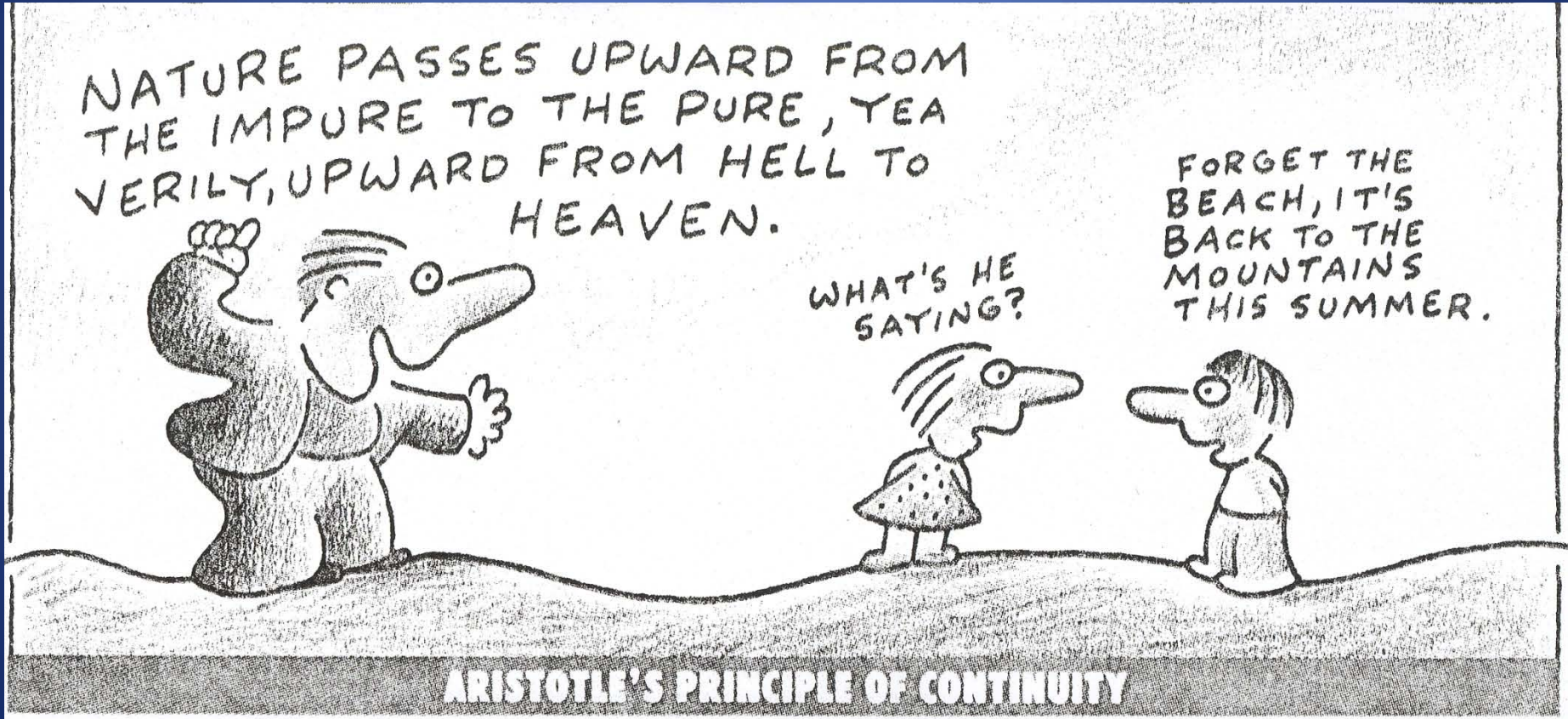
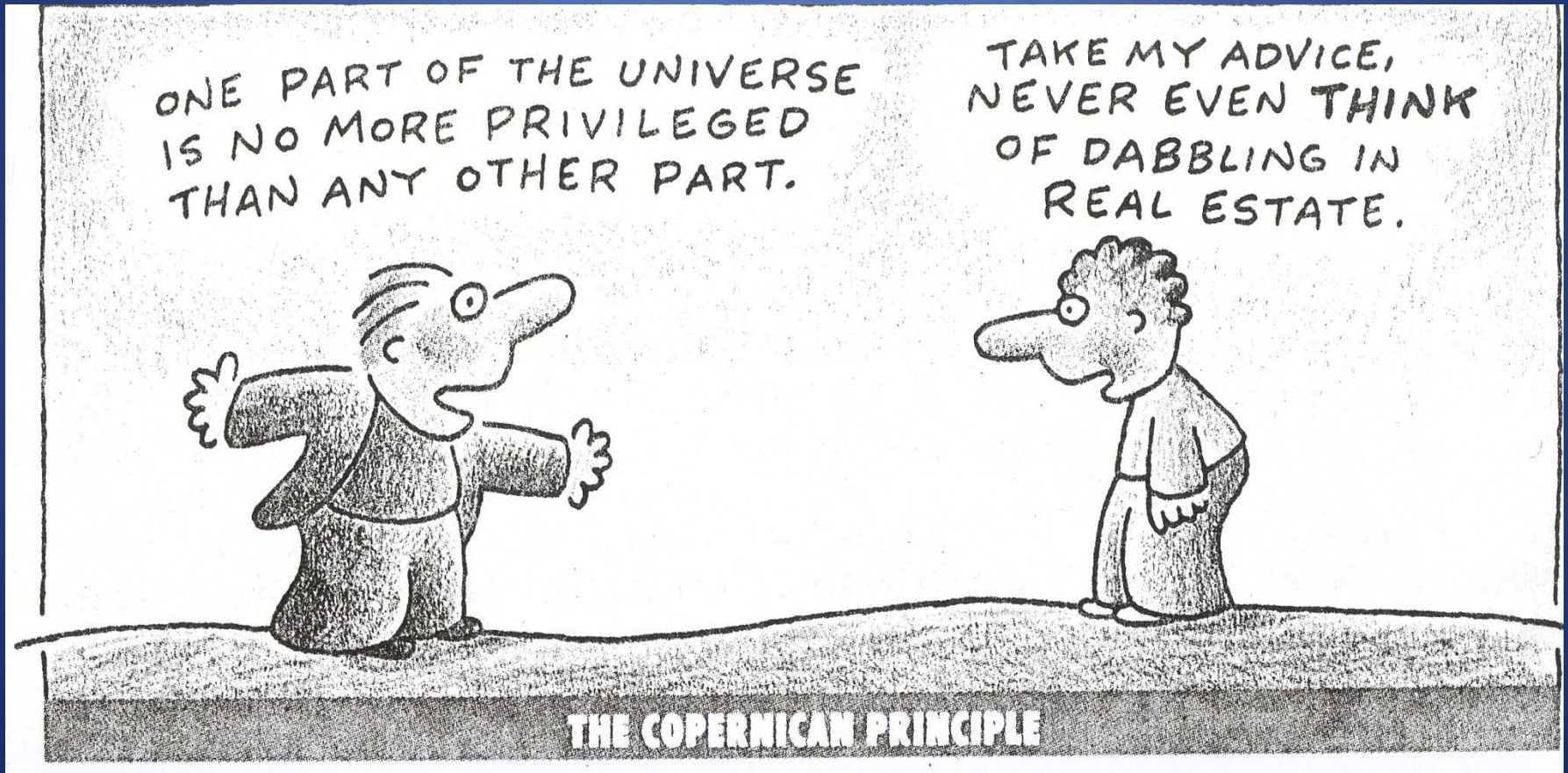


“What Happened in History”, or Grand Theories in Search of Reality

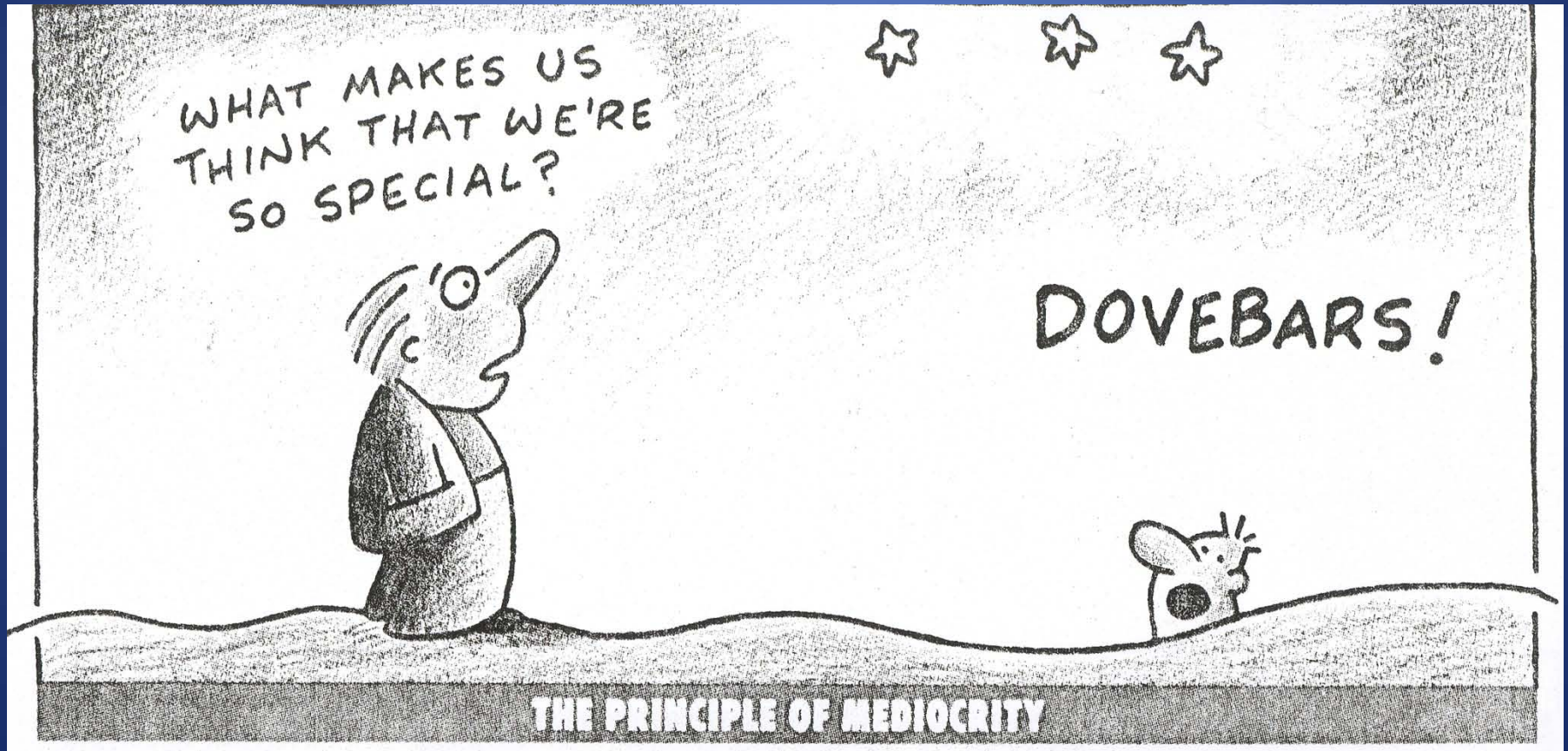
A. Frames of Reference: Ways of How We Perceive the Universe and Why Its Important



