

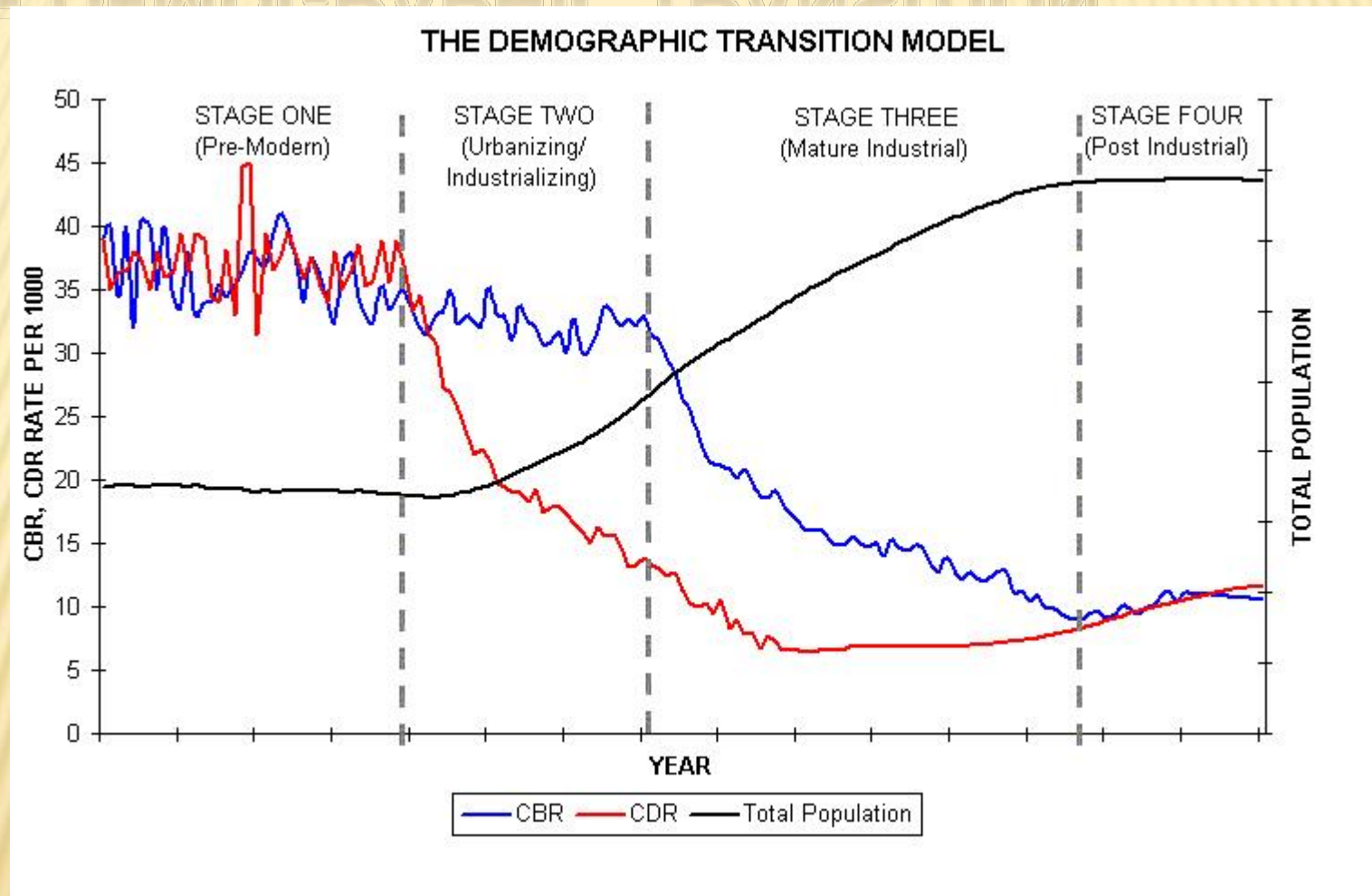
# GEOGRAPHY MODELS

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Preparing for the  
AP Human Geography Exam



