

What is archaeology?

1: the nature of archaeological data



Archaeological data

- The study of the human past using material remains
 - The study of human behaviour revealed through material culture
 - Archaeology is not history without texts!
- What is material culture?
- What can it reveal?



“Archaeology is the discipline with the theory and practice for the recovery of unobservable hominid behaviour patterns from indirect traces in bad samples”

David Clarke: *Archaeology, the loss of innocence* (1973)

Objects of study

- Material culture
 - ‘Materialist’ perspective
 - Physical objects created by humans
 - ‘Portable antiquities’
 - Structures
 - Spaces
 - Landscapes
 - Archaeology is the science of material culture



A science of material culture

- Need to understand *things*
 - How they are held
 - How they are used
 - How they are made
 - What meanings they convey
 - How people relate to them



- What people do to them
- How they affect other *things*
- How they can help people
- How they can be treasured

But there's a problem...

- Most societies we study are remote in time
 - We can't observe them directly
- Archaeology is not unique
 - Astronomers can't visit distant stars
 - Particle physicists can't see sub-atomic particles
 - Biologists can't observe complete living systems



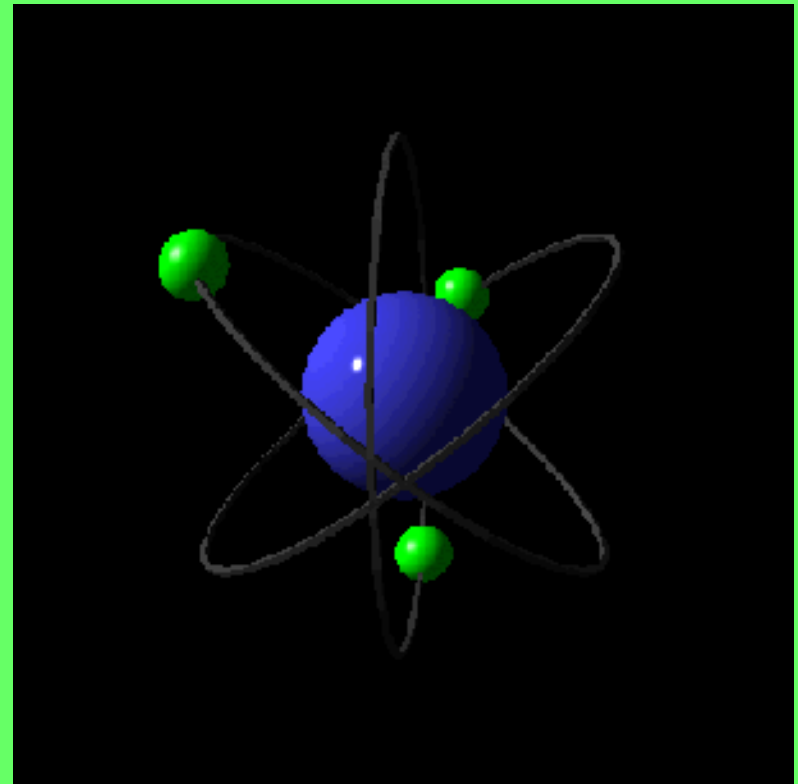
The archaeological perspective is unique

- Archaeology is not the only discipline to study material culture
 - But it is the only one to deal systematically with the past
 - Detachment from the remains



