

## **Cognitive archaeology**

© Copyright Bruce Owen 2009

- **Cognitive archaeology:** What people thought in the past, when they thought it, how they came to think it, and how that affected other things
  - Two broad foci:
    - Origins and development of modern human thinking abilities
      - When did people start thinking like we do, why, how, etc.
    - Content and influence of thought, as opposed to environment, economics, etc.
      - What religious ideas have people had, why, and how did that affect their lives and developments in their societies?
      - How did people understand and explain their world, both the physical world and the social (economic, political, etc.) world?
        - that is, what have people's ideologies been?
  - In part, this is a reaction to the excesses of the New Archaeology and the processual approach, which tended to emphasize
    - adaptation to the environment
    - economic or material determinism
    - a systemic view of society in which subsystems or subgroups acted in certain ways in response to certain conditions
  - reacting to this solely materialist focus, the cognitive archaeology approach emphasizes individuals and what they think as being of interest and having a causal role
    - in order to understand what people were doing in the past, cognitive archaeologists say you have to understand what they were thinking
    - their cognitive abilities (in the case of very early humans who may or may not have been fully modern in their psychology)
    - their ideology and cosmological framework for the world
    - which shapes their understanding of and response to conditions they encounter
- several areas, which blend together somewhat
  - identifying symbols and their meanings
    - first, some terms
      - **sign:** something that stands for (means) something else
      - **referent:** what the sign stands for
    - several types of signs:
      - **icon:** a sign that resembles its referent
        - a portrait is an icon of that person
        - a little picture of a printer on your computer screen is an icon of your printer
        - a picture of a person wearing a dress signifies (in our culture) a female; on a door, it implies that the room is for females
      - **index:** a sign that correlates to its referent
        - it “indicates” the referent somehow
        - a grimace “means” pain
        - pointing at something indicates that thing

- **symbol**: a sign with no inherent connection to its referent; the relationship is arbitrary
  - you generally have to learn what the referent is from someone who knows it
  - a red octagon outlined in white means “stop”
  - most speech is symbolic, in that the sounds have no particular relationship to the meaning
    - “dog” in English, “perro” in Spanish, “hund” in German....
  - consider the symbolism in a stained-glass window in a gothic Catholic church
    - saints hold objects that identify who they are, but you have to know the symbols to know what story the window depicts
- as Kelly & Thomas point out, identifying and deciphering symbols in archaeological material is difficult
  - they say we generally depend on ethnographic analogy
  - sometimes true, as in the Hopewell peace pipe example
    - we know from ethnography and history that recent peace pipes were thought to symbolize weapons
      - usually arrows
    - we see that Hopewell pipes physically resemble the hooks of atlatls (spear throwers)
    - so we suspect that maybe these were also pipes that symbolized weapons
      - but a different weapon that was no longer used in North America in historical times
    - and that these Hopewell symbolic weapon pipes maybe functioned similarly to the historical peace pipes
      - in mediating relationships between potentially hostile people
    - without the ethnographic analogy, we would never even have thought of this, much less been able to argue for it
  - But sometimes we may be able to figure things out without ethnographic analogy
    - when the images are sufficiently representational that we can be pretty sure of what the iconic (literal) referent is
    - then we may be able to make educated guesses about what the symbolic meaning was
      - based on the characteristics of the referents
        - as in assuming that representations of lions or eagles have to do with fierceness and danger
        - we can’t be sure, but it is a reasonable hypothesis
      - based on which referents are used with which others
      - based on the context of the referents
        - as in plants or animals that are represented far from where they would normally live
          - maybe they were exotic, powerful, special, mysterious...
      - but some ethnographic analogy always makes for a much stronger case
  - Ritual and religion
    - Religion is hard to define, although we all think we know it when we see it...
      - One's understanding of the supernatural and one's relation to it
    - Ritual: stereotyped activities carried out in accordance with religion
    - often intended to influence the world by influencing the supernatural
  - **Ideology**