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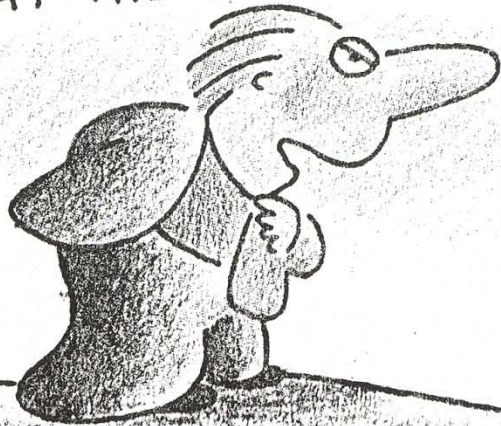
A. Frames of Reference: Ways of How We Perceive the Universe and Why Its Important



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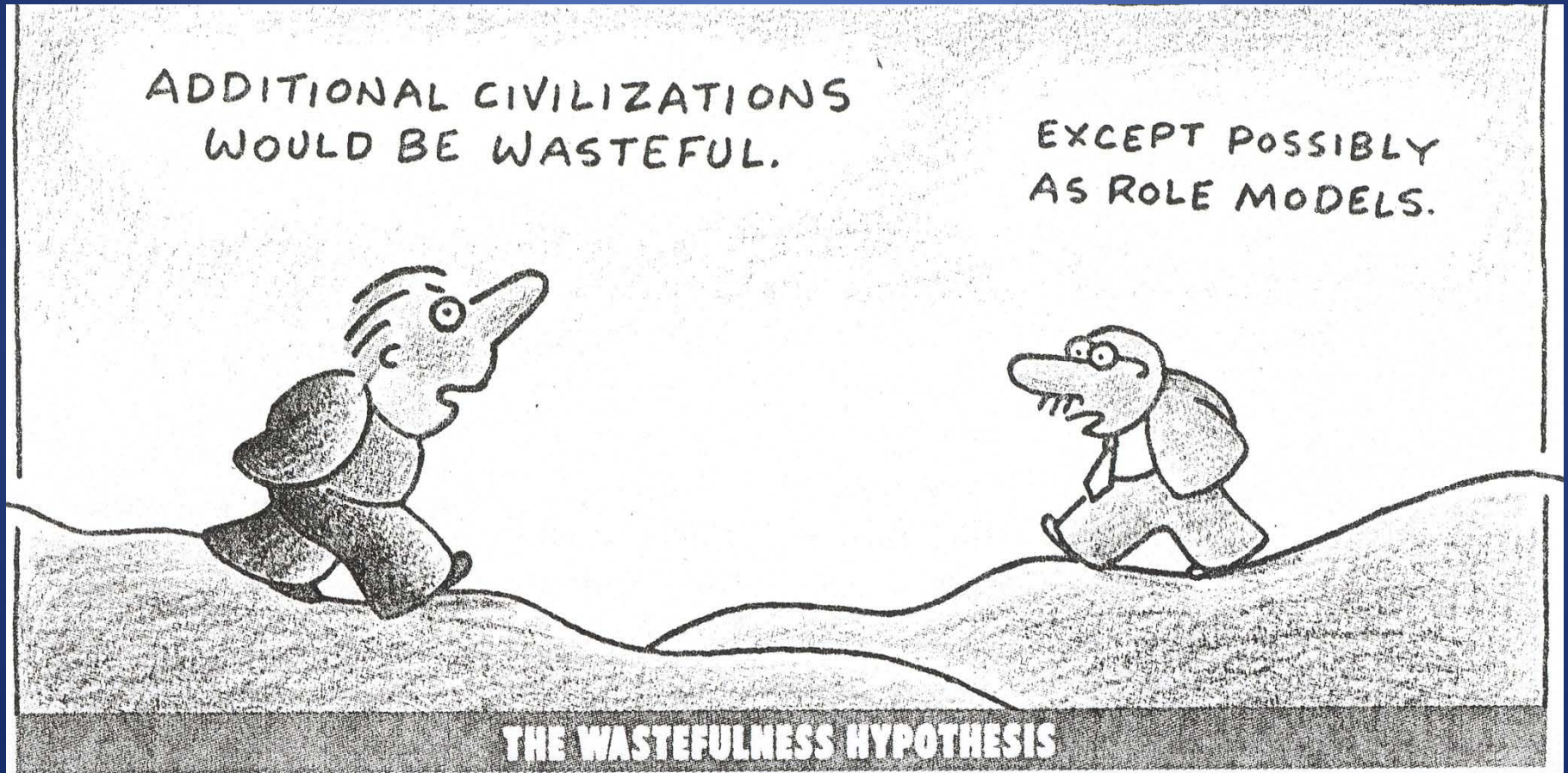
THE OBSERVED VALUES OF ALL PHYSICAL QUALITIES ARE RESTRICTED, OR PRIVILEGED, BY THE REQUIREMENT THAT THEY BE COMPATIBLE WITH OUR EXISTENCE.

MAYBE THAT'S WHY I CAN NEVER GET A GOOD TABLE AT LE CIRQUE.



THE WEAK ANTHROPIC PRINCIPLE

A. Frames of Reference: Ways of How We Perceive the Universe and Why Its Important



A. Frames of Reference: Ways of How We Perceive the Universe and Why Its Important

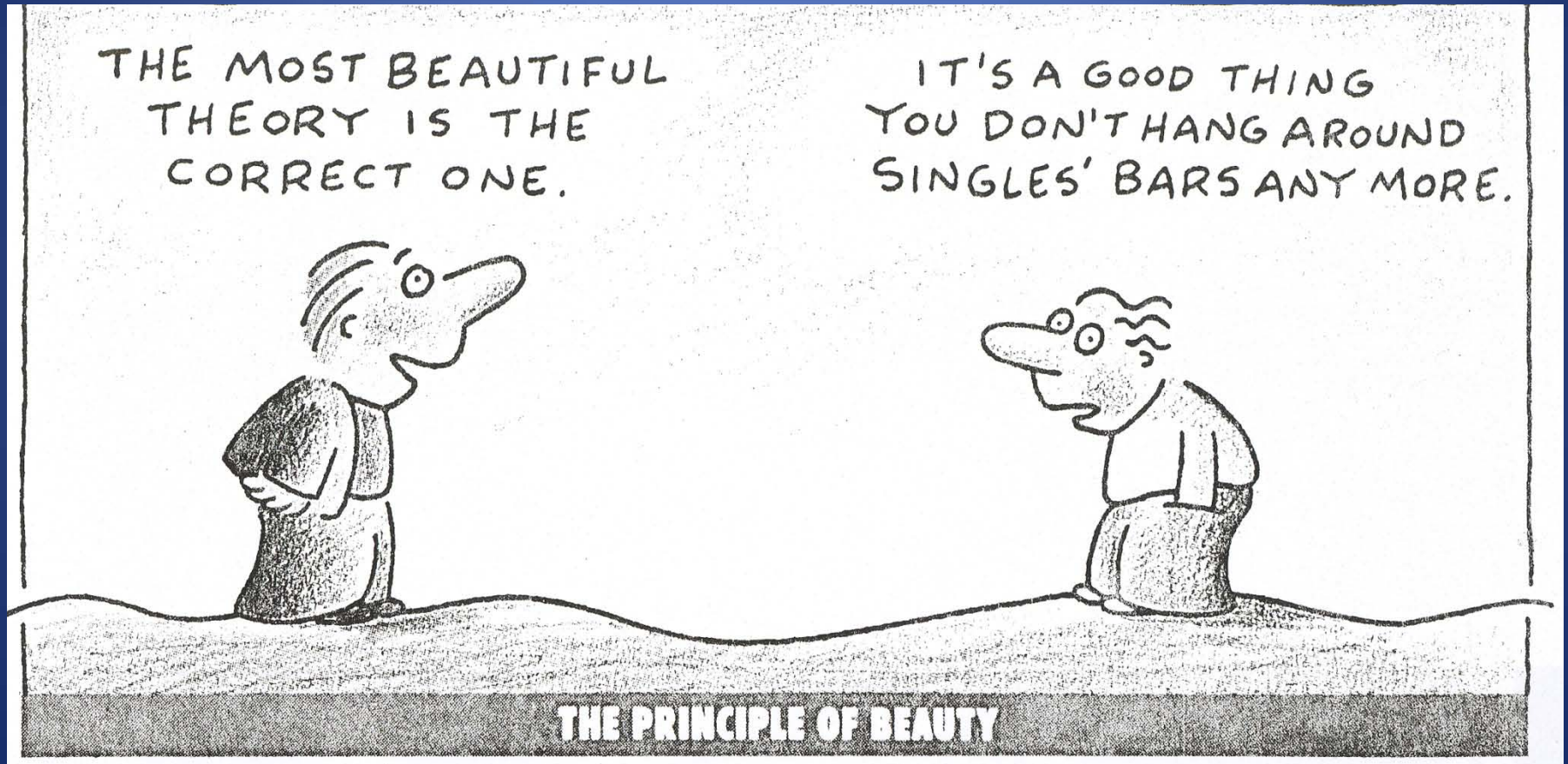
AS THE UNIVERSE EXPANDS,
NEW GALAXIES ARE CREATED
TO FILL THE GAPS.

WELL, GENTRIFICATION
HAS CAUGHT ON IN A
BIGGER WAY THAN
I THOUGHT.