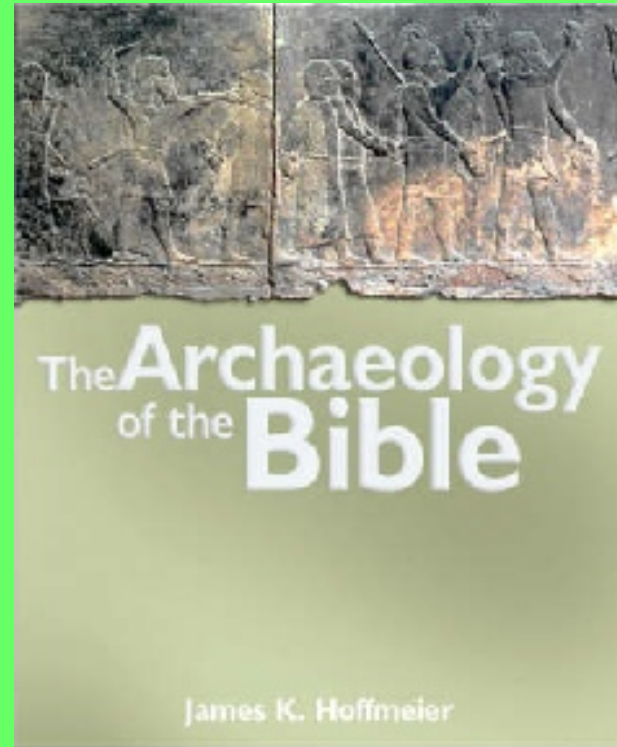
Archaeology and science

- But what is science?
 - A set of logical and empirical methods for observing phenomena to understand them
 - Explanations in terms of natural phenomena
 - An organised body of knowledge about the empirical universe



The myth of objectivity

- The ‘facts’ do not speak for themselves
 - Archaeological data need to be interpreted
- But how do we remove bias?
 - By not using the data to confirm what we already ‘know’
 - By evaluating all claims to knowledge



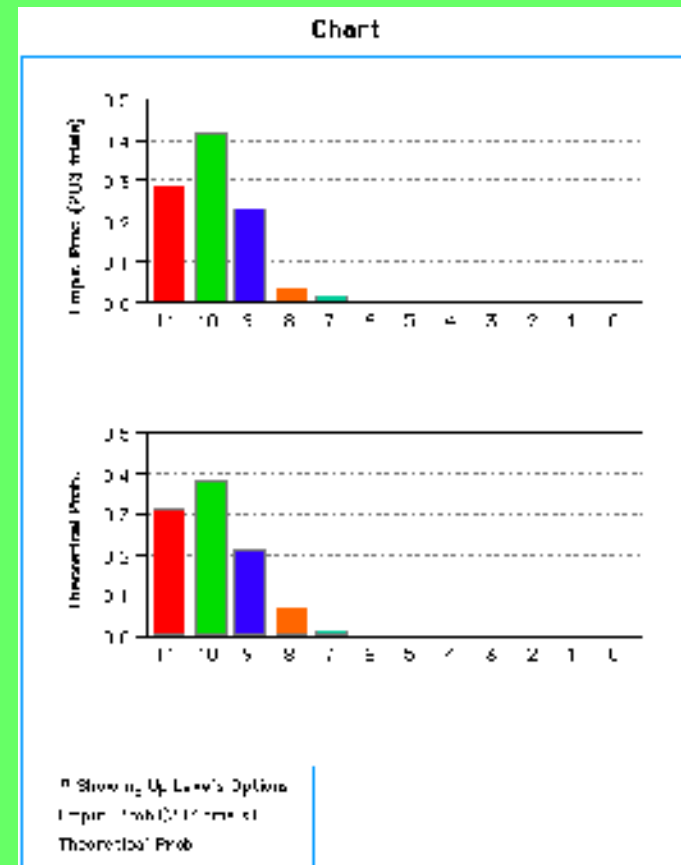
The myth of complexity

- A scientific approach is not necessarily complex
 - It must follow logical patterns of deduction
- Hypotheses must:
 - Explain the maximum number of observations with minimum assumptions
 - Be compatible with a well-established body of theory
 - Be tested before they are accepted
- Hypotheses need not explain all relevant observations



Logical and empirical methods

- No single method
 - Some involve logic
 - Some involve empirical observation
- They are impersonal
 - They need to be repeatable by different people
 - They need to be verifiable



