



- MWS (1540-1650) began with the Period of Exploration and Discovery, lasted until the mid-17th century
- Interdependent system of countries, linked by economic and political competition
- Linked mainly by capitalistic relationships
  - Began with mercantilism



- World System Theory developed by Immanuel Wallerstein (1970s)
  - Criticizes the capitalist world economy as creating spatial and sectoral inequalities through exploitation and domination of precapitalist modes of production in developing countries
- External Arena regions not yet incorporated into the world system during its early stages
  - Australia, New Zealand, South Africa, Brazil



- 15th century: exploration was important in opening up new opportunities for trade and economic expansion
- 16th century: new shipbuilding and navigation technologies bind more places together through trade and political competition
  - Different resources, social structures and cultural systems resulted in quite different pathways of development
- 17th century: consolidated with stronger economic ties between countries
  - Start of the involvement in the capitalist system



- There were instances of resistance and adaptation
  - Tanzania attempted to become self sufficient
  - China and Cuba opted out of the capitalist system to pursue a different path to development
- This resulted in a highly structured relationship between places and regions



- · Core Regions
- Semi Peripheral Regions
- Peripheral Regions



- · Core Regions
  - Dominate trade
  - Control the most advanced technologies
  - High levels of productivity
  - Diversified economies
  - High per capita incomes
  - Success depends on their dominance and exploitation of other regions



- · Core Regions
  - Military enforcement
  - Colonialism establishment and maintenance of political & legal domination by a State over a separate and alien society.
  - Sheer economic and political influence



- Core Regions
  - G8
    - Canada
    - France
    - Germany
    - Italy
    - Japan
    - Russia
    - United Kingdom
      United States
    - United StatesEuropean Union



- · Semi Peripheral Regions
  - Able to exploit peripheral regions
  - Exploited by core regions
  - Neither peripheral nor core status is permanent
    - US and Japan
    - Spain and Portugal



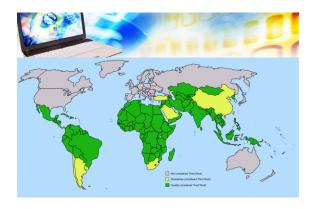
- Semi Peripheral Regions
  - Determinants in change in status:
    - Manipulating markets
    - Regulating economies
    - Creating physical and social infrastructures



- Semi Peripheral Regions
  - O5 (Outreach 5 or Plus 5)
    - Brazil
    - China
    - India
    - Mexico
    - South Africa



- Peripheral Regions
  - Dependent and disadvantageous trading relationships
  - Obsolete technologies
  - Undeveloped/narrowly specialized economies
  - Low levels of productivity
  - Third World Countries





- André Gunder Frank (1967)
  - Metropolis satellite setup
  - Development of the metropolis is unlimited while that of the satellites is limited
  - Satellites experience their greatest economic development when their ties to their metropolis is weakest
    - First World War
  - Those regions that are the most underdeveloped and feudalistic today are the ones that had the closest ties to the metropolis in the past



- Minisystems (MS) society with a single cultural base and a reciprocal social economy
  - Subsistence based economies
  - Limited in geographic scale
  - Vulnerable to climate change



- Paleolithic (Old Stone Age) (10,000 years & beyond)
  - Subsistence economies
  - Hunting and gathering
- Proto-Neolithic (early Stone Age) (9000 7000 B.C.)
  - Start of first agricultural revolution
    - Slash and burn/shifting cultivation (fallowing)
    - Use of fire
    - Use of stone tools
    - $\bullet\,$  Improved tools to prepare and store food



- **Neolithic** (New Stone Age) (7000 5500 B.C.)
  - Sedentary cultivation
  - Production of surplus
  - Start of barter/trade economy
  - Domestication of animals



- · Residual Minisystems
  - Provide stark counterpoints to the landscapes and practices of the contemporary world-system
  - Bushmen of the Kalahari Desert
  - Hill tribes of Papua New Guinea
  - Tribes of the Amazonian rainforest



- Carl Sauer (Agricultural Origins and Dispersals) (1952)
  - Agricultural breakthroughs could only take place in certain geographic settings:
    - Natural food supplies were plentiful
    - Terrain was diversified
    - Soils were rich and relatively easy to till
    - No need for large scale irrigation or drainage



