Neo-evolutionism

(Childe, White, Steward, Sahlins and Service)

1. Introduction

After the decline of **19th-century unilineal evolutionism**, early 20th-century anthropologists became wary of grand theories that ranked societies in rigid stages. However, by the 1930s–1950s, scholars revisited evolutionary models with greater empirical rigor and methodological sophistication. This movement is called **Neo-evolutionism**, and it sought to **reintroduce evolutionary explanations without ethnocentrism**, combining cultural materialism, ecology, and systems thinking.

Neo-evolutionism **emphasized multilinear development**, not a single universal path, and often used **scientific criteria like energy capture, ecological adaptation, and sociopolitical organization** to explain cultural change.

2. V. Gordon Childe

a. Childe's Materialist Framework

Vere Gordon Childe (1892–1957) was an Australian-born archaeologist is best known for introducing a **Marxist-materialist perspective** into archaeology, emphasizing that **technological innovations and economic organization**—not race or "genius"—were the primary forces behind cultural evolution.

Rejecting the **Eurocentric and racial hierarchies** of 19th-century evolutionists like Tylor and Morgan, Childe was inspired by **Karl Marx's historical materialism**, combining it with archaeological evidence to trace human progress. At institutions like the **Institute of Archaeology (UCL)** and through his wide correspondence with Soviet scholars, Childe developed a critical framework that **linked economic base to social superstructure**.

He viewed social change not as a smooth process, but through **revolutions**—dramatic turning points in human history marked by technological and economic innovation.

b. Key Contributions to Neo-evolutionary Theory

1. The Neolithic Revolution

In his seminal work **"Man Makes Himself" (1936)** and later in **"What Happened in History" (1942)**, Childe coined the term **"Neolithic Revolution"** to describe the **transition from foraging to farming** roughly around **10,000 years ago**.

- This was not a slow, gradual change but a **transformational shift** in how humans lived, produced food, and organized society.

- The domestication of **wheat, barley, sheep, goats, and cattle** in the **Fertile Crescent** led to **permanent settlements**, food surplus, and **population expansion**.

- Childe emphasized that **technological control over nature** (e.g., irrigation, tools, granaries) was the **material foundation** for complex society.

Case Integration: At **Çatalhöyük** in modern-day Turkey (excavated later by Ian Hodder), evidence of early sedentary life, surplus storage, and symbolic art provides material support for Childe's thesis.

2. The Urban Revolution

Childe identified a second major threshold in cultural evolution—the **Urban Revolution**—around **3500 BCE**, notably in **Mesopotamia and Egypt**.

In his article *"The Urban Revolution" (1950)*, published in the journal *Town Planning Review*, Childe defined **10 key features** of early cities:

- Surplus production

- Monumental architecture

- Social stratification

- Writing systems

- Craft specialization

- Long-distance trade

- Political centralization

Childe argued that **cities represented the birth of civilization**, where class society, state power, and ideology emerged on top of economic foundations.

c. Case Studies: Mesopotamia and Nile Valley

1. Mesopotamia (Sumerians, 3500 BCE onwards)

- Excavations at **Uruk and Ur** (modern Iraq) showed evidence of:
    - Large-scale **irrigation canals**,
    - Early **cuneiform script**,
    - Centralized **temples (ziggurats)**,
    - Evidence of **grain storage** and tax collection.

Childe interpreted these findings to argue that **agricultural surplus enabled ruling elites, priesthoods, and bureaucracies**—marking the transition to **state-level societies**.

2. Nile Valley (Ancient Egypt, from 3100 BCE)

- In the **Old Kingdom period**, massive construction projects like the **Pyramids of Giza** reflected the ability of centralized institutions to mobilize labor.
- **Hieroglyphic writing**, religious ideology, and a **complex division of labor** fit Childe's model of an "urban" society supported by **irrigated agriculture along the Nile**.

d. Criticisms and Limitations

Despite his pioneering work, Childe's theories have faced criticisms:

- **Technological Determinism**: Some scholars argue Childe **overemphasized technology and economy**, underplaying **ritual, ideology, and social agency**.
    - **Ian Hodder's post-processual archaeology** counters Childe by highlighting **symbolism and meaning in early societies**, e.g., at Çatalhöyük.
- **Eurocentric Focus**: While Childe was critical of racist evolutionism, his focus remained largely on the **Near East and Europe**, with less comparative attention to **Africa, East Asia, or the Americas**.
- **Stage-based Model**: Although more nuanced than 19th-century evolutionists, Childe's **"revolutionary" stages** can be seen as **linear** or **teleological**.

