AP Human Geography Models and Theories

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QUESTION	ANSWER
Which model explains how birth rates and death rates change as a country develops?	The demographic transition model, from the American demographer Warren Thompson (1929). Stage 1: high birth and death rates. Stage 2: death rate falls. Stage 3: birth rate falls. Stage 4: both low.
In which stage of the demographic transition model are birth and death rates both high, so the population stays low and grows very little?	Stage 1, the pre-modern stage. Both rates are high and fluctuate with famine and disease, so they almost cancel out.
In which stage of the demographic transition model does the death rate fall sharply while the birth rate stays high?	Stage 2, the stage of fastest population growth. Better food, sanitation and medicine cut deaths first.
In which stage of the demographic transition model does the birth rate begin to fall, so growth slows?	Stage 3. Urbanization, education for women and access to contraception lower fertility.
A country has low birth and death rates and almost no population growth. Which stage of the demographic transition model is it in?	Stage 4. Both rates are low and stable, as in many developed countries.
In which stage of the demographic transition model does the birth rate fall below the death rate, so the population declines?	Stage 5, added later to the original four stages. Few countries have reached it, so its shape is still debated.
Which model explains how the main causes of death change over time?	The epidemiologic transition, from Abdel Omran (1971). Infectious and parasitic diseases give way to degenerative and human-made diseases.
In a wealthy country, heart disease and cancer are the leading causes of death. Which stage of Omran's epidemiologic transition is it?	Stage 3, the age of degenerative and human-made diseases. Stage 1 is pestilence and famine. Stage 2 is receding pandemics.

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Which theory says population grows faster than the food supply, so growth is held back by famine, disease and war?	Malthusian theory, from Thomas Malthus (An Essay on the Principle of Population, 1798). Population grows geometrically, food arithmetically.
Which group of thinkers updates Malthus and warns that population growth still strains resources and the environment?	The neo-Malthusians, such as Paul Ehrlich (The Population Bomb, 1968). They stress limits on land, water and energy, not only food.
Which thinker argued against Malthus that population pressure pushes farmers to innovate and produce more food?	Ester Boserup (1965). More people lead to new farming methods, so food can keep up.
Which laws describe who migrates, how far, and why?	Ravenstein's laws of migration, from E. G. Ravenstein (1885). Most migrants move a short distance, long-distance migrants head for big cities, each flow creates a counterflow, and economic reasons dominate.
Which theory divides the causes of migration into push and pull factors?	Everett Lee's theory of migration (1966). Push factors drive people out of a place, pull factors attract them to another. Intervening obstacles and opportunities lie between the two.
Which hypothesis links patterns of migration to the stages of the demographic transition?	Zelinsky's migration transition (Wilbur Zelinsky, 1971). The type and volume of migration change as a society moves through the stages.
Which model predicts the interaction between two places from their population and the distance between them?	The gravity model, adapted from Newton's law of gravitation. Interaction grows with the product of the two populations and falls with distance (often its square).
Using the gravity model formula (population 1 × population 2) ÷ distance², what is the interaction between two cities of 20 and 30 (thousand) people that are 5 miles apart?	24. Use (20 × 30) ÷ 5², which is 600 ÷ 25.
Which law applies the gravity idea to shops and says a city draws customers from a town in proportion to its size and nearness?	Reilly's law of retail gravitation, from William J. Reilly (1931). It locates the breaking point between the trade areas of two cities.