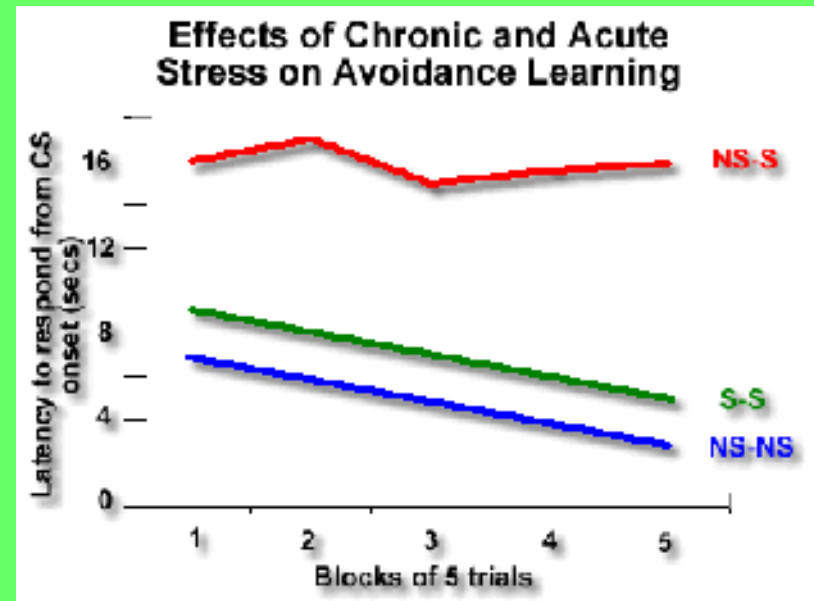
Scientific facts

- No *a priori* knowledge
 - Science must discover things
- Assumes a regular order to nature
 - Laws and principles are constant
- But cannot prejudge what they might be



Testing

- Science is:
 - A unified set of principles, knowledge and methods
 - To explain the behaviour of some specified range of empirical phenomena
 - Must be testable



Predicting

- A theory must make a prediction
 - Test to confirm or falsify
 - The more tests passed, the better confirmed it becomes
 - But it is never proved
 - The next test may falsify it!

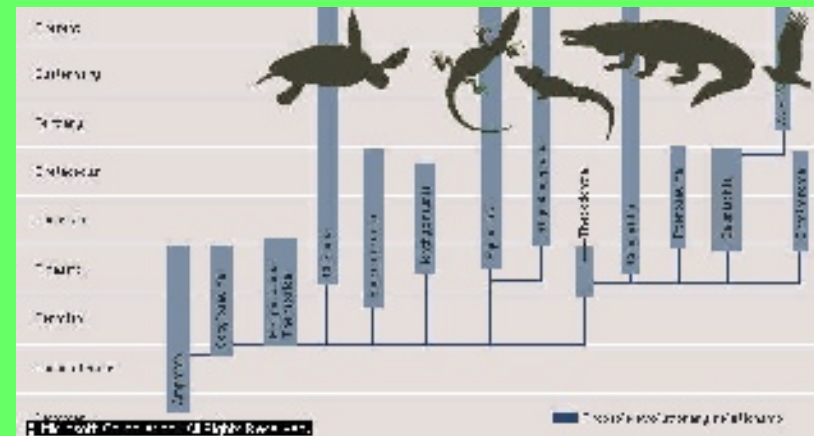
Trade Theory's Prediction

The Legacy of Heckscher and Ohlin

- Under the **assumptions** associated with the “long run” in microeconomics textbooks:
 - A country “abundant” in skilled labor and “scarce” in unskilled labor will gain from trade by specializing in and exporting goods using skilled labor intensively
 - The purchasing power of skilled labor will rise with removal of obstructions to free trade, while the purchasing power of unskilled labor will fall.