# THE DEMOGRAPHIC TRANSITION



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## **Stage One:**

*CBR*- very high

*CDR*- very high

*NIR*- low

*Population Growth*: Low

## **Movement from Stage One to Stage Two:**

MDC- Industrial Revolution

LDC- Medical Revolution

## **Stage Two:**

*CBR*- very high

*CDR*- plummets

*NIR*- high

*Population Growth*: High

## **Movement from Stage Two to Stage Three:**

Changes in Social customs and improved technology

# DEMOGRAPHIC TRANSITION

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## Stage Three:

*CBR*: Drops quickly

*CDR*: Falling but slower than before

*NIR*: slows

*Population Growth*: Moderate

## Movement from Stage Three to Stage Four:

greater gender equity, more women working and improved birth control

## Stage Four:

*CBR*: low

*CDR*: low

*NIR*: low

*Population Growth*: Low



# DEMOGRAPHIC TRANSITION

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Examples of Countries and Regions of each stage of demographic transition:

Stage One:           None

Stage Two:           Sub-saharan Africa

Nigeria, Sierra Leon, Cape Verde

Stage Three:        East Asia, Latin America, Middle East

China, Brazil, Mexico, Saudi Arabia, Chile

Stage Four:         Western Europe

United Kingdon, Demnark

# ROSTOW'S STAGES OF ECONOMIC GROWTH

**Definition:** A model of economic development that describes a country's progression which occurs in five stages transforming them from least-developed to more-developed regions.

## **Stages:**

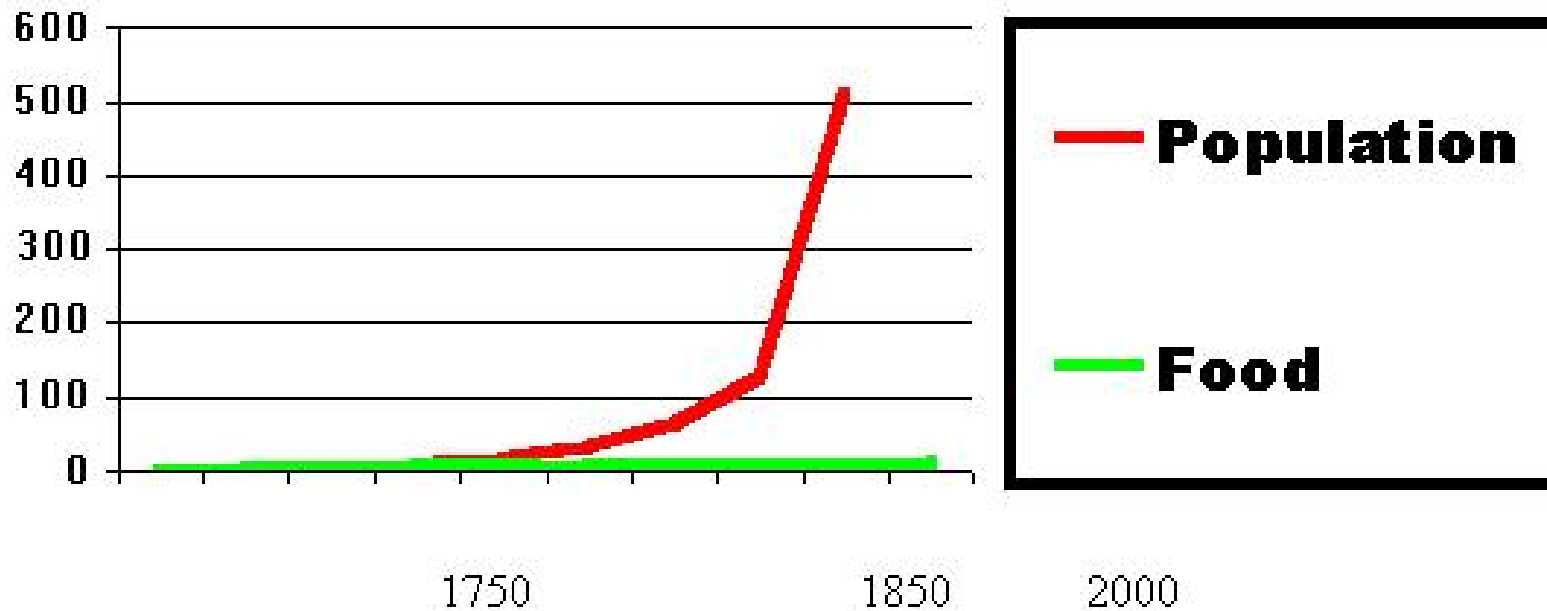
1. The traditional society- a country that has not yet begun the process of development. It contains a very high percentage of national wealth allocated to military and region. (Rostow called those services “nonproductive”)
2. Preconditions to takeoff- An elite group of people initiate innovative economic activities including new technology and infrastructure.
3. The Takeoff- Rapid growth generated in a limited number of economic activities like textile and food production.
4. The drive to maturity- Modern technology diffuses to many areas. Workers become more skilled and specialized.
5. The age of mass consumption- Economy shifts from heavy industry to consumer goods.