- Geographic settings where new practices have developed and from which they have subsequently spread
- Agricultural practices diffused slowly outward from each
- Four Main Hearth Areas:
  - Fertile Crescent
  - South Asia
  - East Asia
  - The Americas



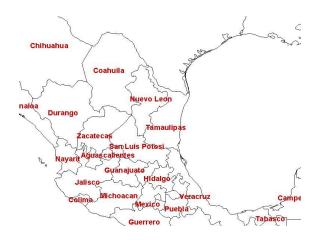






 Mesoamerica, around Tamaulipas and the Tehuacán Valley (Mexico), Arizona, New Mexico, western slopes of the Andes Mountains













- · Source of:
  - Improved strains of crops
  - Domesticated animals
  - New farming techniques



- Effects of the Agricultural Revolution:
  - Population increase
  - Settlements
  - Change in social organization from loose communal systems to one based on kinship
  - Allowed specialization in non-agricultural activities
  - Barter trade



- World Empire group of MS that have been absorbed into a common political system while retaining their fundamental cultural differences
- Redistributive tributary social economy
  - Military coercion
  - Religious persuasion
  - Combination of both



- Best known world empires:
  - Egypt
  - Greece
  - China
  - Byzantium
  - Rome



- Effects of world empires:
  - Urbanization
  - colonization



- **Urbanization** movement of people from rural to urban areas
  - Changes in activities from rural to urban
  - Towns and cities:
    - Centers of administration
    - Military garrisons
    - Theological centers



- Ur (Mesopotamia) 200,000 in 2100 B.C.
- Thebes (Egypt) 200,000+ in 1600 B.C.
- Athens and Corinth (Greece) 50,000 100,000 in 400 B.C.
- Rome 1,000,000 around 200 A.D.
  - Paved streets, piped water, sewage systems, massive monuments, grand public buildings and impressive city walls



- Colonization indirect consequence of the law of diminishing returns (LDR)
- LDR tendency for productivity to decline, after a certain point, with the continued application of capital and labor to a given resource base
  - Fixed resource base, growing population
  - Colonize lands to compensate for the declining productivity



- Colonization had immediate spatial consequences
  - Hierarchies of settlements
  - Transportation networks
    - Center vs. Periphery
- Still apparent in today's landscapes
  - Hadrian's Wall 110 km., height of 20 feet, thickness of 9 feet
  - Intramuros
  - Colosseum







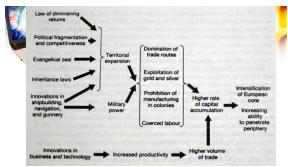


- With large scale communal land improvement schemes using forced labor
  - Irrigation and drainage schemes as the basis for agricultural productivity
  - Resulted in terraced landscapes
    - Sikkim, India
    - East Java, Indonesia
    - Banaue, Philippines





- Factors motivating European Overseas Expansion:
  - \_ I DR
  - Competition among the aristocracy
  - Inheritance laws
    - Law of primogeniture
  - Innovations in ship building, navigation and gunnery



- "Whoso commands the sea commands the trade of the world; whoso commands the trade of the world commands the riches of the world"
  - Sir Walter Raleigh



- Plantation large landholding that usually specializes in the production of one particular crop for market
  - Sugar
  - Cocoa
  - Indigo



- Constrained by technology (wood):
  - Size and strength of timber imposed structural limits on the size of buildings
  - Limits on size and design of ships
    - Limit on the volume and velocity of world trade
  - Unsuitability for overland transportation



- Industrial revolution (1750)
  - New production technologies
    - More efficient energy sources
    - Raised levels of productivity
    - New & better products stimulated demand, increased profits, more capital for further investment
  - New transportation technologies
    - Geographic expansion
    - Internal development



- Industrial revolution ushered in classical capitalism
  - National wealth is defined in terms of consumable goods and the labor (services) that the state produces



- First Wave (1790 1850)
  - Initial cluster of industrial technologies in Britain based on steam engines, cotton textiles and iron working.
- Second Wave (1850 1870)
  - Diffusion to Western Europe (France, Belgium and Germany)
  - Based on steel, machine tools, railroads and steamships



- Third Wave ( 1870 1914)
  - Emergence of electricity, electrical engineering, telecommunications
  - Created the Golden Triangle (London, Paris, Berlin)