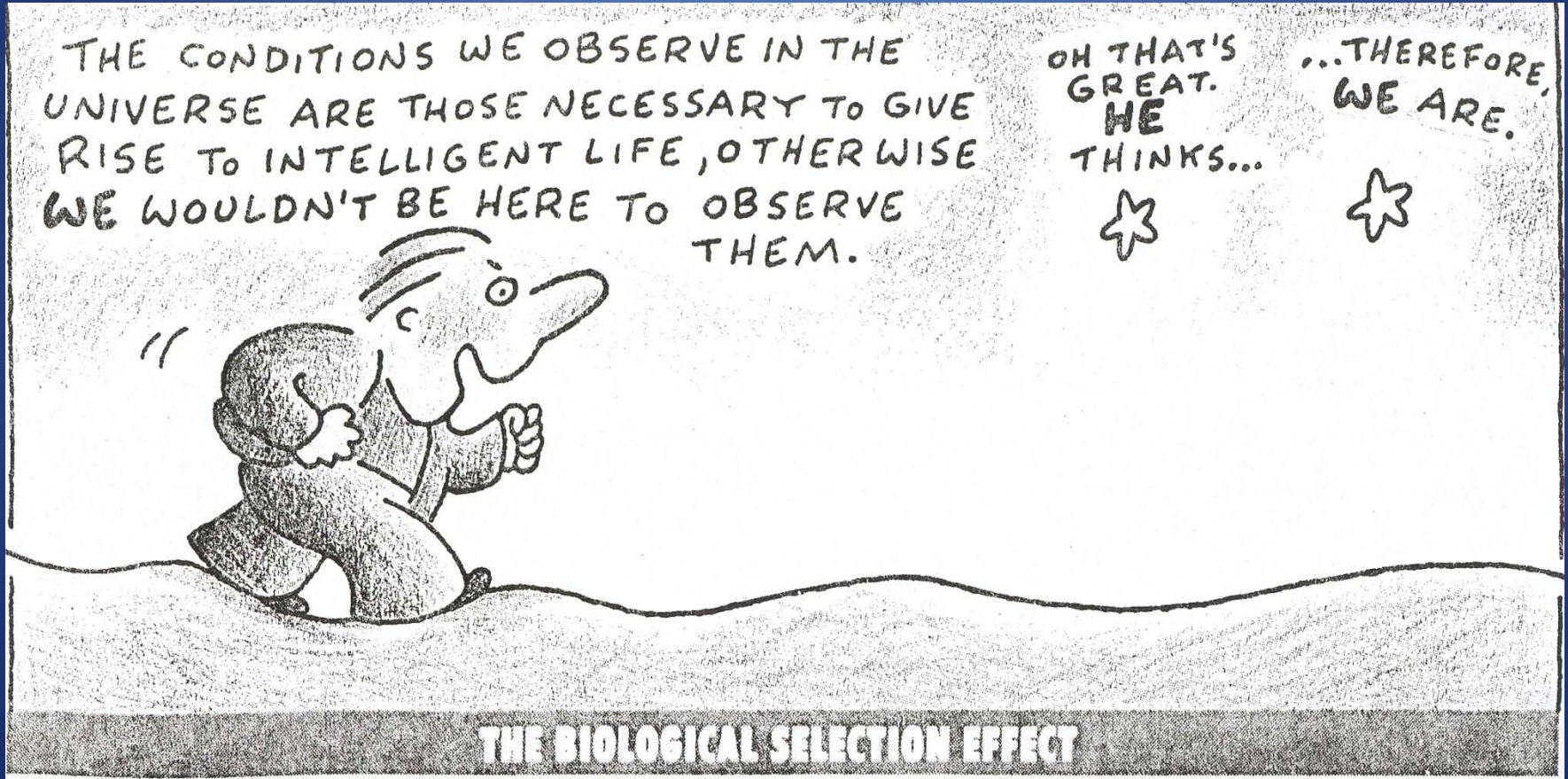


THE STEADY STATE THEORY

A. Frames of Reference: Ways of How We Perceive the Universe and Why Its Important



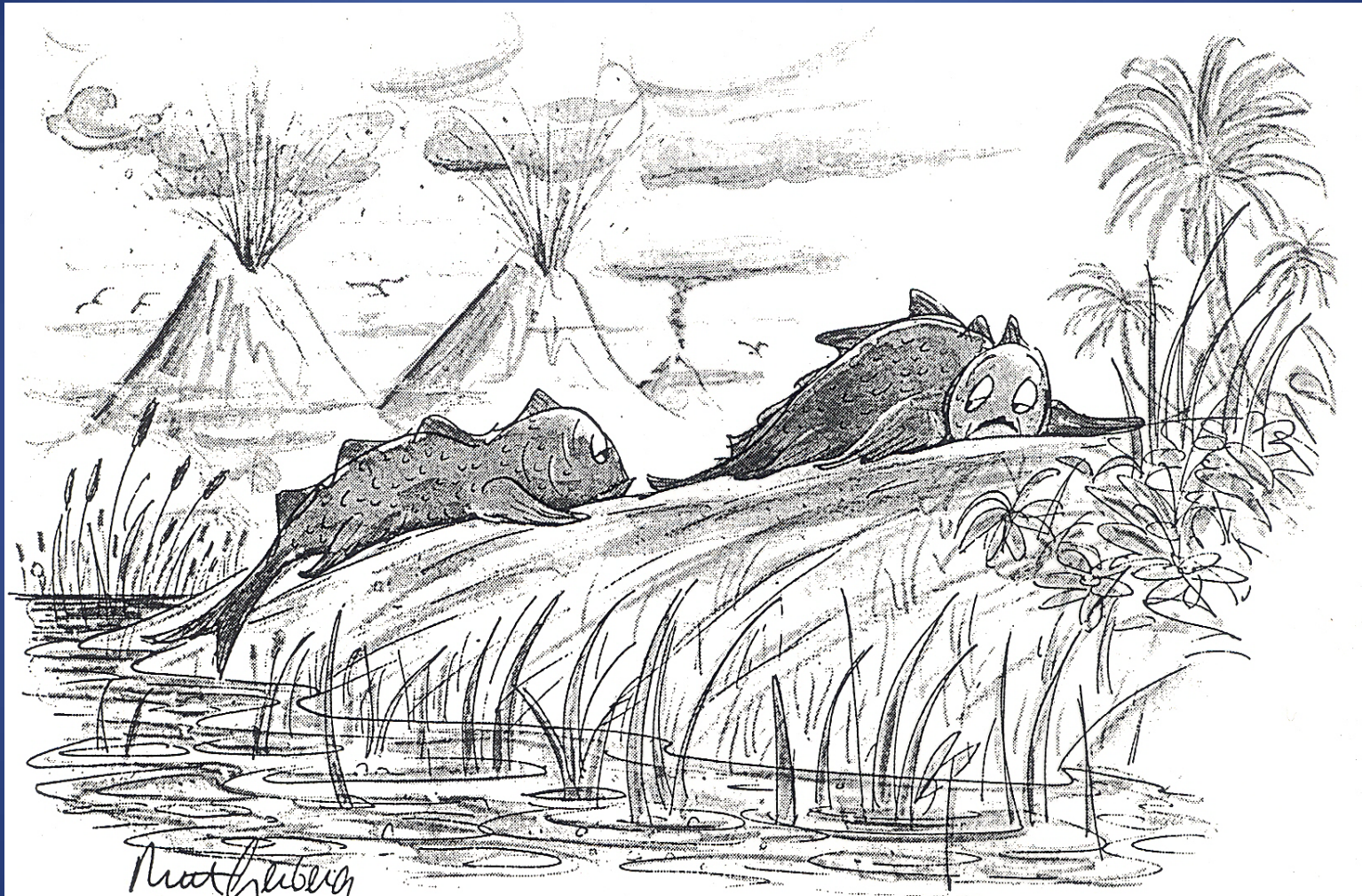
A. Frames of Reference: Ways of How We Perceive the Universe and Why Its Important



B. Beginning of Life

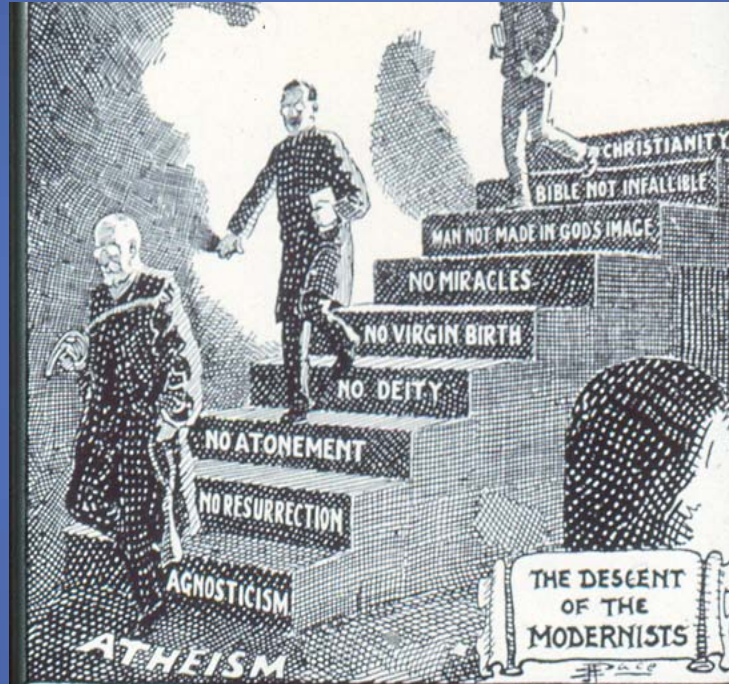
1. Evolutionists—Gradualism vs. Punctuated Equilibria
 - a. Charles Darwin (1809–1882), *Origin of the Species* (1859)
 - b. Alfred Russel Wallace (1823–1913)
 - c. Stephen Jay Gould and Niles Eldredge

2. Creationists—“Survival of the Fittest?”

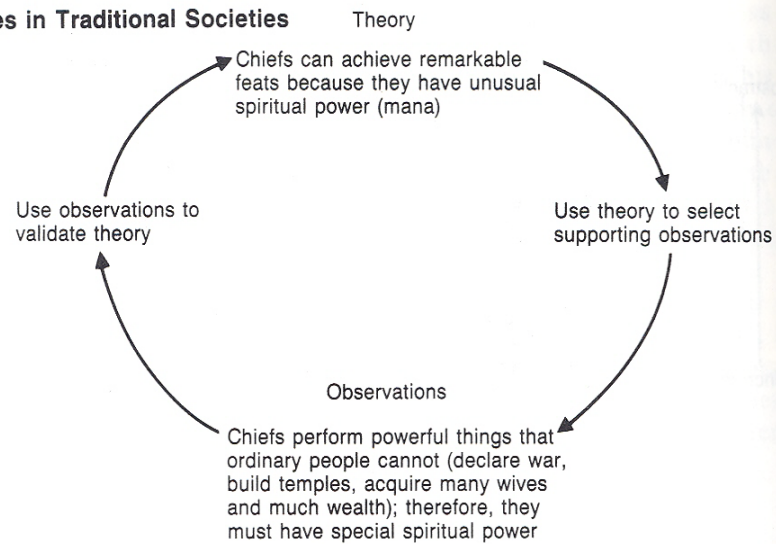


"Gee, evolution is slow."

