Cultural Landscape – Human activity superimposes itself on the physical landscape and each cultural group leaves its own distinct imprints on that landscape | “The Morphology of Landscape” |
| Ruth Leger Sivard | Economics & Gender Roles | Examined the relationship between military and social spending – As economic progress is made, the gap between Men and Women increases, until women achieve full equality, at which point they will catch up | As women catch up to practices of men (drinking/smoking) they will actually decrease their own life expectancy |
| Gideon Sjoberg | Urban Land Use | Cities are products of their societies (4 Stages)  1. Folk (Preliterate societies)  2. Feudal  3. Pre-Industrial  4. Urban/Industrial | “The Pre-industrial City: Past and Present” |
| John Snow | Epidemiology | Epidemiologist (Medical Geographer)  Identified and mapped the link between cholera outbreaks and contaminated water in SoHo London; one of the first to use geographic principles to explain the spread of disease | Outbreak – Spread of disease in short time in limited areas  Endemic – Localized disease  Epidemic – Spread of disease over larger area (regional)  Pandemic – Spread of disease rapidly around the world |
| Nicholas Spykman | Political & Geopolitical | Rimland Theory (Counter argument to Heartland)  Eurasian Rim (Not the Heartland) is/was the key to Global Political Power; Whoever controls the Rimland rules Eurasia, Whoever rules Eurasia rules the World | “Geography of the Place”  Heartland – Eastern Europe/Russia  Rimland – Western Europe, Coastal Asia (SW, S, SE, E) |
| Vidal De La Blache | Human-Environment Interactions | Possibilism – Human-Environment Interaction  Humans have a wide range of potential actions within an environment and they can overcome the environmental limitations placed upon them | “Principles of Human Geography”  Culture determines a societies response to the environment  Folk vs. Popular Cultures |
| Johann Heinrich Von Thunen | Agriculture & Rural Land Use | Agricultural Location Theory (Concentric Circles)  1. Market (City) Center  2. Market Gardening and Horticulture  3. Forest (for lumber/firewood)  4. Grains  5. Ranching (Livestock)  Close to city center = multiple trips, highly perishable, low bulk to keep transportation costs low  Far from city center = few trips, less perishable, high bulk (only going once/twice) | Farmers decide what to grow based on several factors, including the price of their yield for certain crops, and the costs of producing that yield (Land, Transportation, Bulk, Perishability of product)  Not necessarily applicable on the local scale based on improvements in transportation today. |
| Immanuel Wallerstein | Political & Geopolitical | Core-Periphery Model (World Systems Theory)  Core – MDCs, High Consumers  Semi-Periphery – Emerging Economies, Producers  Periphery – LDCs, Raw Materials Suppliers |  |
| Alfred Weber | Industry | Least Cost Location of Industry  Industries will locate where they can minimize costs based on the types of work they do  Bulk Gaining vs. Bulk Reducing | Goal is to minimize costs of TRANSPORTATION from materials to markets. Labor is also a consideration (high/low skill). |