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What is distance decay?	The weakening of interaction between places as the distance between them grows. It is the idea behind the gravity model.
Which concept names the way transport and communication technology make distant places feel closer?	Time-space compression, a term from David Harvey (1989). The jet plane and the internet shrink the time needed to connect places.
Which model explains how farmland use is arranged around a market city?	The von Thünen model, from the German economist Johann Heinrich von Thünen (The Isolated State, 1826). Land use forms rings around the market. Transport costs and the value of the product decide each ring.
In von Thünen's model, what is the order of the land uses from the market outward?	Dairying and market gardening, forest, grains, then ranching. Beyond ranching lies unused wilderness.
In von Thünen's model, why do dairying and market gardening lie closest to the city?	The products are perishable and costly to carry, and they earn a high return per acre. Farmers pay high rent for land near the market.
In von Thünen's model, why does the forest ring lie closer to the city than grain?	Wood, used for fuel and building, was heavy and costly to haul. Grain weighs less per unit of value, so it can come from farther.
What does von Thünen's model assume about the land and the market?	An isolated state with one central market, flat land, uniform soil and climate, and transport cost that rises evenly with distance. Farmers aim for the highest profit.
What limits the von Thünen model today?	Specialty farming regions do not follow its concentric rings. Refrigeration, fast transport, physical geography and global trade also change the pattern.
Which theory explains the size and spacing of settlements as centers that offer goods and services?	Central place theory, from the German geographer Walter Christaller (1933). Large places are few and far apart, small ones are many and close, each with a hexagonal market area.

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In central place theory, what is the minimum population needed to support a service?	The threshold. A hospital has a higher threshold than a bakery, so it needs a larger place.
In central place theory, what is the maximum distance people will travel to buy a good or service?	The range. A person travels farther for a specialist than for bread.
A small town has a bakery and a grocery but no hospital. Which concept of central place theory explains this?	The threshold: the town's population is too small to support a hospital. The hospital is found in a larger central place of a higher order.
Which rule says the nth largest city in a country has 1/n the population of the largest city?	The rank-size rule, linked to George Kingsley Zipf (1949). The second city is half the size of the first, the third a third, and so on.
A country follows the rank-size rule and its largest city has 8 million people. About how large is its third-largest city?	About 2.7 million. Use 8 million ÷ 3.
Which kind of city is at least twice as large as the next one and dominates a country's economy and politics?	A primate city, a concept from Mark Jefferson (the law of the primate city, 1939). Paris in France and Bangkok in Thailand are common examples. A country with one does not follow the rank-size rule.
Which model describes a city as five rings around the central business district?	The concentric zone model, from Ernest Burgess (1925), based on Chicago. It shows a city growing outward from the center as newcomers move up and out.
Which zone of the Burgess model lies next to the CBD, with older housing, factories and many recent immigrants?	The zone in transition. It is the second zone. Working-class homes, better homes and the commuter zone follow outward.
What limits the Burgess model?	It assumes one center, flat land and travel in all directions, with no highways or public transit. It fits Chicago in the 1920s better than many later cities.

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Which model describes a city as wedges stretching out from the CBD along transportation routes?	The sector model, from the land economist Homer Hoyt (1939). Rent and land use follow rail lines and roads. High-income housing forms its own sector.
A city's wealthy homes form a wedge from the CBD along a main rail line, and its factories form another wedge. Which model fits?	The Hoyt sector model. Similar land uses extend along transport routes, not in rings.
Which model says a city grows around several centers instead of one?	The multiple nuclei model, from Chauncy Harris and Edward Ullman (1945). Each nucleus has its own function: an airport, a university, a port or an industrial park.
A city has an airport district, a university district and an industrial park, each acting as a center of its own. Which model fits?	The Harris and Ullman multiple nuclei model. The CBD is only one of several nodes.
Which model describes a suburban city of edge cities linked by a beltway around an older central city?	The galactic city model, also called the peripheral model. Shopping and office centers in the suburbs rival the old downtown.
Who popularized the term “edge city” for a suburban center of offices and shops?	Joel Garreau (Edge City, 1991). The term fits the galactic city model.
Which theory explains why land value is highest at the CBD and falls with distance?	Bid-rent theory, developed by William Alonso (Location and Land Use, 1964). Firms and households bid for land. Retail pays most for central, accessible sites.
Which model of a Latin American city has a commercial spine reaching out from the CBD, with an elite residential sector along it?	The Griffin-Ford model (Ernest Griffin and Larry Ford, 1980). It places squatter settlements on the edge and the poorest zones away from the spine.
Which model of a Southeast Asian city centers on a port zone from colonial times?	The McGee model (T. G. McGee, 1967). The port zone leads to a mix of commercial, ethnic and market areas around it.