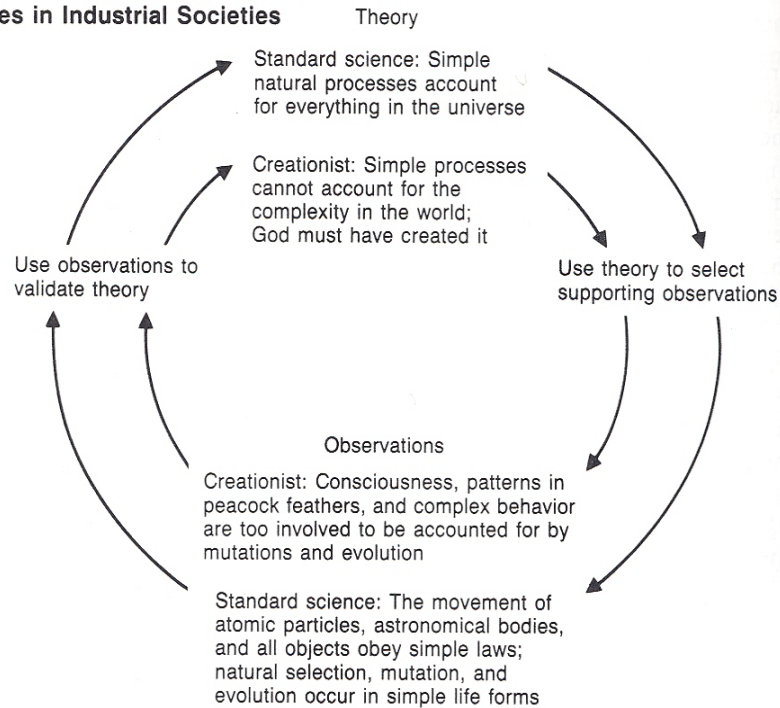
The Descent of the Modernists



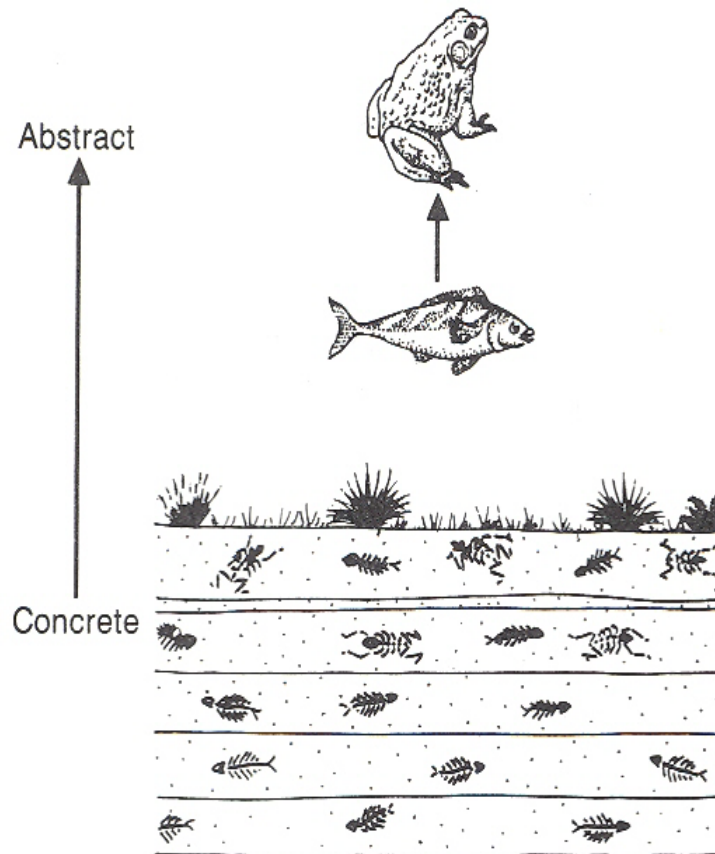
Theories in Traditional Societies



Theories in Industrial Societies



Hypothesis Testing



Theories (relate abstract concepts to each other):

Example: Amphibians (an abstract classification of animals) evolved from (relates one idea to another) Fish (another abstract class or grouping of animals)

Hypotheses (relate abstract ideas to observations):

Example: If amphibians evolved from fish, then fish fossils should occur in rock formations that predate the first amphibian fossils

Observations (what is seen, heard, or felt):

Example: In long sequences of geological deposits, fossil bones of fish-like skeletons occur in the deeper, earlier deposits, while fossil bones of animals similar to amphibians only occur in the upper, later deposits (in conjunction with fish skeletons)

C. Differentiation of Man and Ape: Which Came First, the Jaw or Big Head?

1. Australopithecus

- a. africanus—Taung Baby (Raymond Dart) [ca. 2.5 million years]
- b. afarensis—Lucy (Donald Johanson) [ca. 3.5 million years]
- c. ramidus (Timothy White, Gen Suwa, Berhane Asfaw)
[ca. 4.5 million years]

2. Homo

- a. habilis—Olduvai Gorge (Louis Leakey) [ca. 2.2 million years]
- b. erectus—Java Man (Eugene Dubois), Peking Man
[ca. 1.8 million years]
- c. sapiens—Neanderthal [ca. 200,000 years], Cro-Magnon
[ca. 40,000 years]



Australopithecus afarensis

Discovered in 1975 at Hadar, Ethiopia, this skull belonged to an adult male. The jaw juts forward to support large front teeth. The bones below the eyes indicate large, powerful chewing muscles. The face at the cheek bones is wide and the brain case is small.



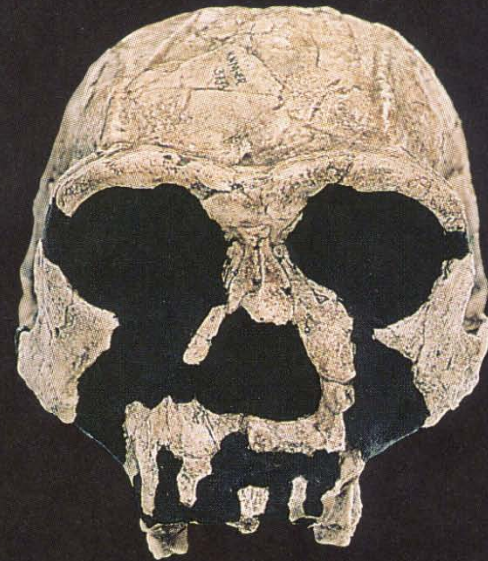
Paranthropus robustus

Discovered in 1950 at Swartkrans, South Africa, this skull belonged to an adult female. The jaw does not jut forward as much. The front teeth are smaller, but the molars are larger. The chewing muscles extend forward and helped to produce a flat face. Like that of *afarensis*, the face is wide and the brain area small.



Homo rudolfensis

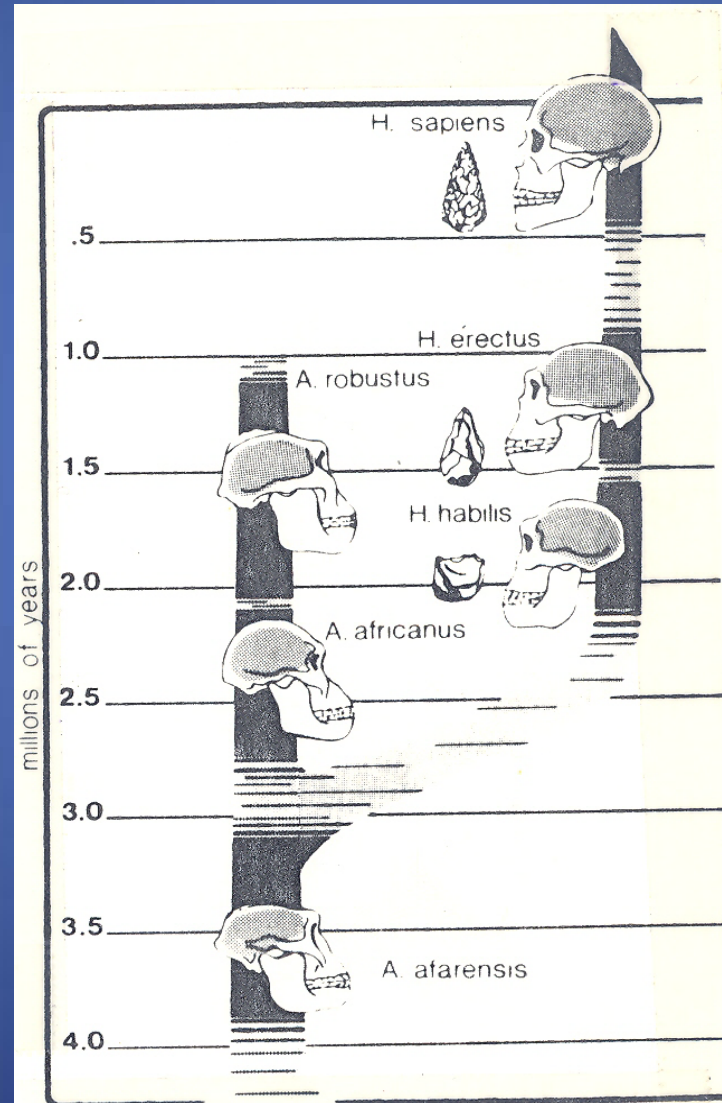
Discovered in 1972 at Koobi Fora, Kenya, this skull belonged to an adult male. The jaw is far less pronounced. The teeth, especially the molars, are smaller. So, too, are the chewing muscles. The brain case is much larger, and the skull has expanded above the face.



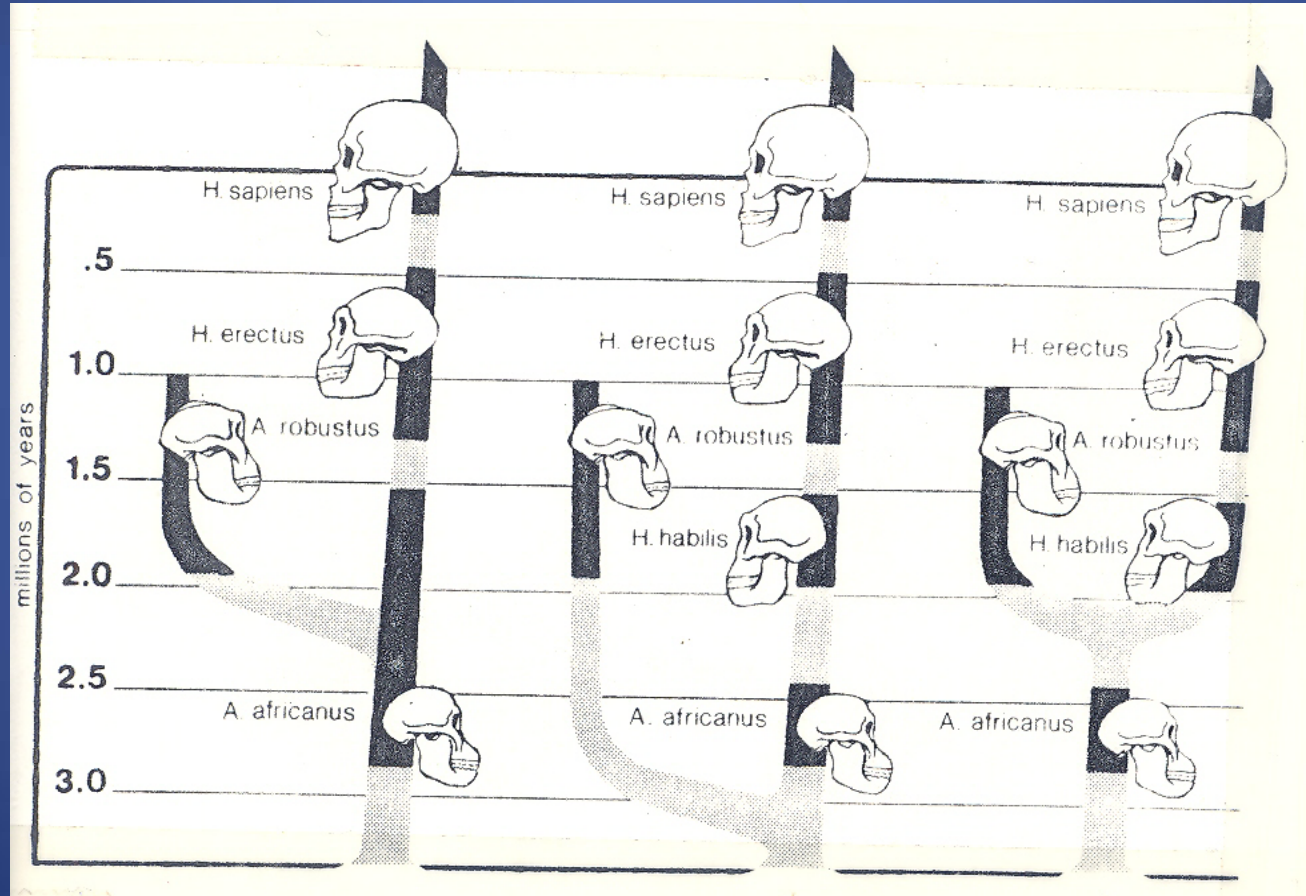
Homo erectus

This skull was discovered in 1975 at Koobi Fora, Kenya, but scientists have not yet determined whether it belonged to a male or female. The jaw is even less pronounced, and the teeth and chewing muscles are smaller. The skull is thicker and protects a larger brain.