- Periods of international power established by individual states through economic, political and military competition or through imperialism
  - Exercise of military power and economic influence by core states to advance and secure their natural interests
- Hegemony domination by one national state over the world economy in one particular epoch
  - Using economic, political, financial and military means



- Portuguese Dominance
- Dutch Dominance
- British Dominance
- American Dominance

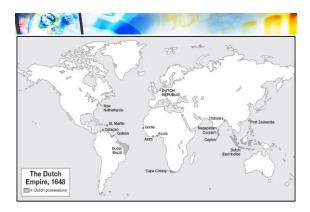


 Established by the Treaty of Tordesillas in 1494 by Pope Alexander VI using the line of demarcation (between 48° and 49° W)





- Started with the defeat of the Portuguese-backed Spanish Armada in 1588.
- · Fishing and shipping industries
- Dutch East India Company
- Dutch West India Company
- 1660's English and French challenged the hegemony
  - Anglo Dutch wars went in favor of England





- Anglo Dutch wars made England a great naval power
- Napoleonic Wars ended with victories by Admiral Lord Nelson at Trafalgar (1805) and Lord Wellington at Waterloo (1815)
- 1860's imperial overstretch
- Increasing economic competition from US & Germany
- WWI: Germany defeated, Britain weakened, United States strengthened



- Rose to power after WWII
- Economic and cultural hegemony was unchallenged but political and military superiority were challenged by Russia
- Gulf War (1991)— hegemonic power protecting the economic foundations of their power
  - Iraq invaded Kuwait



- Increasing interconnectedness of places through economic, political, cultural and environmental change
- After WWII, "Four Worlds" evolved:
  - First
  - Second
  - Third
  - Fourth, worlds



- First world dominant State within the world-system core
- Second world communist countries
- Third world politically independent states but highly dependent economically on the world's core countries
- Fourth world holders of fossil fuel deposits



- Neo-colonialism economic and political strategies by which old core states still indirectly maintain and extended their influence over other areas/states
  - International finance regulations
  - Commercial relations
  - Covert intelligence operations
- Human geographies of peripheral countries are heavily shaped by the linguistic, cultural & institutional influence of the former colonial powers



- Transnational Corporations company with investments and activities that span international boundaries and with subsidiaries in several countries
  - Headquarters in the core countries
- Commodity Chains networks of labor and production processes whose origin is in the extraction of raw materials and whose end result is the delivery and consumption of a commodity



- Four causes of Globalization:
  - New international division of labor
  - Internationalization of finance
  - New technology systems
  - Homogenization of international consumer markets



- New International Division of Labor
  - Core counties focused on producer services
    - Information services, insurance and market research
    - Enhance the productivity or efficiency of other firms' activities
  - Manufacturing production has been decentralized to semi peripheral and peripheral countries



- Internationalization of Finance
  - Emergence of global banking and globally integrated financial markets
  - Computers and information systems
  - Nerve centers: London, Frankfurt, New York, Tokyo
    - 24 hour trading between major financial markets



## · New Technology Systems

- Solar energy
- Robotics
- Microelectronics
- Biotechnology
- Digital telecommunications
- Computerized information systems
- Containerization

- Cargo jets
- Fax machines
- Fiber optic networks
- Communication satellites
- Electronic mail
- Electronic information retrieval systems



- Economic and cultural globalization have not been matched by political globalization or a system of governance that can cope with its powerful forces
  - National governments, political alliances and organizations and the UN appear weak against the powerful TNCs



- Intensified the differences between the core and the periphery
- Gap between the poorest 20% of the world's population and the wealthiest 20% increased threefold between 1960-1990
- Fast world
- Slow world



## • Fast World

- People, places and regions directly involved as producers and consumers in:
  - Transnational industry
  - Modern telecommunications
  - Materialistic consumption
  - International news and entertainment
  - 15% of the world's population



- Slow World
  - Participation is limited
  - Impoverished periphery
  - Rural backwaters
  - Declining manufacturing regions
  - Disadvantaged slums
  - Bypassed by the latest phase in the evolution of the modern world-system
  - 85% of the world's population



 Knox, P.L., S.Marston, A.Nash (2001). Human Geography: Places and regions in a global context. Toronto: Prentice-Hall, Inc.