3. Leslie White

a. Scientific and Materialist Approach to Culture

Leslie A. White (1900–1975), a leading figure in 20th-century American anthropology, developed a **neo-evolutionary framework** grounded in **science and technology**. A professor at the **University of Michigan**, White sought to revive evolutionary thinking but without the ethnocentric and racial assumptions of 19th-century scholars like Tylor and Morgan.

Drawing inspiration from **thermodynamics**, **systems theory**, and **Marxist materialism**, White proposed that **culture evolves through its increasing ability to capture and utilize energy from the environment**. His approach focused on long-term, **universal evolutionary trends**, and offered a **quantifiable** and **testable model** for understanding cultural development.

Unlike Boasian anthropologists who emphasized **cultural relativism**, White reasserted **cross-cultural comparison** by introducing **general laws of cultural progress**, especially rooted in **technological efficiency**.

b. White's Core Formula: C = E × T

White's most influential contribution was his **thermodynamic model of cultural evolution**, expressed in the formula:

$$C = E \times T$$

Where:

- **C** = Degree of cultural development

- **E** = Energy consumed per capita per year

- **T** = Efficiency of energy use in a given technology

This formula reflects White's view that **technological capability and energy utilization** are the most important determinants of societal complexity. For example:

- A society using animal labor inefficiently (low T) may evolve slower than one using fossil fuels efficiently (high T).

- It allows comparison between societies not on the basis of values or race, but on **material and technological criteria**.

c. Evolutionary Stages Based on Energy Capture

White outlined **five evolutionary stages** based on the source of energy a society exploits:

1. **Human Muscle Power**

- ○ Dominant in **hunter-gatherer societies** like the !Kung of the Kalahari or the Inuit.
- ○ Energy is limited to individual physical labor.

2. **Domesticated Animals**
   - ○ Early **agricultural societies** (e.g., Mesopotamia, Indus Valley) used oxen, horses, camels.
   - ○ Greater agricultural productivity enabled **larger population centers**.

3. **Plants**
   - ○ **Advanced agricultural civilizations** (e.g., medieval China or Mayan societies) learned to manage **photosynthetic energy**, intensifying crop yields with irrigation and plowing.

4. **Fossil Fuels**
   - ○ The **Industrial Revolution (1750 CE onwards)** marked a leap with **coal, oil, and steam engines**.
   - ○ Societies like Britain, the US, and later Japan **transformed production, transport, and warfare** through mechanized energy use.

5. **Nuclear Energy**
   - ○ In the 20th century, the capacity to split atoms (e.g., Hiroshima, nuclear reactors) represented the **highest level of energy harnessing**.
   - ○ Though controversial, it marked a **qualitative leap** in cultural evolution.

Case Example:

- In **Britain**, the steam engine revolutionized energy use. According to studies, this shift allowed fewer workers to produce more goods, unleashing mass production and urbanization.

- In contrast, **traditional societies** in parts of sub-Saharan Africa or interior Asia that remained reliant on **animal or plant-based energy systems** showed different developmental trajectories—not because of cultural inferiority, but because of **limited energy regimes**.

d. Cultural Evolution as a Technological Process

White saw **technology as the "leading edge" of culture**. He viewed religion, art, politics, and other institutions as **superstructures** that respond to changes in the **technological base**.

This approach resonates with **cultural materialism**, and anticipates later work by anthropologists like:

- **Marvin Harris** (Columbia University), who emphasized infrastructure in shaping culture.

- **Marshall Sahlins**, who later critiqued but also engaged with White's ideas, especially in relation to Polynesian societies.

White believed that cultures **don't evolve because they are morally superior or more creative**, but because **they learn to harness energy better**—a **neutral, scientific criterion**.

Example:

- **Western societies** advanced rapidly not due to racial or intellectual superiority, but because they efficiently exploited **coal, oil, and later nuclear power**.