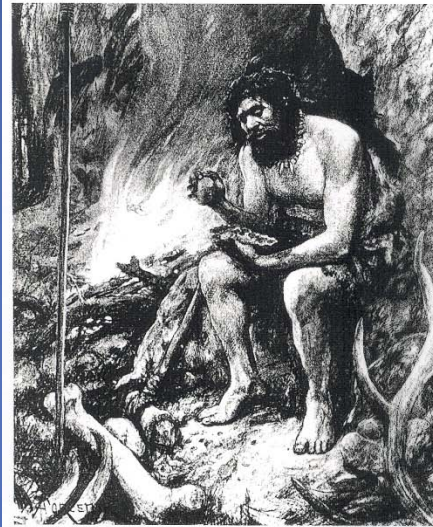
A Possible Stemma of Early Hominids



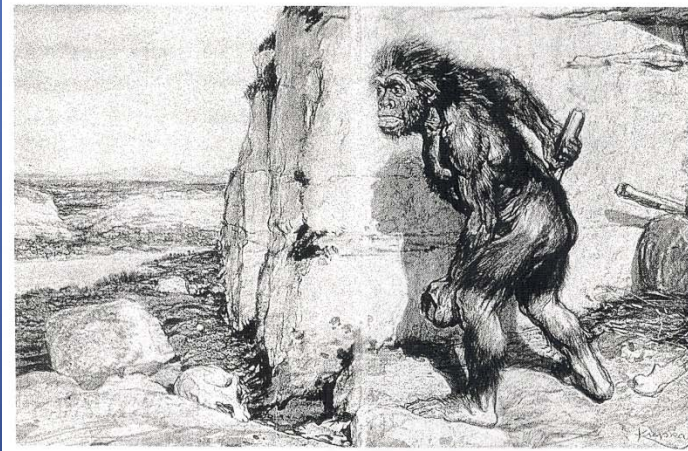
Other Possible Stemmata of Early Hominids



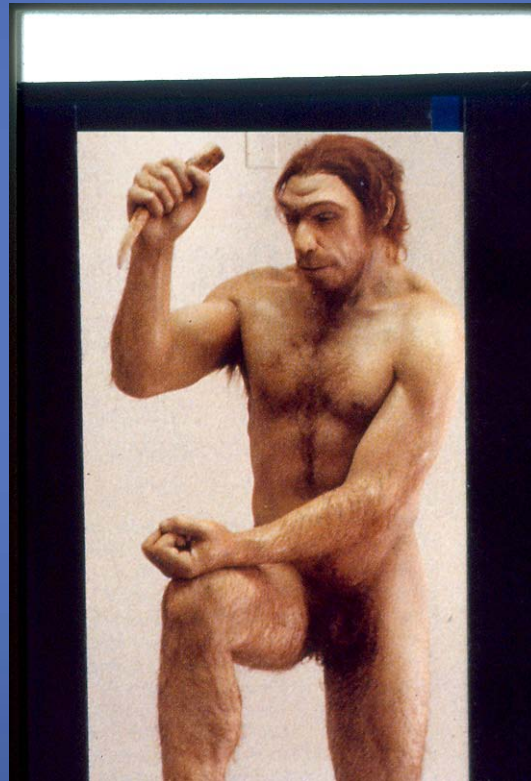
Earlier Representations of Neanderthal



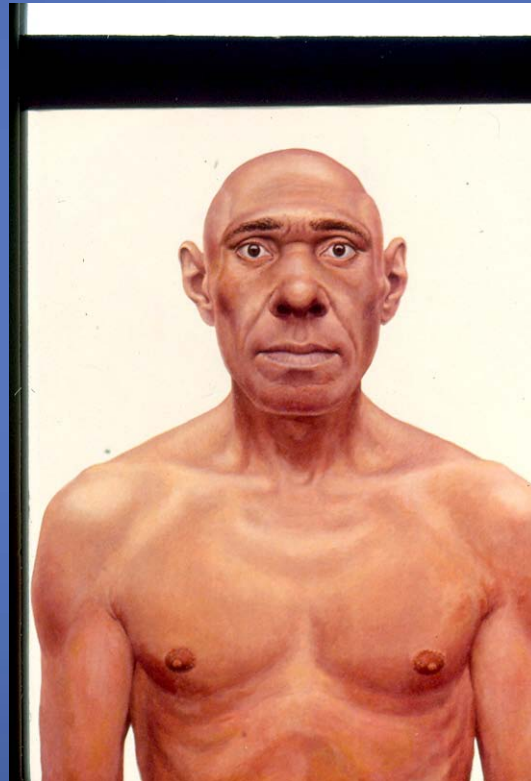
2,3 Two reconstructions of the same skeleton which illustrate how widely interpretations of the Neanderthals can differ. (*Below*) The image which expelled the Neanderthals from human ancestry, depicting an ape-like, hairy creature. Based on Marcellin Boule's scientific study of the Chapelle-aux-Saints skeleton, and apparently approved by him, this reconstruction was widely published in France and England in 1909, shortly after the discovery at La Chapelle-aux-Saints. (*Left*) Neanderthals as close kin. The respected anatomist Sir Arthur Keith commissioned this very sympathetic reconstruction of the Chapelle-aux-Saints remains in 1911. Note that a few of the archaeological details are wrong; for instance, no ornaments or necklaces have been found with Neanderthal fossils. Interestingly, Keith later rejected the implications of this image, following the discoveries at Piltdown (now known to be fraudulent), he joined the camp which expelled the Neanderthals from our ancestry.



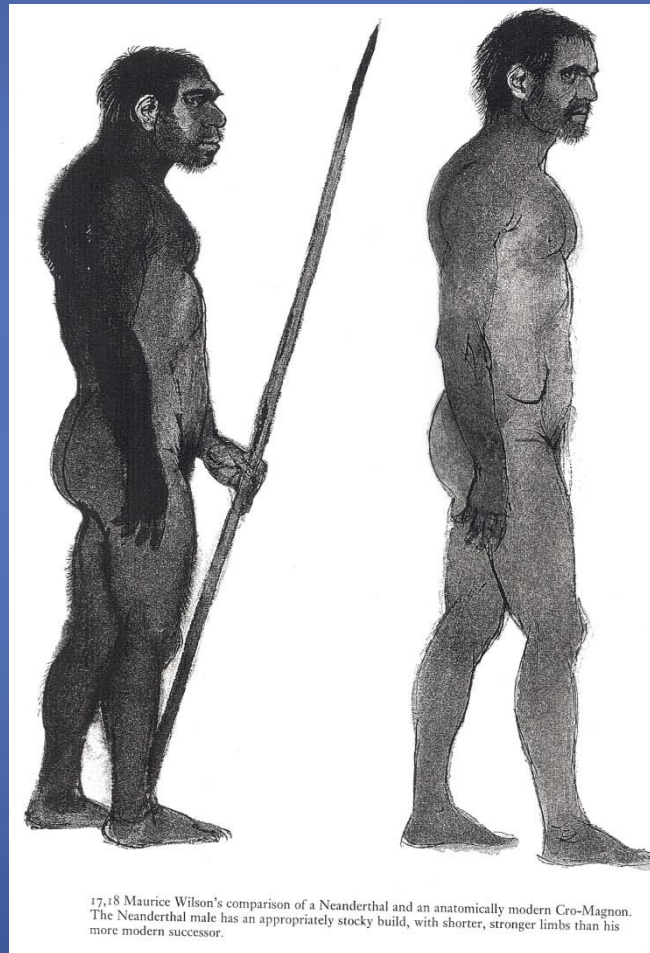
Recent Museum Recreation of a Neanderthal



Artist's Rendition of a Shaved and Showered Neanderthal



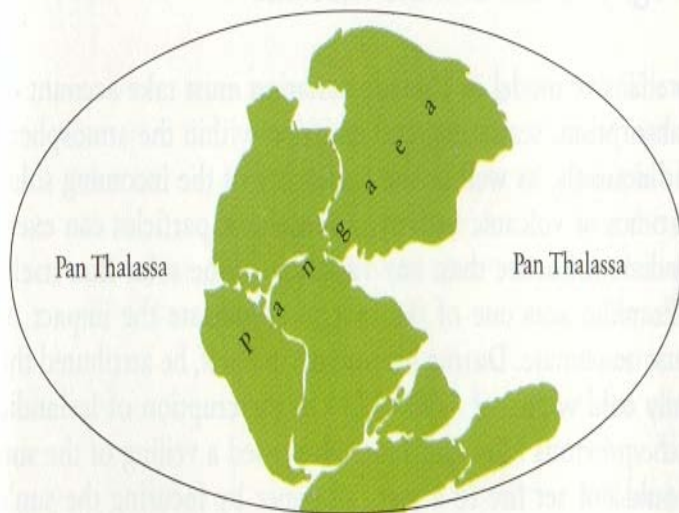
Neanderthal (left) and Cro-Magnon (right)



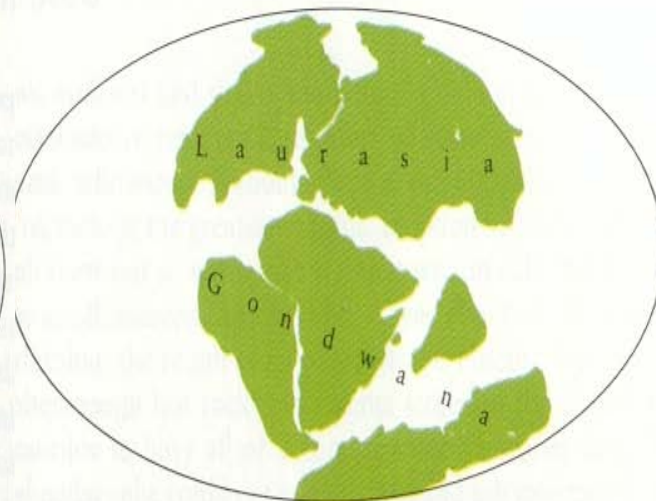
D. Clash of Paradigms

1. Continents on the Move

- a. Traditional View: continents are stationary
- b. Alfred Wegener, German meteorologist, (1880–1930),
Pangea (1912)