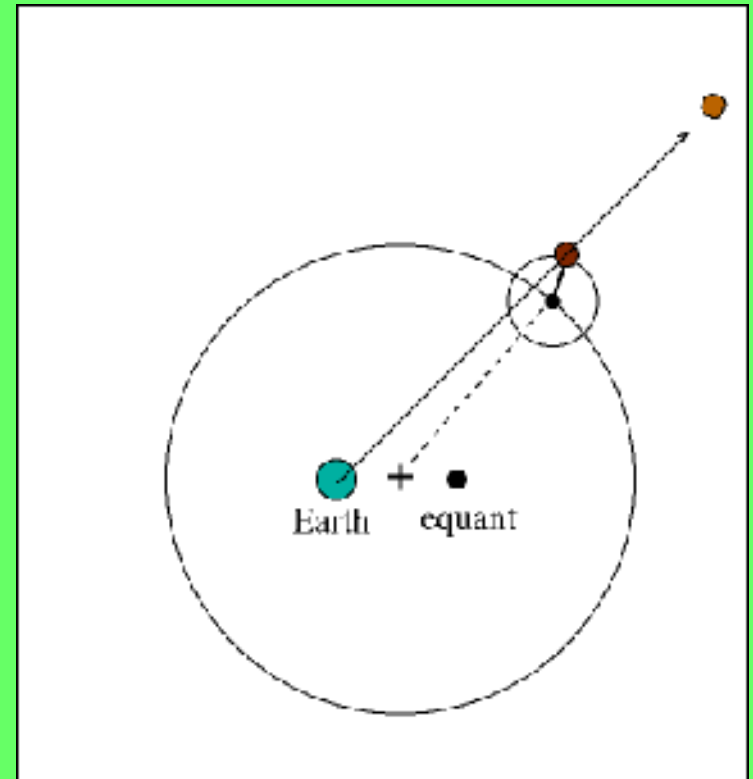
The postmodernist critique

- What is the relationship between ‘facts’ and ‘theories’?
 - Facts are the data
 - Theories are the ideas that explain and interpret facts
- Are ‘theories’ simply ‘speculations’?
 - Is science just a form of mythology?
 - Is it a narrative that can be contested?



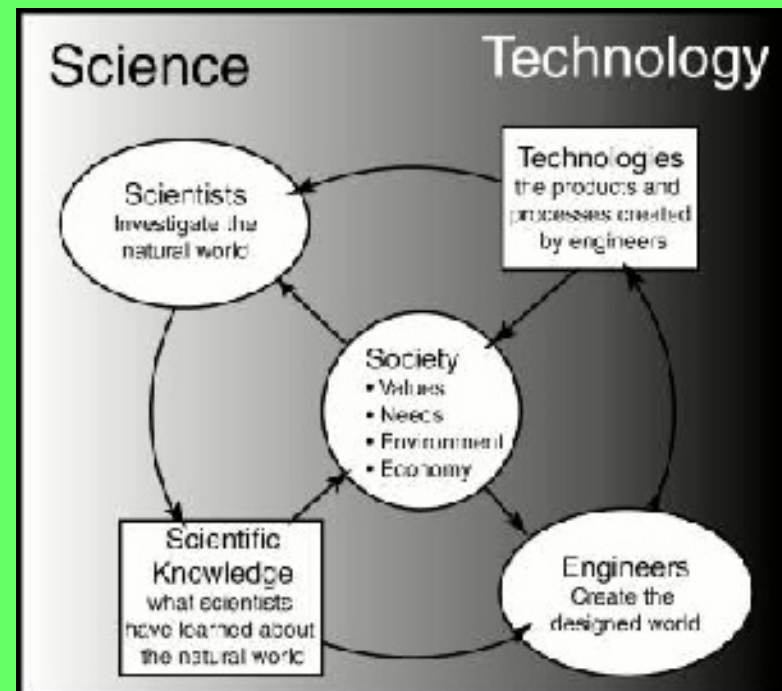
Why extreme postmodernism is wrong

- Facts remain facts
 - Even if their collection is theory dependent
 - Theories are discarded and replaced
 - History of science is the history of rejected theories
- Science does not stand still
 - Unlike religions and mythologies



Scientific knowledge

- Science is not infallible
 - Misconception that ‘scientific truth’ is ‘absolute truth’
 - Misconception that science is merely a ‘narrative’ with meaning only to scientists