# ROSTOW'S STAGES OF ECONOMIC GROWTH

Support of the model: According to the model, each country is in one of the five stages. It was based on two factors: 1. the developed countries of Europe and Anglo-America had been joined by other countries in Southern and Eastern Europe and Japan. 2. many LCDs contain an abundant supply of raw materials sought by manufacturers and producers in MDCs

Critiques of the model: One major problem with the model is that it assumes that all countries will follow the same process of development that the developed countries of Western Europe and North America followed. It also follows countries with a capitalist economy. Not all countries in the world have a strong, capitalistic economy like those in the West.

# MALTHUS' PRINCIPAL OF POPULATION AS IT AFFECTS THE FUTURE



**Malthus' Theory of Population and Food Growth Over Time**

*% increase on left axis*



# MALTHUS' PRINCIPAL OF POPULATION AS IT AFFECTS THE FUTURE

## What Malthus said:

- population grows geometrically while food production grows arithmetically
- according to Malthus, these growth rates would produce the following relationships between food and people in the future:

• Today	1 person, 1 unit of food
• 25 years from now	2 persons, 2 units of food
• 50 years from now	4 persons, 3 units of food
• 75 years from now	8 persons, 4 units of food
• 100 years from now	16 persons, 5 units of food
- these predictions were made just after England became the first country to enter stage 2 of Demographic Transition