- This perspective challenged colonial ideologies and encouraged anthropologists to **focus on ecological and technological factors** in social evolution.

e. Criticism

While Leslie White's work was influential, it has also drawn significant criticism:

1. **Technological Determinism**

   - Critics argue that White's theory **reduces culture to technology and energy**, ignoring **ideology, symbols, values, and social agency**.

   - **Clifford Geertz** emphasized that culture is a **web of meanings**, not just tools and machines.

2. **Neglect of Environment and Feedback Loops**

   - White underemphasized the **ecological consequences** of energy expansion.

   - Anthropologists like **Julian Steward** and later **Roy Rappaport** stressed that **energy use must be adapted to environmental limits**, not just maximized.

3. **Ethnocentric Application**
   - Although White avoided racial hierarchies, his **focus on energy-intensive societies** can be seen as favoring **industrial models** of development.
   - Anthropologists working in **South Asia (e.g., D.N. Majumdar)** or **Japan (e.g., Eiichiro Ishida)** argued for attention to **local adaptations** that are culturally rich but not energy-intensive.

4. Julian Steward

a. Culture and Environment: A Rejection of Unilinear Models

Julian H. Steward (1902–1972), a prominent American anthropologist radically redefined the theory of cultural evolution by rejecting **unilinear models** of development. Unlike theorists such as **Leslie White**, who believed that all cultures follow a **universal path** of progress, Steward argued for a **multilinear approach**. This means that **different societies evolve along different paths**, based on **specific environmental, technological, and historical conditions**.

His most influential contribution is the development of **cultural ecology**, a framework for understanding how **cultures adapt to their natural environments**. This approach does not assume that all cultures evolve towards complexity or statehood. Instead, it examines **how environmental constraints shape adaptive strategies**, technological practices, and social organization.

b. Core Concepts

Steward's theory is built on several **core concepts** that help explain the relationship between **culture** and the **ecosystem**:

- **Cultural Ecology**: This refers to the study of how human cultures interact with their environment. Steward viewed human societies as **adaptive systems** that modify their behavior and institutions to survive and thrive in specific ecological niches.

- **Culture Core**: Steward coined this term to describe the **key features of a society most directly linked to subsistence and environmental adaptation**. These typically include:
  - **Technology** (e.g., tools and irrigation systems)
  - **Economic practices** (e.g., foraging, herding, farming)
  - **Work organization** (e.g., family labor, communal work)

○ **Settlement patterns** (e.g., nomadic camps vs. permanent villages)

- **Multilinear Evolution**: Unlike the **unilinear evolutionists** who ranked societies on a single ladder of progress, Steward insisted that cultures **develop along multiple evolutionary lines**. These trajectories depend on environmental challenges, resource availability, and local innovations.

"Cultures do not develop in the same way everywhere; each responds to specific ecological and social pressures," Steward wrote in *Theory of Culture Change (1955)*.

c. Case Study: The Shoshone of the Great Basin

One of Steward's best-known applications of cultural ecology is his study of the **Shoshone people** in the **Great Basin region of western North America**, characterized by arid deserts, sparse vegetation, and unpredictable resources.

- **Adaptive Social Organization**: Because food and water were **scarce and widely dispersed**, the Shoshone could not afford large social groups. Instead, they lived in **small, mobile family bands** that frequently moved in search of food.

- **Resource Strategy**: Their main diet included **seed plants, roots, and small game**. The seasonal nature of food availability required **flexibility, mobility, and autonomy**.

- **Ecological Determinism Avoided**: Importantly, Steward did not claim that the environment *determines* culture, but that it provides the **conditions within which cultural patterns emerge**.

d. Regional Comparison: The Andes vs. the Great Basin

Steward's comparative work also examined how **different environments shape different types of societies**, even if they are at similar stages of subsistence or technological development.

- **Peruvian Highlands – The Inca Civilization**:
  In the **fertile and high-altitude regions** of the Andes, societies like the Inca could **intensively cultivate crops** (e.g., maize, potatoes, quinoa) using **terracing and irrigation**. This ecological surplus allowed:

　　○ **Dense populations**

　　○ **Bureaucratic governance**

　　○ **State-level organization**

- ○ **Infrastructure development** (e.g., roads, granaries, record-keeping via quipu)
- **Contrast with Shoshone**: While the Inca centralized power and built monumental architecture, the Shoshone remained in **small egalitarian units**. The key difference lay not in their inherent capabilities but in **the environments they had to adapt to**.

e. Criticisms

Despite its contributions, Steward's theory has also been critiqued on various grounds:

1. **Functionalism and Environmental Reductionism**: Some critics argue that cultural ecology risks **oversimplifying culture as just a response to the environment**, ignoring **symbolic systems, beliefs, and social conflict**. Steward focused more on **how** cultures work, not **what they mean**.