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Which model describes an African city with a colonial CBD and a traditional or market zone side by side?	The African city model, from Harm de Blij. Informal settlements, often squatter areas, sit on the periphery.
Which theory describes the stages of economic development a country passes through?	Rostow's stages of economic growth, from the American economist Walt Rostow (1960). Traditional society, preconditions for take-off, take-off, drive to maturity, age of high mass consumption.
A country has an economy based on subsistence farming, with little technology. Which of Rostow's stages is it in?	Traditional society, the first stage. The next stage, preconditions for take-off, brings new ideas and some investment.
In which of Rostow's stages does a country start fast industrial growth led by a few sectors?	Take-off, the third stage. Savings and investment rise and industry spreads.
In which of Rostow's stages do early manufacturing, trade, banks and new ideas appear while tradition still dominates society?	Preconditions for take-off, the second stage. It lays the ground for the fast industrial growth that follows.
In which of Rostow's stages does growth spread over a long period, with living standards rising and the economy outpacing population growth?	Drive to maturity, the fourth stage. Growth reaches many industries, not only the few that led take-off.
What is Rostow's final stage, in which most people consume far more than they need?	The age of high mass consumption, the fifth stage. The economy has a surplus that can fund social welfare.
What is the main criticism of Rostow's model?	It assumes every country follows one path, based on Western history. It ignores the effects of colonialism and trade on poorer countries.
Which theory divides the world economy into core, semi-periphery and periphery?	World systems theory, from Immanuel Wallerstein (1974). Core countries hold wealth and power. Peripheral ones supply cheap labor and raw materials.

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A country exports raw materials, pays low wages and imports manufactured goods. Where does Wallerstein's theory place it?	In the periphery. The semi-periphery lies between core and periphery and has traits of both.
Which theory argues that poor countries stay poor because of their unequal ties with richer ones?	Dependency theory, associated with Andre Gunder Frank (1960s). The wealth of the core depends on keeping the periphery as a source of cheap goods.
What is commodity dependence?	A country relies on exports of one or a few raw products for most of its income. Price swings on the world market can then hurt its whole economy.
Which theory explains where industry locates by the lowest cost of transport, labor and agglomeration?	Weber's least cost theory, from Alfred Weber (1909). A firm locates where total cost is lowest, often near its heavy raw materials.
In Weber's least cost theory, why do metal smelters and lumber mills locate near their raw materials?	They are bulk-reducing industries: the product weighs less than the inputs. Processing near the source avoids paying to haul the waste.
In Weber's least cost theory, why does a factory that assembles tractors locate near its market?	It is a bulk-gaining industry: the product is bulkier than its parts. Shipping the finished good costs most, so the firm stays close to buyers.
Which location factor, secondary for Weber, draws firms of one industry to cluster and share suppliers, labor and services?	Agglomeration. Shared resources split costs, an economy of scale.
Which view says the physical environment shapes human culture and behavior?	Environmental determinism, associated with Friedrich Ratzel. Geographers now see it as too simple and biased.
Which view says people can adapt the environment to meet their needs?	Possibilism, associated with Paul Vidal de la Blache. The environment sets limits, but culture and technology decide how people use it.

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Dikes and polders in the Netherlands reclaim land from the sea. Which view of human-environment interaction do they best illustrate?	Possibilism. People use technology to change the physical setting.
Which idea describes how a cultural group shapes the natural landscape into a cultural landscape?	Carl Sauer's cultural landscape (The Morphology of Landscape, 1925). Culture is the agent, the natural area is the medium, the cultural landscape is the result.
Which geopolitical theory says whoever controls Eastern Europe and the interior of Eurasia can dominate the world?	Mackinder's heartland theory, from Halford Mackinder (1904). Control of the Eurasian land mass gives power over the “world island.”
Which geopolitical theory says control of the coastal fringe of Eurasia matters more than the interior?	Spykman's rimland theory, from Nicholas Spykman (1944). It answers Mackinder and shaped the Cold War policy of containment.