# MALTHUS' PRINCIPAL OF POPULATION AS IT AFFECTS THE FUTURE

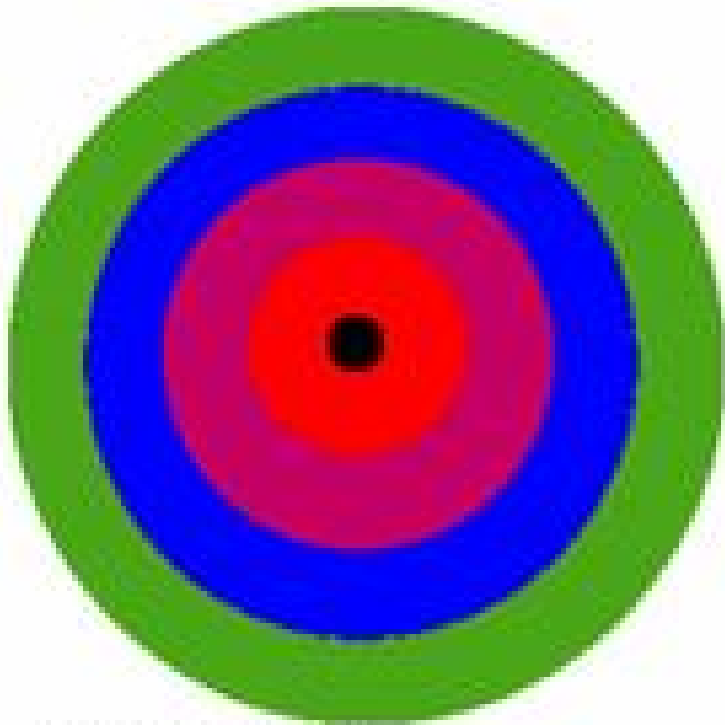
## **Neo-Malthusians:**

1. Population growth is increasing greatly in the poorer countries of the world because of medical growth not growth of wealth. They are not increasing their food production as quickly as they are their population
2. Population growth is stripping the world of many valuable resources like energy sources, not just food.

## **Malthus' Critics:**

1. Boserup and Kuznets: Population growth could stimulate economic growth and bring about more food production.
2. Simon: Population stimulated economic growth. More people=more brains to invent things to improve life.
3. Marxists: No cause-effect relationship between the growth of population and economic development.

# VON THUNEN'S LAND USE MODEL



**Central City**

**Intensive Farming/Dairying**

**Forest**

**Extensive Field Crops**

**Ranching/Animal Products**

Mat T. Rosenberg, 1997

- 1826- *The Isolated State* by Johann von Thunen

- According to the model, a commercial farmer initially considers which crops to cultivate and which animals to raise based on market location.

- Farmer takes into account two costs: cost of land v. cost of transportation

- The goods that are expensive to ship or are perishable will be closer to the central city while the goods that need lots of land or are inexpensive to ship will be farther from the central city.



# CENTRAL PLACE THEORY

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## **Definition:**

A theory of Walter Christaller that seeks to explain the relative size and spacing of towns and cities as a function of people's shopping behavior.

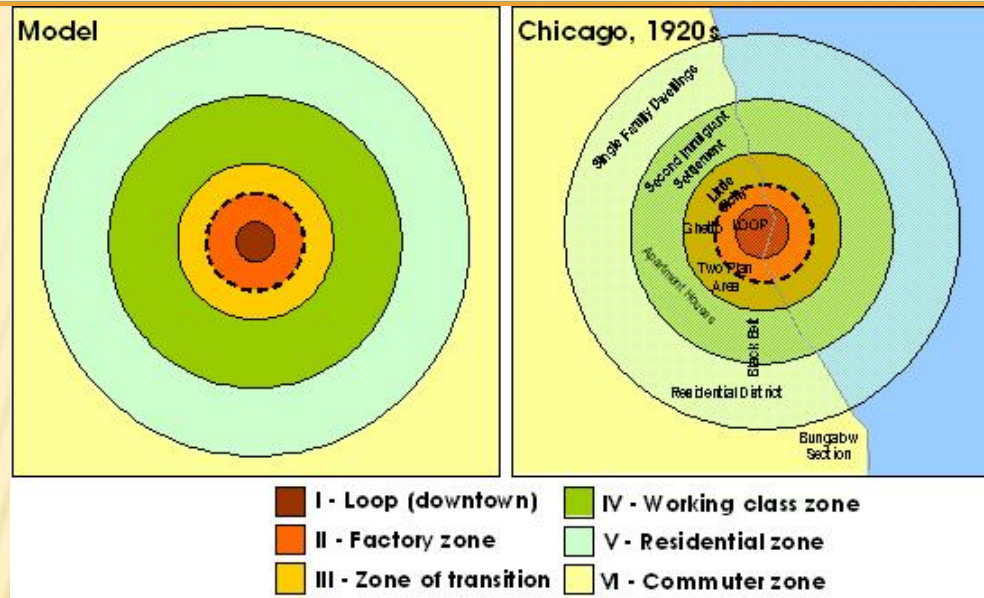
It explains how and where central places in the urban hierarchy should be functionally and spatially distributed.