2. **Underemphasis on History**: Scholars like **Marshall Sahlins** pointed out that Steward's framework does not sufficiently consider **historical contingencies**, colonial encounters, or cultural agency in shaping development.

3. **Inadequate for Complex Societies**: Steward's model works well for **small-scale societies**, but may not fully explain **urban complexity, modern states, or global capitalism**, where environmental adaptation is mediated by **technology, policy, and ideology**.

5. Marshall Sahlins

a. Synthesizing Steward and White: A Dual Approach

Marshall Sahlins (1930–2021), a highly influential American anthropologist, offered a profound critique and reconciliation of the ideas of **Leslie White** and **Julian Steward**. He introduced the distinction between two types of cultural evolution:

- **General Evolution**: Refers to **broad evolutionary trends** observable across all societies over long periods—such as the **increasing complexity** of social, economic, and political systems. This idea echoes **White's focus on energy capture and technology**.

- **Specific Evolution**: Emphasizes **individual cultural trajectories** shaped by **local histories**, **ecologies**, and **symbolic systems**. This aligns with **Steward's focus on adaptation and multilinear development**.

By integrating these two approaches, Sahlins provided a more **holistic and balanced** understanding of human development. His work is still widely studied in global anthropology courses—such as at **Harvard**, **LSE**, and **Kyoto University**—for its theoretical depth and its challenge to ethnocentric assumptions.

b. The Original Affluent Society

In his famous essay **"The Original Affluent Society"** from *Stone Age Economics* (1972), Sahlins fundamentally challenged the assumption that **hunter-gatherer life was poor, harsh, and primitive**.

Drawing on ethnographic studies, especially of the **!Kung San (Ju/'hoansi)** people of the **Kalahari Desert**, he made the following claims:

- **Abundance, not scarcity**: Hunter-gatherers met their subsistence needs through only **15–20 hours of work per week**, allowing ample time for **leisure, family, and ritual**—a lifestyle far less stressful than modern wage labor.

- **Minimal inequality**: These societies lacked **private property**, **rigid hierarchies**, and **exploitative class divisions**, indicating a high level of **social equality** and **mutual dependence**.

- **Sustainable economies**: Their low-intensity interaction with nature ensured **ecological balance**, in contrast to industrial overproduction and environmental degradation.

"The world's most primitive people have few possessions, but they are not poor. Poverty is a social status, not a material condition," Sahlins famously wrote.

c. A Theoretical Balance: Beyond Materialism

Sahlins criticized **reductionist materialist models**, whether based on **energy capture (White)** or **ecological adaptation (Steward)**, arguing instead for a **symbolic and historical interpretation** of culture. He believed that human societies are not merely driven by survival but by **meanings, values, and historical narratives**.

For example:

- **Polynesian societies**, though similar in ecological setting, developed **distinct cultural norms**, myths, and political structures depending on **cosmological beliefs**.

- **Cultural meaning** influenced how people responded to material conditions. In some cases, ritual and belief systems **overrode rational economic**

behavior, showing that culture cannot be understood in utilitarian terms alone.

Sahlins' position thus inaugurated **"historical particularism with a global view"**, which emphasized both **cultural agency** and **local variation**, anticipating postmodern critiques of grand evolutionary schemes.

Criticisms of Sahlins

1. **Romanticizing the Primitive**: Some scholars accused Sahlins of **idealizing hunter-gatherer life**, ignoring issues like **insecurity**, **short life expectancy**, or **intra-group conflict**.

2. **Overgeneralization**: Critics like **Ernest Gellner** and **Melvin Ember** questioned whether the leisure and equality observed among the **!Kung** could be **universally applied** to all foraging societies.

3. **Underestimating Ecological Constraints**: While critiquing materialism, Sahlins may have **underplayed the role of ecological pressures** and environmental limitations in shaping early human societies.

