Introduction to Archaeology/A Brief History

Archaeology =
Explanation of past human behavior using physical remains

Foundations:
James Usher: “Young Earth”
Charles Lyell: Uniformitarianism=
John Ray: “fixity of life”
Carl Linnaeus: Intermediate forms
Boucher de Perthes: “Pre-Adamites” controversy
Thomsen and Worsaae: regular stages

Archaeological Explanation: Culture, Adaptation, and Evolution

Empirical foundations:
Change and Time
How and Why?
Charles Darwin and Theory of Natural Selection
What about behavior?
Culture=
Cultural variation=
Innovation=
Adaptation=
Biological and Cultural

What is the archaeological record?

Contexts
Systemic context=
Archaeological context=
Transformational processes
Primary context=
Secondary context=

Archaeological Data
Artifact=
Feature=
Ecofact=
Site=
Region=
Archaeological research: discovery, recovery, reconstruction, explanation

How old is it? Dating the Archaeological Record

Chronometry=
Relative versus absolute dating
Stratigraphy
Radiocarbon
Potassium-Argon
Dating gap=
Direct versus indirect dating

**Miocene Apes, Australopithecines, and Early Homo**

- Early Miocene: Arboreal habitats
- Late Miocene: Grassland savannas
- Hominoidea vs Hominidae
- Bipedal locomotion: benefits? Skeletal features?
- Basal Hominids
- Primitive Australopithecines
- Derived Australopithecines
- Early Homo

**Oldowan Hunting and Scavenging**

- Oldowan Industry
- Elements of stone technology: raw material=, hammer=, core=, flake=, tool=
- Interpretations of stone-bone associations

**Homo erectus and Dispersal**

- Expensive tissue hypothesis=
- *H. erectus, H. ergaster, H. antecessor*
- Key sites
- Migration vs dispersal: climatological, biological and behavioral elements of dispersal
- Evolutionary cascade…

**Neanderthals: Morphology, Distribution, and Culture**

- Archaic *H. Sapiens*
  - Regional populations in Africa, Europe, and Asia
- Neanderthals
  - Behavior
  - Material Culture (Middle Paleolithic)
  - “Survival of the Unfit”
  - Burial evidence
  - Ritual cannibalism
  - Classification: *H. neanderthalensis* or *H. sapiens neanderthalensis*?

**Origins of Modern Humans: Models and Evidence**

- Anatomically modern human=
- Multiregional model=
- Replacement model=
- Weak replacement model=
- MtDNA evidence

**The Symbolic Revolution: Origins of Language and Symbolic Behavior**

- Upper Paleolithic adaptive advantage?
- Klein’s “Great leap forward”
- Evolution of language: behavior and cognition; biological and physical remains
Language=
Symbolic behavior
  Signal versus symbol
  Utilitarian versus non-utilitarian
  Ocher, ornaments, mobilary and parietal art

Human Dispersals to Australia and the Pacific

Mojokerto and Sangiran
Sunda versus Sahul shelves
  Glacial sea levels
  Wallace trench-biogeographic barrier
Colonization of Sahul
  Dispersal prerequisites
  Rafting or watercraft?
AMH in Sunda (40-35ka)
AMH in Sahul
  New Guinea (40-25ka)
  Australia (<50ka)
  Coastal then interior
  Wallandra versus Mungo
People in the Pacific
  Dispersal or migration?

Human Dispersals to the Americas

Buffon’s degeneration ideas
Last Glacial Maximum
Bering Land Bridge
Arctic adaptations: Mamontovaya Kurya, Dyuktai
East Beringia (Alaska) sites
Ice Free Corridor versus Coastal Route
Early sites (Meadowcroft, Monteverde)
Clovis
Megafauna extinctions-human role?
Anthropogenic landscape=

Holocene and the Mesolithic: Climate Change and the Human Environment

All terrestrial environments colonized by 10ka
Bølling-Allerød interstadial=
Younger Dryas=
Holocene: seal levels rise, changes in vegetation, megafaunal extinctions
Impact on human populations
  Population growth, intensification, social complexity
Simple hunter-gatherers=
Population growth, carrying capacity, restricted mobility/territory size
Intensification=
Complex hunter-gatherers=
Origins of Agriculture: Domestication of Plants and Animals

