- archaeology & adaptation
- physical objects & behavior
- contexts
  - systemic context =
  - archaeological context =
  - transformational processes
    - primary context =
    - secondary context =
- archaeological data
  - artifact =
  - feature =
  - ecofact =
  - site =
  - region =
  - archaeological research
    - finding sites
    - recovering data
      - excavation
      - reconstruction
  - explanation

- archaeology = explanation of past human behavior using physical remains

- adaptation = characteristics of an organism evolved through natural selection leading to a “good fit” between the organism and the environment

- archaeology of adaptation = explanation of past human behavioral adaptations using physical remains

- in principle, physical objects can be used to examine any aspect of human behavior

- including adaptation
But, just because a behavior exists does not necessarily mean it is a successful adaptation.

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  - artifact =

systemic context =

- the function or response of a physical object within a living, dynamic system of behavior
  - ceramic vessel → used to cook or store foods in a particular in systemic context
  - red deer population → responds to predation pressure in systemic context
  - soil → responds to the frequency of farming and types of crops
archaeological context =
- the physical remains that have “exited” systemic context and become part of the geological record
  - thermal fracture of ceramic vessel or marrow extraction from a long bone
  - the final events in system context that led physical objects to “exit” systemic context

cultural transformational process =
- agencies that “convert” physical objects from systemic to archaeological context
  - discard = intentional disposal of a portable material object...
  - abandonment = intentional disposal of a non-portable material object...
  - loss = unintentional disposal of a portable material object...

natural transformational process =
- agencies that “distort” the characteristics of physical objects once they are in archaeological context
  - water flow → alters the two-dimensional spatial location of physical remains
  - bioturbation → alters the three-dimensional position of physical remains
  - soil pH → acidic soils tend to dissolve organic remains such as bone and plant parts
What constitutes the archaeological record?

- artifacts =
- features =
- ecofacts =
- sites =
- regions =

Artifacts = portable objects whose form is modified in whole, or in part by human activity

Features = objects modified in whole or in part by human behavior that cannot be removed from their place of discovery without being altered or destroyed

- primary context =
  - locations of and associations between physical remains of past behavior **HAVE NOT** been altered from those established when they “exited” systemic context
    - does not mean that everything is perfectly preserved?
    - true primary context is very rare

- secondary context =
  - locations of and associations between physical remains of past behavior **HAVE** been altered since they “exited” systemic context
    - most physical remains are to one degree or another in secondary context
    - cannot jump directly to a reconstruction of behavior
- Ecofacts = (a)biotic remains that are relevant to understanding human behavior
  - floral ecofacts = seeds, pollen
  - faunal ecofacts = animal bones
  - soils and sediments

- Sites = Spatial clusters of artifacts, features and/or ecofacts (in all combinations)

- Region = a spatially bounded area containing two or more archaeological sites
  - geographic = bounded by well-defined geographic features
  - ecological = ... ecological characteristics
  - cultural = ... cultural characteristics

- process of archaeological research
  1. finding sites at surface and below the surface
  2. collection and recording of archaeological data
  3. reconstruction of behavior from physical remains
  4. testing models of “how” and “why” humans behaved as they did in the past
     - adaptation? mal-adaptati

- ANTHROPOLOGY 110P W08
reconnaissance = finding sites

- methods used to locate and identify (basic characterization) previously unknown sites

low tech high tech

collecting data

- surface survey = methods used to collect detailed information about artifacts, features, or sites found at the surface (e.g., mapping, surface collection)
  - poor preservation, large spatial extents, poor control of time
- excavation = methods used to collect detailed information about artifacts, features or sites found buried below the ground surface
  - better preservation, limited spatial extents, better control of time

reconstructing behavior

- how have the materials been transformed?
- is there any evidence that some natural process has “disturbed” or “damaged”
- how were the materials employed in systemic context (reflect behavior)?
  - e.g., stone tools and animal bones found together and marks on the bones suggest tools were used to butcher the animals

explanation

- Theory/Model = a summary of the patterns and regularities of behavior
  - a law-like statement
- Hypothesis = a set of predictions that should hold true if a model/theory is an accurate description of reality
- Observation/Test = information (data) collected with the aim of assessing the validity of an hypothesis
- archaeology is a historical science
- only one chance to excavate a site and collect data!
- “heart” of archaeological theory-building is to use “multiple working hypotheses”