The smallest settlements in an urban system will provide only those goods and services that meet everyday needs (bakery and dairy products, and groceries) and that these small settlements will be situated relatively close to one another because consumers, assumed to be spread throughout the countryside, will not be prepared to travel far for such items. On the other hand, people will be willing to travel farther for more expensive, less frequently purchased items usually found in the larger settlements.

Range and Threshold are taken into account when deciding where to place a business.



# CONCENTRIC ZONE MODEL



**Definition:** A city grows outward from a central city in a series of concentric rings. The rings denote different classes of people.

1<sup>st</sup> is the CBD

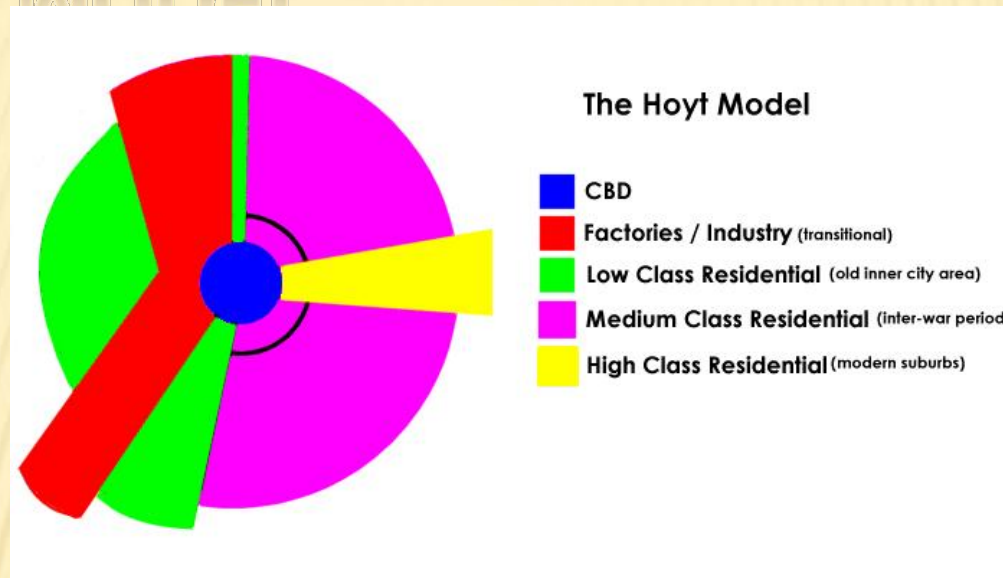
2<sup>nd</sup> is the zone of transition containing industry and poorer houses

3<sup>rd</sup> is the working-class zone containing modest homes with working class families