200 million years ago



135 million years ago



65 million years ago

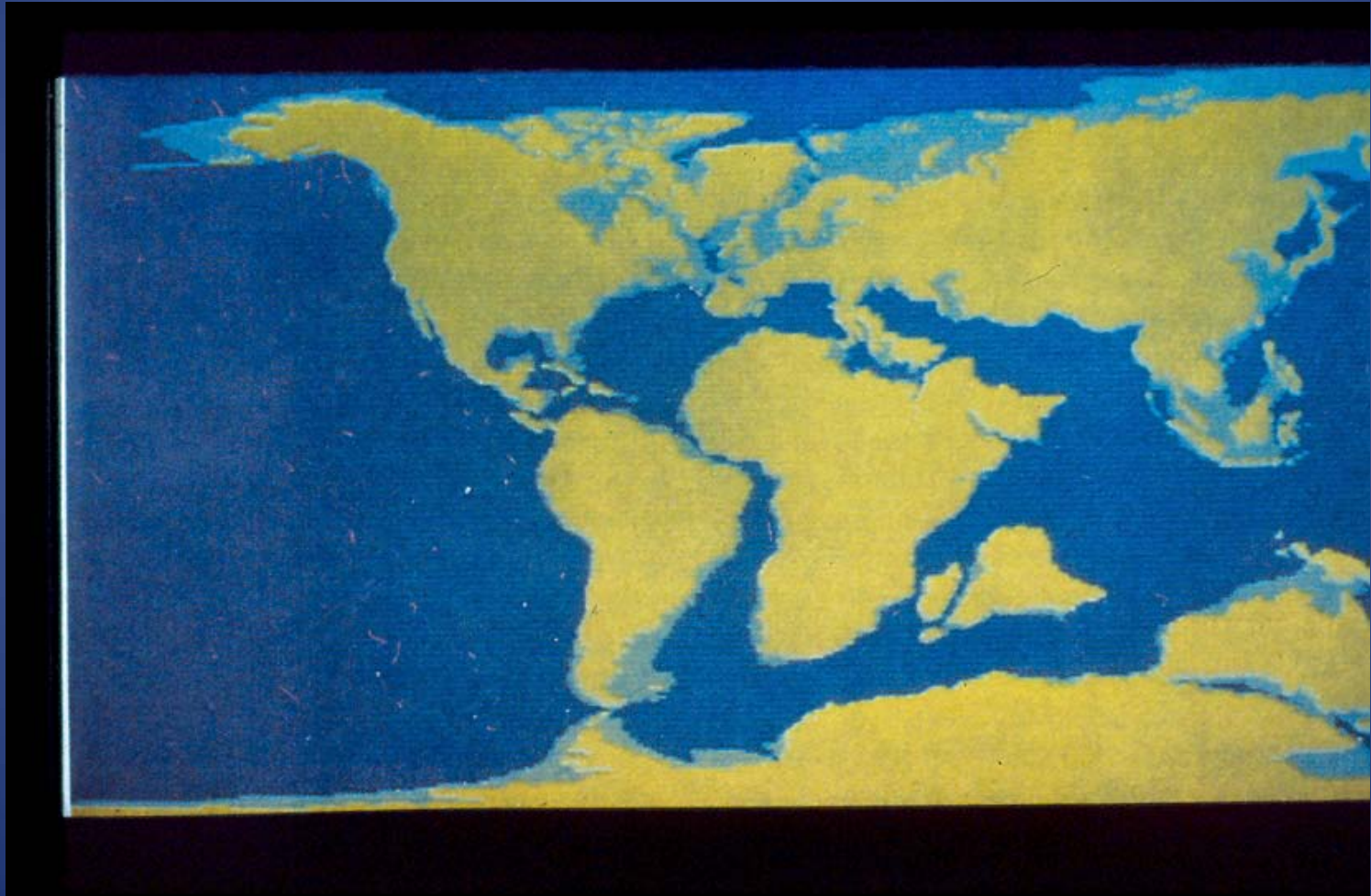


Today

From Pangaea, ca. 200 Million Years B.P., to the Present

Source: Friedman: *Sun and Earth*, p.217

How the Continents Seem to Fit Together



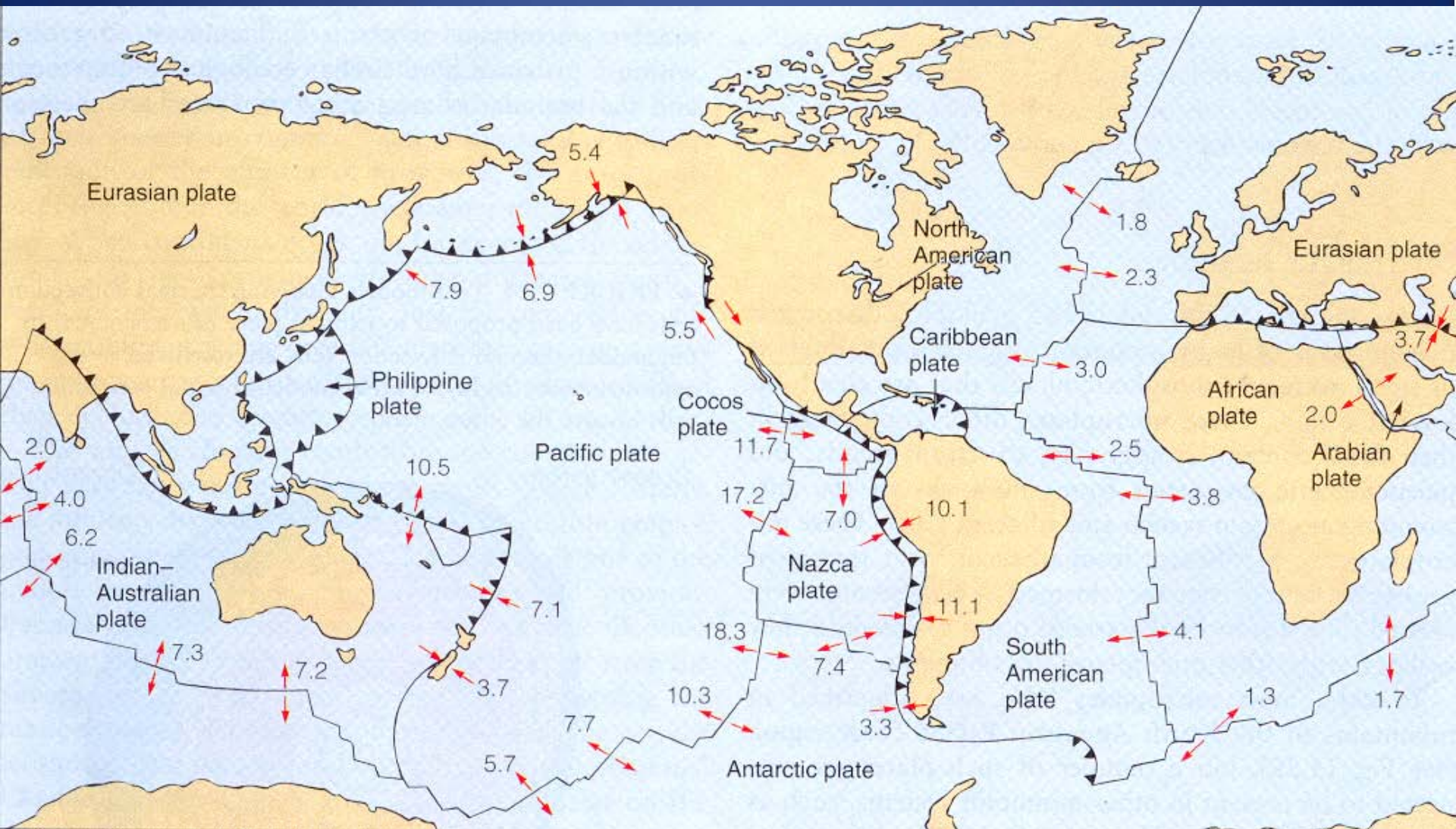


Plate Tectonics: Moving Continents

Source: Wicander & Monroe: *Historical Geology*, p.191

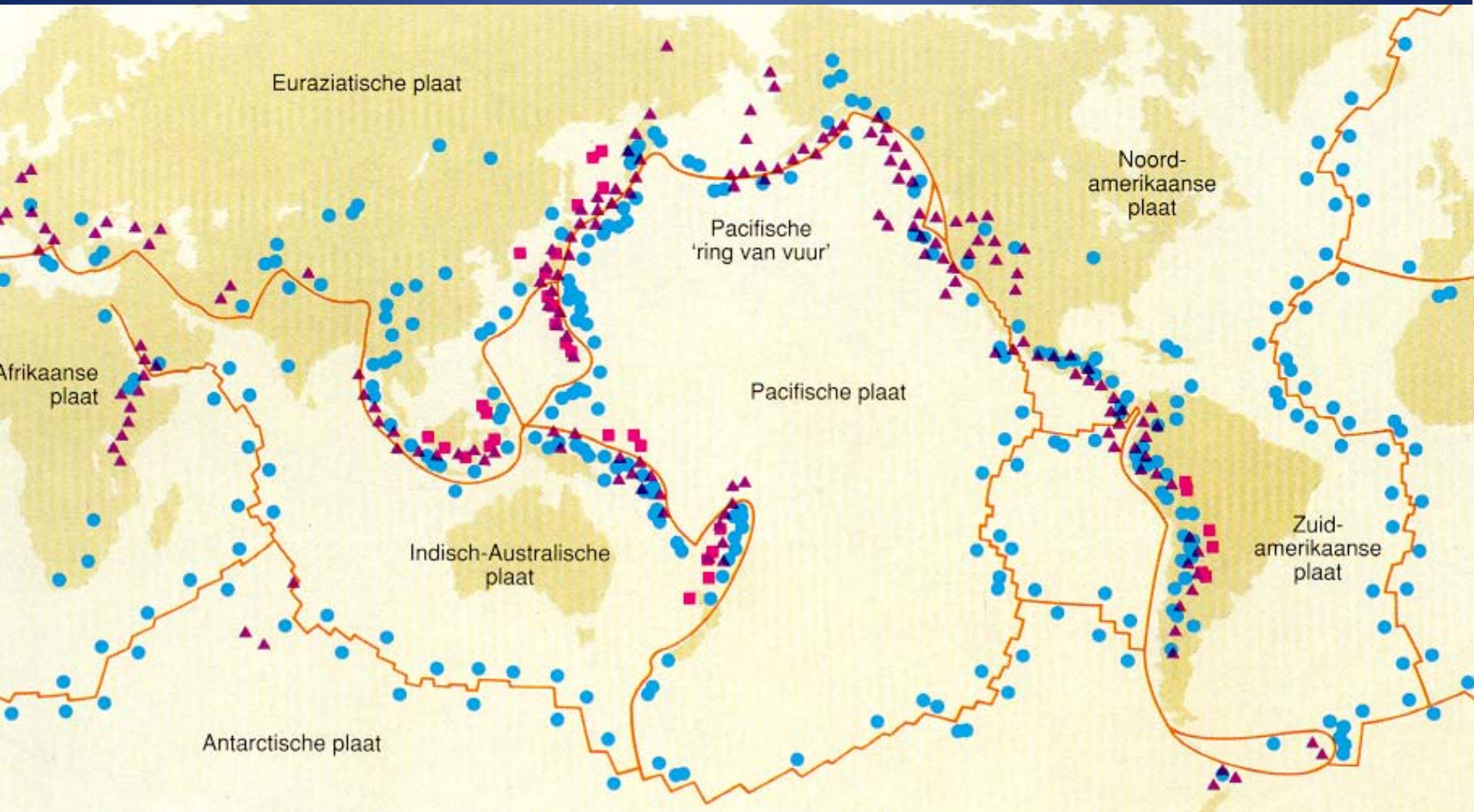


Plate Tectonics: The Ring of Fire

Source: Elsom: *De Evolutie van de Aarde*, p.48

D. Clash of Paradigms

2. Piltdown Man (Dawn Man)

- a. Charles Dawson (1844–1916)
- b. Sir Arthur Keith (1866–1955)
- c. Arthur Smith Woodward (1864–1944), *The Earliest Englishman* (1948)
- d. Pierre Teilhard de Chardin (1881–1955) – “Omega Point”
- e. Sir Arthur Conan Doyle (1859–1916)
- f. Martin A. C. Hinson
- g. Horace De Vere Cole (1881–1936)