Synchronous origins
Theory of origins
“Solitary genius”
Childe’s “Oasis hypothesis”
Population pressure
Climate change
Social theories
“Readiness” versus accident

Domestication =
Transformation of human life: health consequences, population growth

Domestication in the Old World

Fertile crescent
Founder domesticates: cereals (Emmer, Einkorn, barley), pulses (lentils, peas), dogs, sheep, goats
Identifying domesticates
Large seed size
Semi-tough rachis
Seed quantity
Small body size
Excess males
Southwest Asian sequence
   Kebaran: simple hunter-gatherers
   Natufian: complex hunter-gatherers; Abu Hureyra (11-13ka)
   PPNA: mature agriculture; Jerico
   PPNB: proto-cities? Çatalhöyük (10.5-8.5ka)
Multicausal model

Domestication in the New World

Mesoamerica
   Cucurbits (Guila Naquitz, Oaxaca 10-8ka)
   Mesoamerican trinity= maize, beans, squash
   Tehuacan Valley
Andes 10ka; 4-5ka
   Cucurbits; camelids-quinoa-potatoes; cotton
American Southwest
   Turkeys; Trinity at 4-3.5ka at earliest
   Supplemental to hunting and gathering
Eastern North America
   Local domesticates: goosefoot, marsh elder, gourds (oily seeds)
   Earliest maize ca. 1.7ka
   Cahokia 900-1200 AD: trinity and cultural supernova
Old World/New World comparison
   Use of wild precursors; sedentism
Domestication in East Asia

East Asia Neolithic: Yellow versus Yangtze
South China: rice-buffalo
   - Warm-wet Holocene
North China: millet-pig-dog
   - SEA monsoon
   - Wild progenitors
Middle Yellow River
   - Ethnogenesis
Ceramics versus pottery

Chiefdoms and Emergence of Social Inequality

Urbanism=
State=
Social complexity=
Traits of city-states
City/state formation
   - Multivariate models
   - “Urban revolution”
Systems theory
   - Single mechanisms: irrigation, trade, warfare
Social theories: why give up autonomy?
Marx and economic, ideological, and political power of the state=

Mesopotamia

Levant and Anatolia
Northern Mesopotamia
   - Hassunan=
   - Samarran=
   - Halafian=
   - Gradual coalescence?
Southern Mesopotamia=Sumeria
   - Ubaid=
   - Uruk period (6-5.2ka)=
      - Rapid urbanization
      - City-states: Uruk, Eridu, Ur
Sumerian world system
   - City-states=
      - Formal trade networks; competitive instincts?; ethnic co-residence

The Origins and Function of Writing Systems

Speech=
Social memory=
Archaeology and literacy
   - Symbols ↔ ideas
Pictographs, figurines, physical mnemonics
Symbols ↔ sound
Explosion of combinatorial complexity

Literacy and the state
Sumer: Economic power=
China: Ideological power=
Maya: Political power=

Archaeological preservation

Power and the impact of literacy
Traditions/customs→laws/regulations
Social memory→institutional memory

The Archaeology of War

Hobbes versus Rousseau

Warfare=
Organized purposeful actual/potential lethal force
Homicide versus war

Archaeology of war
Defensive and aggressive markers
Settlement systems
Burials
Sites (destruction)
Technology
Iconography/history

Purpose/causes of war
Competition; elimination of people
Acquisition of resources/territory
Acquisition of prestige

Mesoamerica

Preclassic; Classic; and Postclassic Periods

Highland
Massive urbanization
Valley of Mexico, Teotihuacan
Oaxaca: Monte Alban

Lowland
Moderate urbanization
Maya
Idyllic view versus brash reality
Preclassic
Classic: early super powers

Peruvian North Coast
Pacific valley drainage system
Moche AD 200-700

Highland Andes
Altiplano
Tiwanaku