4<sup>th</sup> is the middle class with newer spacious homes

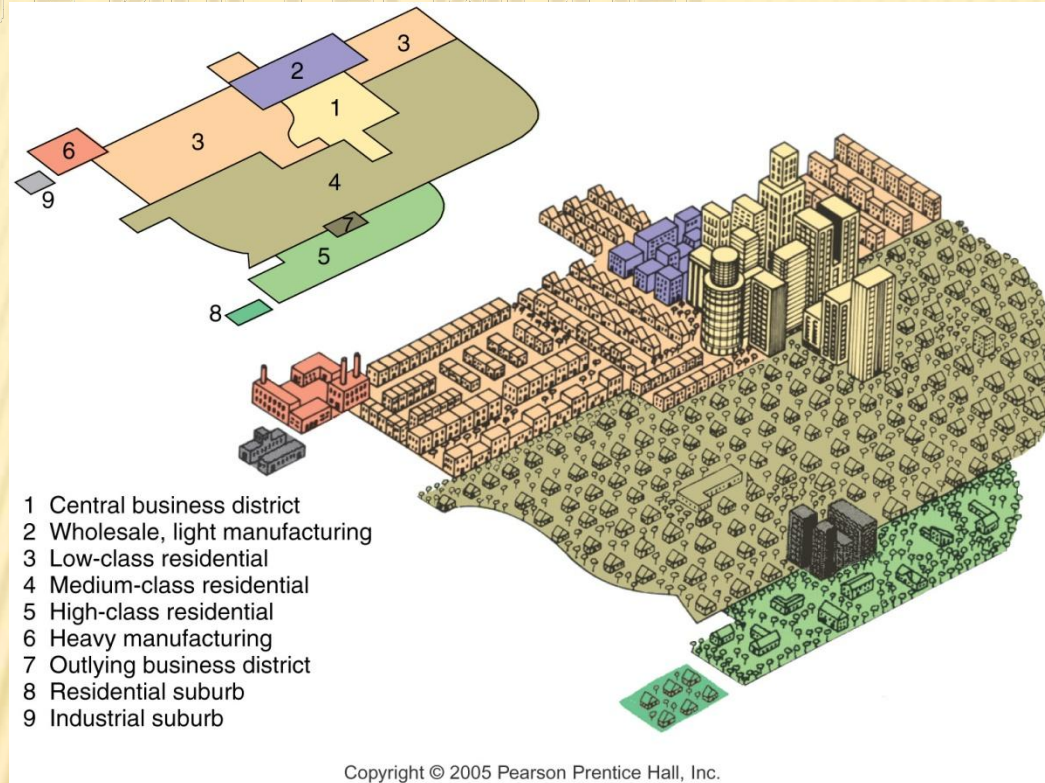
5<sup>th</sup> is the commuter zone

# SECTOR MODEL



**Definition:** The city develops in a series of sectors, not rings. As a city grows, activities expand outward in a wedge from the center. Many areas are more attractive for various activities. Social classes are found in sectors of a city, not in the rings from the inside out.

# MULTIPLE NUCLEI MODEL



**Definition:** A city is a complex structure that includes more than one center around which activities revolve. Examples of these nodes are a port, neighborhood business center, university, airport and park. Some activities are attracted to particular nodes, whereas others try to avoid them like things near universities and airports.



# WALLERSTEIN'S WORLD SYSTEMS THEORY

Definition: Theory developed by Immanuel Wallerstein that explains the emergence of a core, periphery and semi-periphery in terms of economic and political connections first established at the beginning of exploration in the late 15<sup>th</sup> century and maintained through increased economic access up until the present.

Core- Countries with strong economies with large economic productivity, high per capita GDP. Seen as the MDCs of the world