Portrait painted by John Cooke in 1915

Back row (from left) F. O. Barlow, G. Elliot Smith, Charles Dawson, Arthur Smith Woodward. Front row: A. S. Underwood, Arthur Keith, W.P. Pycraft, and Sir Ray Lankester

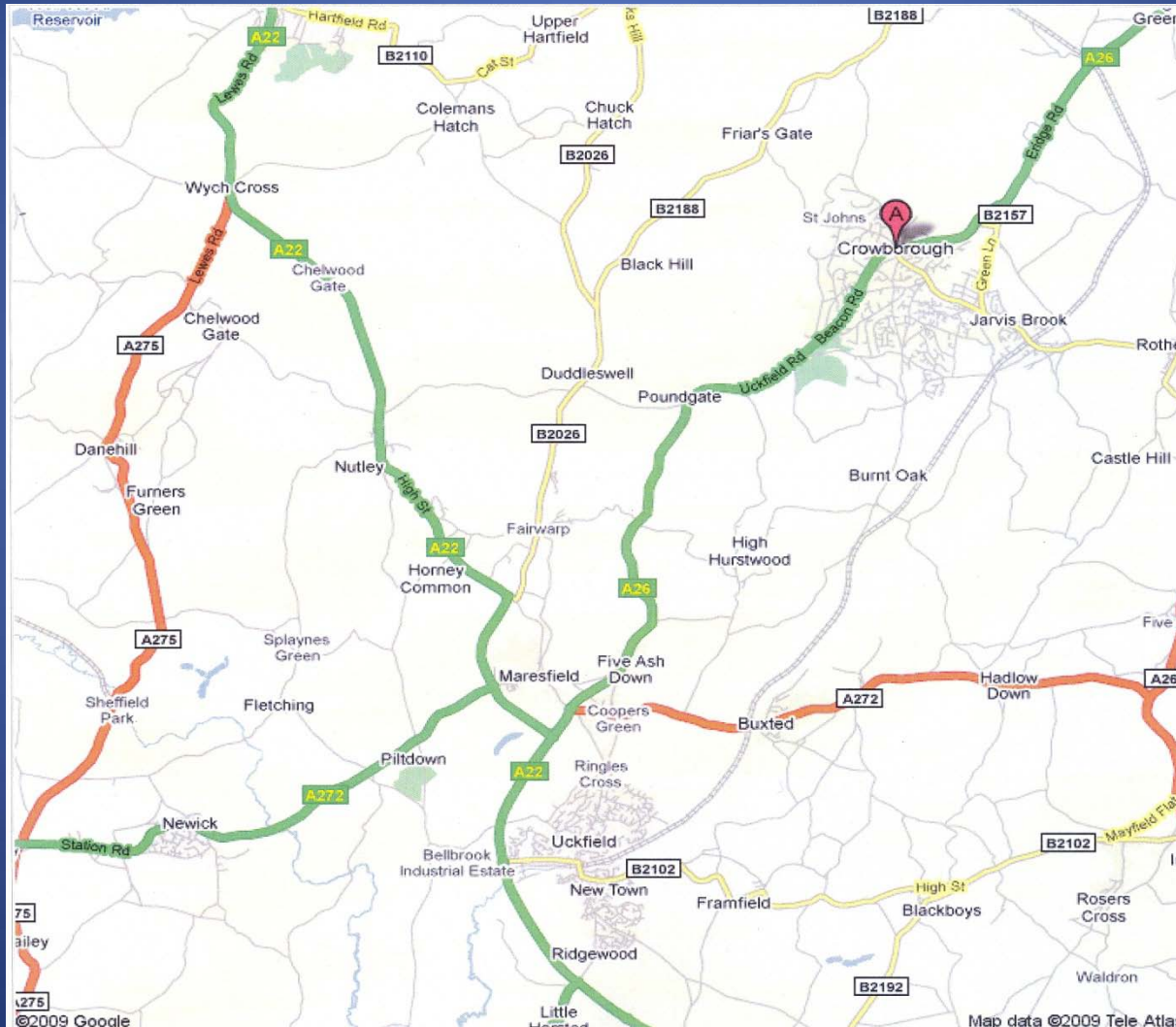
Rutot's Reconstruction of Piltdown Man



Southeastern England



Vicinity of Sir Arthur Conan Doyle's Home



E. Theories of Archaeological Research

1. Theory of Uniformitarianism
2. Theory of Superposition
3. Three-Age Theory:
 - (1) Stone Age
 - (2) Bronze Age
 - (3) Iron Age

Three-Age Theory (Christian Thomsen)

Kebetræk
III
Nordisk Oldkyndighed,
af
for Forfatter
Nicolai Christian Zetler.
Hjortenbald.
Læst 1848. Høst. 1848.
1848.

IRON AGE

B. Den kristelige Middelalder's Vaaben og Rustninger,
sønnemellig Riddervæsenet vedkommende.

Angrebsvaaben.

1. Sværd, bestaaende af Parades- og Slagsværd og almindelige Sværd, Raader, Daggertter, sabelformige Sværd. 2. Dolke af flere Slags; sædvanlig er paa disse, ligesom paa Sværdene, den ydre Beklædning af Haandtaget tabt, ligesom paa den her forefillede:

BRONZE AGE

2. De hamre af Bronce. Ufildning af en udmærket af betydelig Størrelse og Vægt (7 Pund) vedføies her:

3. Sværd af Bronce eller af Jern, af hvilke Prover her

STONE AGE

5. Halvmaaneformige Flintredskaber, blot tilhugne paa samme Maade som Knivene; nogle krumme alene paa den udvendige Side, og da enten uden Tænder, eller med Tænder alene paa den indvendige Side, eller med Tænder paa begge Sider; andre krumme saavel paa den udvendige som paa den indvendige Side.

6. Flintflækker og Pilspidser; de sidste indfattes i Træskafter. Flintpils - Fabrikationen tydeliggjøres ved nedenstaaende Ufildninger:

Figure 3.8 In reorganizing the collections of the Danish National Museum, Christian Thomsen realized that many of the objects in the collections could be placed in an evolutionary sequence, which he called the Stone Age, the Bronze Age, and the Iron Age. This insight led to the most powerful theory of contemporary archaeology: cultural evolution.

F. Theories of Cultural Development

1. Diffusionist Theory

- a. Sir Grafton Elliot Smith (1871–1937)
- b. Out of Africa
- c. The Search for Eve