- a system of ideas about society, culture, politics
- a set of ideas that makes sense of social organization, power relations, differential wealth, etc.
  - often manipulated to advance individual or group interests
  - to legitimize the status quo or to justify changing it
- features might include
  - the divine right of kings
  - democracy
  - free-market capitalism
  - socialism, etc.
- **Iconography**
  - one's system of visual symbols and relations among them that express ideas, even if only in a vague way
  - usually art, decoration, sculpture, etc.
- Examples
  - origins and development of modern cognitive abilities
    - the shift from early *Homo* Oldowan style tools to *Homo erectus* Acheulean tools (handaxes, etc.)
      - made to a specific shape
      - more visualization and planning required
      - that is, increasingly complex cognition
  - Handedness in stone tool manufacture - origins of modern brain structure
    - research done by Nick Toth
      - experimental archaeology research shows that you can distinguish whether the maker of stone tool was right-handed or left-handed
        - it affects which hand the tool was held in (the non-dominant hand)
        - we can tell which flake scars were made first, and which later, by the way they intersect and overlap on the tool
        - these form typically right-handed or left-handed patterns
  - No right vs. left-handed bias detected in earliest Oldowan pebble tools
    - around 2.5 mya
      - made by early members of the genus *Homo*, or late Australopithecines
      - thus they probably lacked the strong "lateralization" of brain function found in modern humans
      - so they probably thought in a very different way
  - but handedness is apparent in Acheulean tools
    - starting around 1.8 mya
    - made by *Homo erectus* and early *Homo sapiens*
    - mostly right-handed
    - thus probably the strong lateralization of modern humans had appeared
    - goes along with larger brains, longer juvenile dependency, reduced sexual dimorphism that probably means long-term male-female pair bonding
    - suggests a shift towards a human way of thinking

- Magdalenian figurines
  - Venus of Willendorf, etc.
    - mostly female, but some male and many indeterminate
    - all ages and body shapes
    - some faceless, some not
    - some with headgear or hairdos
  - what were the creators of these figurines thinking?
    - ritual, fertility, etc.?
    - sex, made by men?
    - pregnancy, made by women?
    - different things in different times and places?
  - before jumping to conclusions, consider an example from the much later site of Catal Huyuk, 7400-6300 BC
    - fat, naked female on the front, like a Venus figurine
    - skeleton on the back
    - clearly, something more complex is going on with the meaning here than just iconic representation of females
    - so we should be careful about assuming a straightforward meaning for other examples, too
  - some animals or seemingly anthropomorphic animals
    - are they meant to be representational, or were they intentionally anthropomorphized to make them mythical/supernatural beings?
- Alexander Marshack's analysis of the La Marche antler
  - Magdalenian (Upper Paleolithic) cave site, 13,000-12,000 BC
  - is this evidence of observing phases of the moon?
  - if so, it suggests modern-like thinking
  - problems of objectivity and interpretation, alternate explanations of marks
- reconstructing a given culture's ideology, religion, etc., and considering its effects or implications for the society
  - Chavín iconography (1000-200 BC)
    - jungle plants and animals
      - unlikely to be due to Chavín people coming from the jungle
      - suggests references to powerful shamans and animals of the jungle?
        - due to Chavín being on a route from the highlands towards the jungle?
    - San Pedro cactus
    - Shamans transforming?
    - drug paraphernalia
    - complex, esoteric iconography; reversible images...
    - travelling oracle?
  - Conrad and Demarest interpretation of Chimu state's expansion (1000-1470 AD)
    - capital at Chan Chan is composed of a series of walled compounds, each built by a successive ruler
    - each continued to operate after his death, to revere his remains

- supported by the lands that the ruler had conquered
- each new king thus had to expand the state in order to finance his own royal compound
- this is known in part from ethnohistoric accounts, supported by the archaeological evidence of the compounds
- if correct, it is a great example of how ideas about cosmology and religion had a profound effect on the "real world" of secular power, militarism, the expansion of a state or empire, etc.
- Moche iconography (1-800 AD)
  - straightforward weaving shop scenes, etc. look like representations of real life... probably
    - if so, they allow some fairly straightforward interpretations
    - in this case, fairly large-scale textile workshops with weavers and high-status overseers
    - probably many other useful details to be teased out
  - warfare scenes: realistic, or ritualized, or mythological?
  - Chris Donnan: presentation theme (and other themes not discussed in class)
    - Figures A, B, C now all found in actual burials
      - some multiple examples of the same "figure"
      - with the appropriate paraphernalia
      - suggests that the scenes were actually carried out by high-status people whose role in life was largely to be that particular figure in these rituals
      - that implies a lot about the ritual nature of high status among the Moche
      - and the nature of the Moche state
      - not to mention the real life experiences of at least some Moche people
    - Donnan has been doing this all through the processual archaeology years, when some belittled his work as unscientific "art history"
    - He is still at it, and does not particularly describe himself as a "cognitive archaeologist", either
      - what does that mean about all these labeled "types" of archaeology?
  - sacrifice scene, throne and prisoners scene
    - corresponding architecture, copper cups, sacrificed bodies...
  - so we are beginning to see the outlines of ritual practices
    - which must have been a major, shaping feature of life and political development for the Moche
    - we really could not properly understand this society without considering these rituals and the ideas around them
      - adaptation to the environment and economics would just not explain the Moche