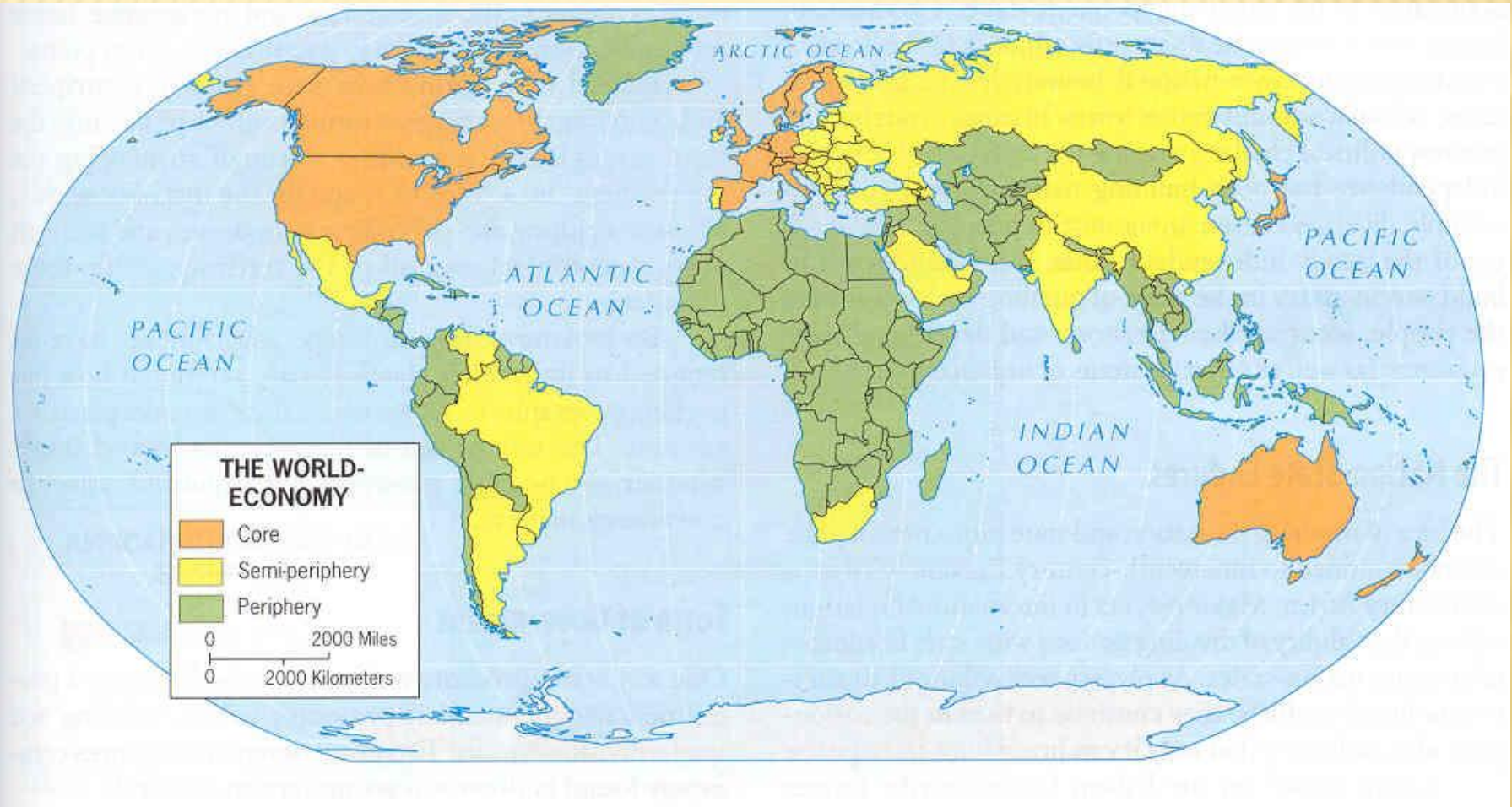
Semi-periphery- The newly industrialized countries with median standards of living, such as Chile, Brazil, India, China and Indonesia. They offer their citizens relatively diverse economic opportunities but also have extreme gaps between rich and poor.

Periphery- Countries that have low levels of economic productivity, low per capita incomes and generally low standards of living. They world economic periphery includes Africa (not S. Africa), parts of S. America and Asia



# CORE-PERIPHERY MODEL

СОВЕЪЕВЪИЪНЕВЪА WODET



# MACKINDER'S HEARTLAND THEORY AND SPYKMAN'S RIMLAND THEORY





# MACKINDER'S HEARTLAND THEORY AND SPYKMAN'S RIMLAND THEORY

## **Heartland Theory:**

Mackinder believed that a land-based power, not a sea-based power, would ultimately rule the world. He believed that Eurasia was the most important area in the world containing a “pivot area” extending from Eastern Europe to eastern Siberia. The “pivot area” became known as the Heartland.

Who rules East Europe rules the Heartland.

Who rules the Heartland rules the World Island.

Who rules the World Island rules the World.

## **Rimland Theory**

Spykman believed the Eurasia rim, not its heart, held the key to global power. He parodied Mackinder:

Who controls the Rimland rules Eurasia

Who rules Eurasia controls the destinies of the world.

Spykman saw a divided rimland as a key to the world's balance of power. Today the rimland includes Western Europe and China

# WEBER'S LEAST COST THEORY

## Definition:

Model developed according to the location of manufacturing establishments is determined by the minimization of three critical expenses:

1. **labor**
2. **transportation**
3. **agglomeration** (a process involving the clustering or concentrating of people or activities. Often refers to businesses that benefit from proximity because they share skilled-labor pools and technological and financial amenities.)