Despite this, Sahlins remains a towering figure in anthropology, particularly for **redefining the relationship between economy, culture, and evolution**.

6. Elman Service

a. The Evolution of Political Systems

Elman R. Service (1915–1996), a key figure in **political anthropology** developed a **typology of sociopolitical evolution** that became foundational for understanding the **rise of complex societies**.

His model, first published in *Primitive Social Organization (1962)*, outlines a **four-stage evolutionary framework**:

1. **Bands**

   - **Small**, **egalitarian**, kin-based groups.

   - Characterized by **mobility**, **communal sharing**, and **decision-making by consensus**.

   - **Example**: The **!Kung San** of southern Africa, who hunt and gather in flexible groups based on familial ties.

2. **Tribes**

- ○ **Larger populations**, usually sedentary, organized around **lineages or clans**.

- ○ Leadership is **informal**, often through **"big men"** or respected elders.

- ○ **Example**: The **Nuer of South Sudan**, studied by **E.E. Evans-Pritchard**, exhibit tribal organization with **cattle-based economy** and segmentary lineage politics.

3. **Chiefdoms**

- ○ Societies with **centralized authority** in a **hereditary chief**.

- ○ Exhibit **social stratification**, **redistributive economies**, and **monumental architecture**.

- ○ **Example**: The **Polynesian islands**, such as **Hawaii**, had powerful chiefs who redistributed resources and organized labor.

4. **States**

- ○ Highly **stratified**, **bureaucratically organized** societies.

- ○ Possess **codified laws**, **standing armies**, **tax systems**, and **class divisions**.

- ○ **Example**: **Ancient Egypt**, with pharaonic kingship, centralized irrigation, and priestly class.

This model provides a **comparative framework** to understand how political structures **emerge, consolidate, and complexify**.

b. Integration Over Economy

Service emphasized that the **integration of diverse groups** into a cohesive political unit was a key factor in societal evolution—**not just economic surplus or environmental pressure**. He argued that **coordination**, **conflict resolution**, and **ideological legitimation** become more crucial as societies grow.

- ● In bands and tribes, **social integration** occurs through kinship and reciprocity.

- ● In chiefdoms and states, **institutions** and **ritual authority** take over this function.

Comparative Insight: While White focused on **energy** and Steward on **ecology**, Service provided a lens to understand the **emergence of political institutions**, including **leadership, law, and hierarchy**.

c. Case Studies: Trobriand and Maya

1. **Trobriand Islanders (Melanesia)**

    ○ Studied by **Bronisław Malinowski**, they were originally organized in **kin-based systems**.

    ○ Over time, **redistributive leadership roles** resembling **chiefdoms** emerged.

    ○ **Yams**, as both food and ritual wealth, became a tool for **chiefly authority**, illustrating **symbolic and economic centralization**.

2. **Maya Civilization (Central America)**

    ○ Archaeological and ethnohistorical evidence shows that Maya society evolved from **decentralized tribal communities** into **complex city-states** with kingship, bureaucracy, and temple economies.

    ○ Their political evolution was marked by cycles of **centralization, collapse, and reorganization**, showcasing **non-linear patterns** within a general evolutionary framework.

Criticisms of Service's Model

1. **Over-Schematization**: Critics argue that his **stages are too rigid**, ignoring societies that do not fit neatly into one category. Many societies **combine traits** from different stages.

2. **Eurocentric Evolutionism**: Like earlier evolutionists, Service's model has been critiqued for implying a **value-laden progression** from "simple" to "complex," often equating **statehood with civilization**.

3. **Neglect of Ideology and Symbolism**: Anthropologists such as **Pierre Clastres** argued that **non-state societies may deliberately resist centralization**, not because they are "less evolved," but due to **ideological choices**.

7. Common Features of Neo-evolutionism

1. Materialism: The Centrality of Technology, Environment, Energy, and Economy

A defining feature of neo-evolutionism is its **materialist orientation**. These anthropologists argued that the **material conditions of life**—especially **technology**, **energy utilization**, **ecological constraints**, and **economic**

systems—play a **foundational role in shaping social organization, cultural forms, and institutions**.

- **Leslie White** focused on the amount of **energy harnessed per capita per year** as a driver of cultural complexity.