2. Separate Evolvment Theory

- a. Franz Boas (1858–1942)
- b. Historical Particularism

Diffusionist Cultural Map

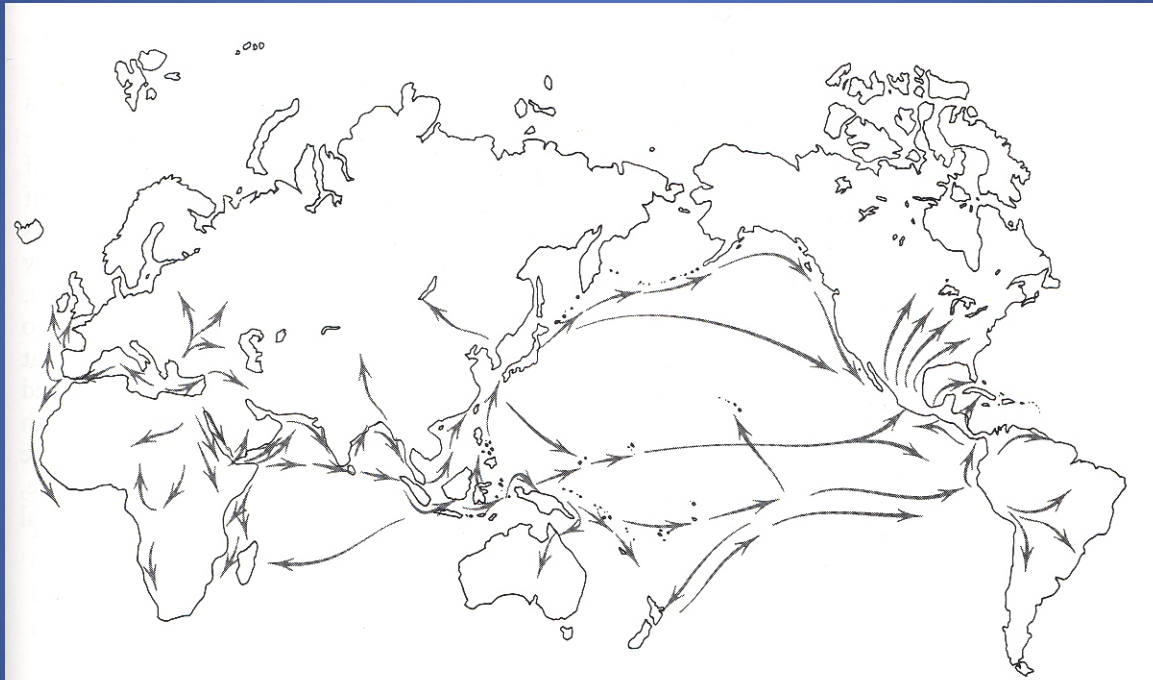
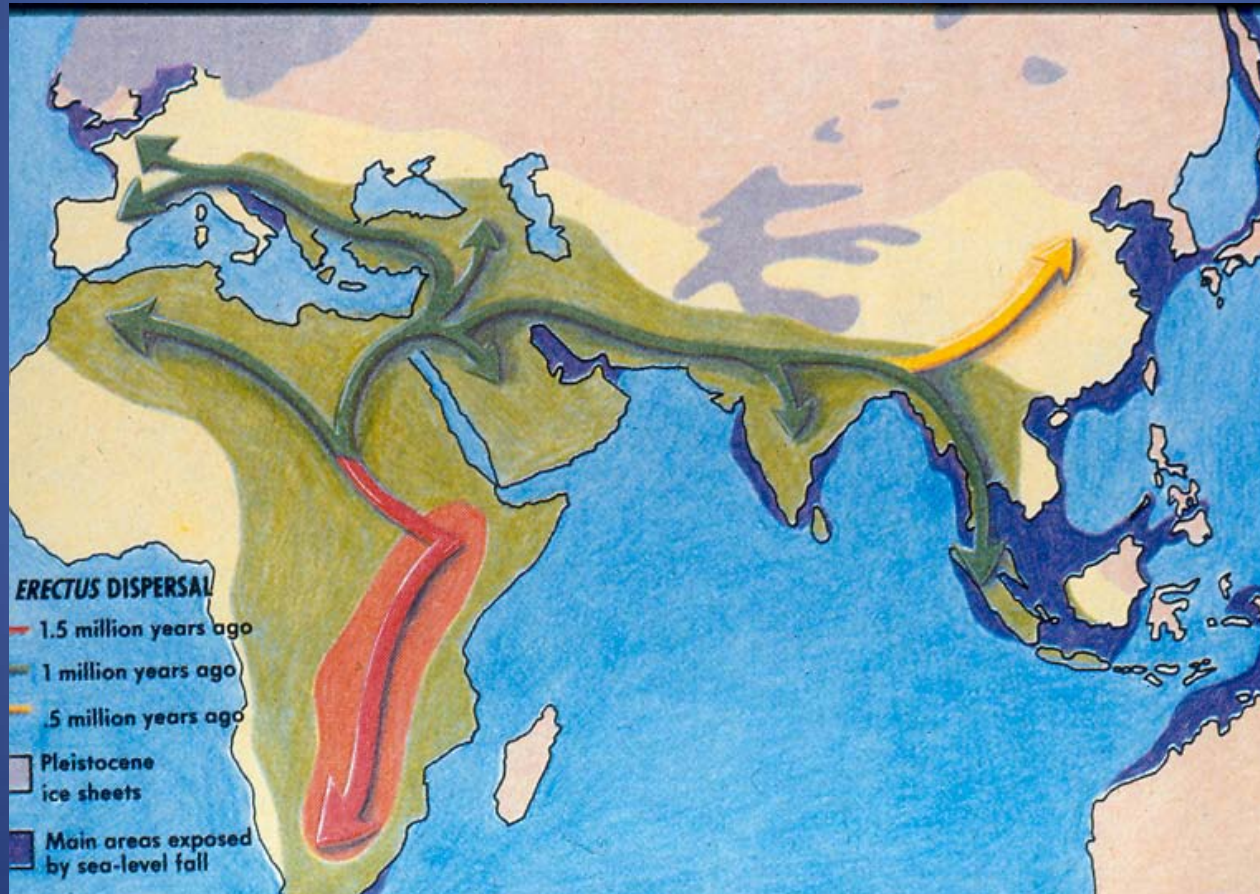
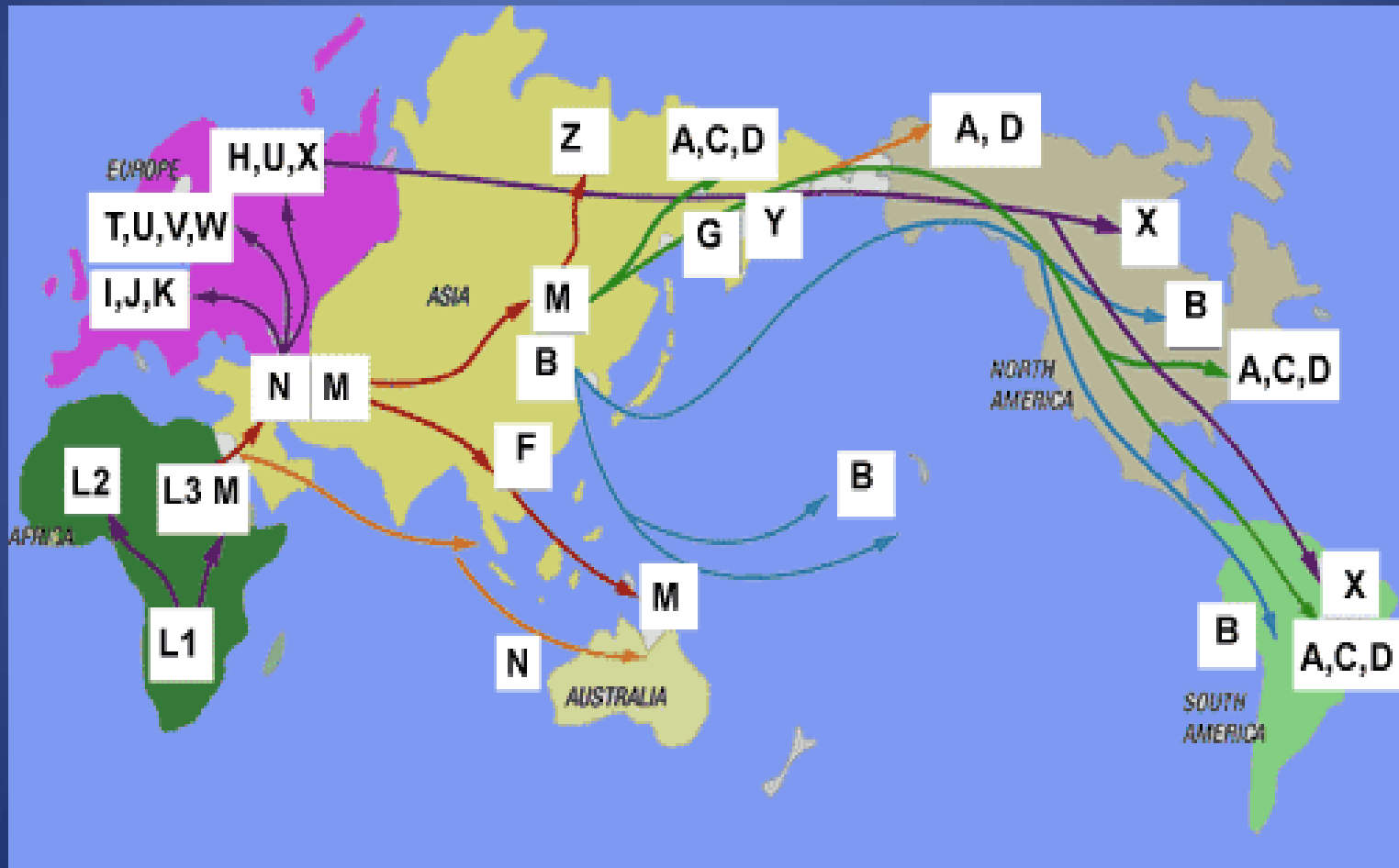


Figure 4.1 Diffusionists of the early twentieth century thought of cultural traits and ideas as spreading over the earth's surface like wisps of smoke on currents of air. This map shows Grafton Elliot Smith's conception of the spread of civilization traits from Egypt to various other parts of the world. Archaeologists now know that civilization arose independently in several places in the world and that culture traits do not diffuse in random fashion or along "cultural currents."

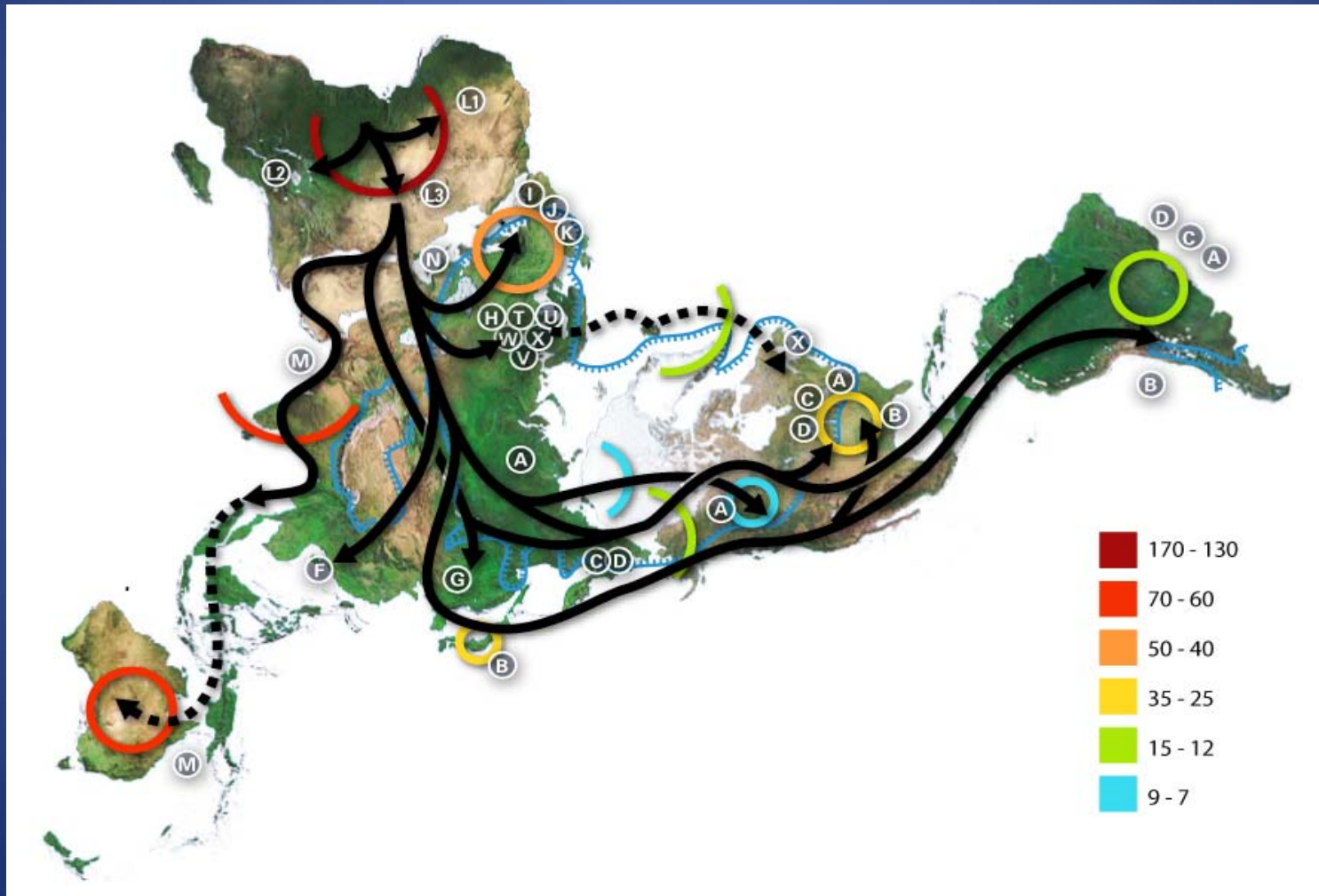
Homo Erectus Dispersal (1.5 million to .5 million years ago)



“Out of Africa” Migrationist Map



Polar View of “Out of Africa” Migrationist Map



G. Historical Linguistics

1. Indo-European people

— Sir William Jones (1746–1794)—English philologist

2. Mesopotamia: Sumerian, Semite, Elamite

Extent of Indo-European Languages by 1500 B.C.



Extent of Indo-European Languages by 500 B.C.



H. Theories of Civilization

1. Geographical

- a. Climate, Heredity, and Geography (Ellsworth Huntington)
- b. Misuse of Natural Resources (Soil Exhaustion; Deforestation)
- c. Topographical (Henry Thomas Buckle)

2. Nutritional/Health

- a. Nomad (Franz Oppenheimer)
- b. Parasite (William H. McNeill)

H. Theories of Civilization

3. Human Nature/Natural

- a. Adversity (Arnold J. Toynbee)
- b. Great Man (James Breasted)
- c. Organic (Oswald Spengler)

4. Social Organization

- a. Marxist (V. Gordon Childe)
- b. Hydraulic (Karl Wittfogel)

H. Theories of Civilization

5. *Deus ex machina*

- a. Theophany (Hegel: *The Rise of Liberty*)
- b. Chariots of the Gods (Erich von Däniken)

6. Psychological

- a. Oedipal Complex (Sigmund Freud)
- b. Bicameral Mind (Julian Jaynes)