The myth of absolute knowledge

- What is reality?
 - How do we know we're not part of someone else's dream?
 - *Cogito ergo sum* (René Descartes)
- Science seeks relative certainty
 - Then probability
 - Then possibility



Explaining the past

- Archaeology used to be descriptive
- Now tries to explain
 - Generate hypotheses
 - General (how do we recognise artefacts?)
 - Specific (why was Stonehenge built?)
- Relationship between humanity and material culture



Terminology

- Archaeological jargon
 - You'll pick it up as we go along
 - Don't be frightened of it!
 - Every area of knowledge has its own jargon
- If you don't understand a word, just ask
 - I use jargon all the time and don't think about it



“Jargon is by its nature exclusionary, and is particularly frustrating when it disguises relatively straightforward ideas and concepts behind what have been termed “poly-hyphenated monsters” by one archaeologist”

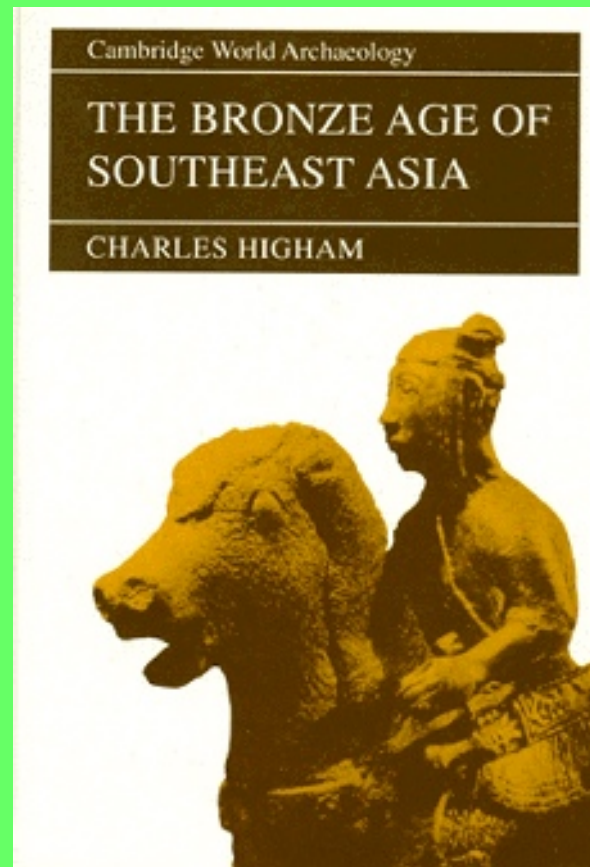
Essential terms and concepts

- Culture
 - The things that people surround themselves with
 - Anthropological definition
 - Archaeological definition
 - Material culture
- Context
 - The relationships between things



Periods

- Historical terminology
 - Romans, Normans, Tudors, early modern
- Technological terminology
 - Stone Age, Bronze Age, Iron Age
- Marxian terminology
 - Barbarism, civilisation, feudal



Archaeological periods in Britain

- Stone Age

- Palaeolithic (before 11,000 BC)

- Lower Palaeolithic (750,000-200,000 BC)
 - Middle Palaeolithic (200,000-59,000 BC)
 - Upper Palaeolithic (59,000-11,000 BC)

- Mesolithic

- Early Mesolithic (11,000-6800 BC)
 - Late Mesolithic (6800-4000 BC)



- Neolithic

- Earlier Neolithic (4300-3100 BC)
 - Later Neolithic (3100-2000 BC)

- Age of metals

- Bronze Age

- Early Bronze Age (2500-1800 BC)
 - Middle Bronze Age (1800-1200 BC)
 - Late Bronze Age (1200-750 BC)

Archaeological periods in Britain

– Iron Age

- Early Iron Age (750-400 BC)
- Middle Iron Age (400-100 BC)
- Late Iron Age (100 BC - AD 43)

• Historical period

- Roman (AD 43-411 in England & Wales)
- Medieval
 - Early Medieval (411-900)



- Central Medieval (900-1100)
- High Medieval (1100-1350)
- Late Medieval (1350-1500)

– Post-medieval

- Early modern (1500-1800)
- Industrial (1800-1980)
- Post-industrial (since 1980)

Other important terms

- **Archaeological culture**
 - A recurring set of material culture types
- **Assemblage**
 - The set of material culture from a site
- **Archaeological context**
 - The associations of objects in a culture
 - The basic unit of an excavation site
 - Deposits, cuts, walls etc.