- **Julian Steward** emphasized **ecological adaptation**, arguing that cultural systems develop in response to specific **environmental constraints and opportunities**.

- **Gordon Childe** analyzed **technological revolutions** (e.g., Neolithic and Urban Revolutions) as turning points in human history, where shifts in **subsistence patterns** led to new forms of social and political life.

2. Multilinearity: Evolution is Not a Single, Universal Path

Unlike 19th-century evolutionists such as **Lewis Henry Morgan** or **Herbert Spencer**, who proposed **unilinear stages of cultural development** (e.g., savagery → barbarism → civilization), neo-evolutionists firmly embraced **multilinear evolution**.

- **Julian Steward** explicitly argued that **each society follows its own evolutionary trajectory** based on **local ecology, historical experience, and social adaptation**.

- For example, desert-dwelling societies like the **Shoshone** evolved into **small, mobile family units**, whereas **Peruvian highland societies** developed **complex, centralized states**—both responses to distinct environmental pressures.

This **pluralistic understanding** became especially important in post-colonial anthropology, where researchers sought to avoid **Eurocentric models** of progress.

3. Scientific Method: Empiricism, Comparison, and Systems Thinking

Neo-evolutionism reasserted the **scientific goals** of anthropology—particularly the desire to **discover laws**, **formulate hypotheses**, and **test them empirically** across cultures and time periods.

- **Cross-cultural comparison** was widely used, as seen in **Service's typology** (bands, tribes, chiefdoms, states), which drew on ethnographic data from Africa, Oceania, the Americas, and Asia.

- Scholars employed **systems theory**, treating cultures as **dynamic feedback systems** where energy inputs, social organization, and technological innovation were interlinked.

- **Ecological models**, such as Steward's **cultural ecology**, incorporated concepts from **biology**, **geography**, and **environmental sciences**, giving anthropology a more **interdisciplinary and empirical foundation**.

4. Critique of Ethnocentrism: Moving Beyond Civilizational Superiority

A crucial feature of neo-evolutionism was its **rejection of the ethnocentric and racist assumptions** embedded in earlier theories of progress.

- Scholars like **Sahlins** argued that **"development" does not necessarily mean "better"**, and that **hunter-gatherers** may have lived more **fulfilling and egalitarian lives** than industrial workers in capitalist economies.

- **Steward** and others emphasized that **all societies are adapted**, not "backward"; their forms of organization reflect **logical responses to local conditions**.

- Evolution was no longer seen as a **ladder of civilization**, but as a **web of adaptive strategies**, each suited to specific social and ecological challenges.

9. PYQ Insights

1. Compare Neo-evolutionist Thinkers: White vs. Steward

A highly recurring comparative theme—testing materialism vs. ecology, unilinear vs. multilinear evolution.

2022: *Distinguish between Leslie White's and Julian Steward's approaches to cultural evolution.*

2. Neo-evolutionism as a Theoretical Framework

Often asked in general, theory-based questions—candidates are expected to explain origin, features, and significance.

2020: *Discuss the contributions of neo-evolutionism in understanding cultural change.*

3. Cultural Ecology and Environmental Determinism

Steward's ecological theory is repeatedly asked, especially with ethnographic illustrations.

2019: *Explain cultural ecology with suitable ethnographic examples.*

4. Contributions of Individual Thinkers

UPSC often isolates one neo-evolutionist to test depth of understanding.

2021: *Examine the sociopolitical evolutionary stages proposed by Elman Service..*

5. General vs. Specific Evolution (Sahlins)

A relatively newer focus area, appearing after syllabus reorientation toward nuanced theoretical debates.

2023: *Assess the significance of Sahlins' concept of "The Original Affluent Society" in anthropological theory.*

6. Evolution of Political Systems (Elman Service)

Often linked with state formation, kinship transitions, and political anthropology.

2021: *Examine Elman Service's evolutionary model of bands, tribes, chiefdoms, and states.*

7. Comparative Evolutionary Approaches

Sometimes multiple theorists are grouped together for comparative insights.

2022: *Evaluate the major distinctions among Childe, White, and Steward in their approaches to evolution.*

9. Role of Technology and Energy in Culture

Focused on White and Childe, often in relation to industrial and agricultural revolutions.

2015: *Discuss how energy utilization is central to Leslie White's explanation of cultural evolution.*