How do data survive?

- Site formation processes
 - Natural processes
 - Deposition
 - Human processes
 - Digging
- Type of material
 - Durable
 - Chemically unstable
 - Organic



Factors determining data survival

- Primary or secondary context?
 - Has the material been moved since it first got into the ground?
- Nature of deposition
 - ‘Transforms’
 - Natural
 - Cultural
 - Pompeii principle
 - Deliberate concealment
 - Hoards
 - Burials
 - Accidental deposition



Factors determining data survival 2

- Redeposition
 - Residuality
- Site types
 - Habitation sites
 - Campsites
 - Villages
 - Towns and cities
 - ‘Working sites’
 - Kill sites
 - Quarries and factories
 - Rubbish deposition
 - Middens
 - Burials



Sources of data

- **Primary sources**
 - Texts and documents for historians
 - Monuments, sites, artefacts and ecofacts for archaeologists
- **Secondary sources**
 - Histories for historians
 - Site reports, syntheses and maps for archaeologists



Primary sources 1

- **Monuments**
 - Upstanding structures
 - Earthworks
 - Human built environment
- **Sites**
 - Buried remains of human physical environment
- **Landscapes**
 - Existing features
 - Lost features



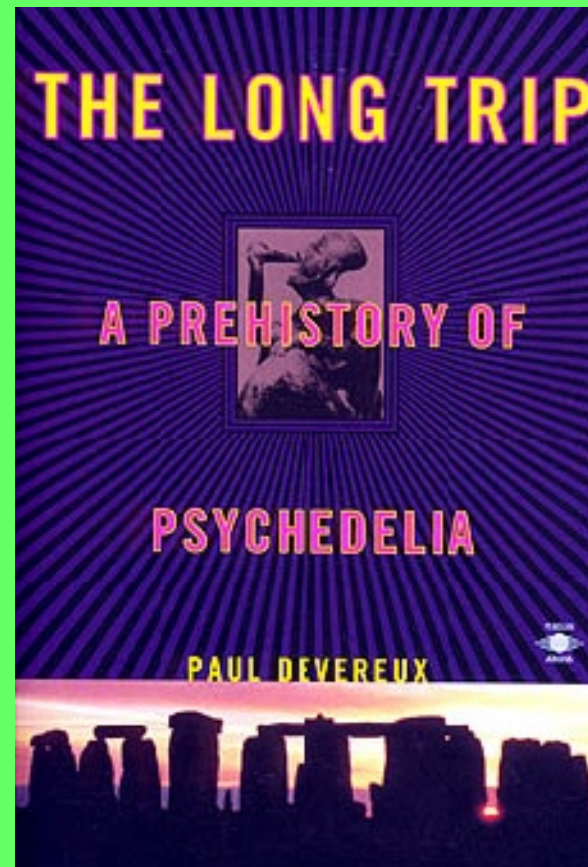
Primary sources 2

- Artefacts
 - Material culture
 - Portable objects
- Ecofacts
 - Information about natural environments
 - Bone (human and animal)
 - Wood
 - Pollen



Secondary sources

- Site reports
 - Excavation, survey etc.
 - Historic Environment Records
- Historical documents
 - Maps
- Syntheses
 - Accounts of places
 - Accounts of periods



Archaeology: the most basic science of all

- Archaeology is a social science
 - It deals with human experience
 - From the origins of humanity to the present
 - Its source of information is physical remains
 - Of human beings themselves
 - Of the living things they exploit
 - Of the materials they use and create
- It aims to understand people
 - It's not just about the objects or the monuments



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