Two Million Years of Art in Human Evolution

AH 224 Paleolithic Art, Spring 2012

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originsnet.org (pleistocenecoalition.com)
MYTHO-STRATIGRAPHY

Mythic III
Eurasian
‘shamanic’

Mythic II
‘Southern Route’

Mythic I
‘Khoisan’

Complex Idea
Modeling

Conceptual
Symbolic
Modeling
### 4 Meme Model: 2MY Evolution of Art, Symbol & Myth

<table>
<thead>
<tr>
<th>Era and Techné</th>
<th>Four Meme Model (James Harrod)</th>
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<tbody>
<tr>
<td><strong>Oldowan</strong></td>
<td>'Rudimentary Symbolic' = 2.0-3.5 yrs // human = great ape cognition (A. Russon 2004) = <em>Australopithecus</em> (similar cognitive level by triangulation to common great ape ancestor) First 'art object': ‘animacy in stone’, ‘animated spirit that inhabits the body’</td>
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<tr>
<td>EO ~2.6 to 2.0 Ma</td>
<td><em>Conceptual-Symbolic Modeling</em> = <em>Homo habilis/rudolfensis</em> (out-of-Africa) First Metaphor = ‘core-seed-sustenance-essence in interpersonal interaction’; ‘rhomboids of the mind’ First Ethos = carnivore axis First Joke: ‘hit the baboon head’ anvil (drill cupules)</td>
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<tr>
<td>‘Classic’ ~2.0 to 1.4 Ma</td>
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<tr>
<td>Developed ~1.7 to 1.2 Ma</td>
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<tr>
<td><strong>Acheulian</strong> (sensu lato)</td>
<td><em>Complex Idea Modeling</em> = <em>Homo erectus/ergaster</em> (out-of-Africa) Biface pairing of complementary shapes <em>(contraria sunt complementa</em>, Niels Bohr; <em>coincidentia oppositorum</em>, C. G. Jung; ‘co-poiesis’, Bracha Ettinger) Sheath, the Womb Source of Animacy (Life-Giver) &amp; Vehicle, Cutting Spirit, Energy of Initiative (Death-Giver) colorants, marking traditions, mortuary practice, adornments, anthropomorphs &amp; zoomorphs</td>
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<tr>
<td>EA ~1.7 to 1.0 Ma</td>
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<tr>
<td>MA ~1.0 Ma to 500 ka</td>
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<tr>
<td>LA ~650 to 200 ka</td>
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<tr>
<td>FA ~300 to 150 ka</td>
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<tr>
<td>**Middle Paleolithic /</td>
<td><em>Mythic I &amp;II</em> EMP =archaic <em>Homo sapiens</em> / MMP = <em>Homo sapiens sapiens</em> (out-of-Africa) Beings of the Dreaming, Creatrix of Life-Forms, stone arrangements, landscape art, image representation, mortuary practices with grave goods; geometric ‘signs’</td>
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<tr>
<td>Middle Stone Age</td>
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<tr>
<td>EMP ~300 to 40 ka</td>
<td>I. ‘Gaia’ (M. Witzel) = Khoisan</td>
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<tr>
<td>MMP ~150 to 60(100) ka</td>
<td>II. ‘Gondwana’ (M. Witzel) = ‘Southern Route’ Africa to SE Asia &amp; Australia</td>
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<tr>
<td>LMP ~60 to 30/35 ka</td>
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<tr>
<td>**Upper Paleolithic /</td>
<td><em>Mythic III</em> = <em>Homo sapiens sapiens</em> (out-of-SW-Central-Asia) ‘Eurasian’ (Y. Berezkin) ‘Laurasian’ (M. Witzel) = Shamanic 6 Worlds Shamanism; Soul Journey, Soul Retrieval; Mother-of-Animals, Master-of-Animals; Geometric Protolanguage, UP(E) array of 12 female and 12 male spiritual transformations (J. Harrod)</td>
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<tr>
<td>Later Stone Age</td>
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<tr>
<td>EUP ~150 to 60 ka</td>
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<tr>
<td>MUP ~40 to 20 ka</td>
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<td>LUP ~25 to 10 ka</td>
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*Templeton (2010, 2002): genetics = 3 waves out-of-Africa – 1.9 Ma; 650 ka; 130 ka; 1 out-of-Asia (recent)*
A New Paradigm

• Wave I: Dispersal of *Homo rudolfensis/habilis*, with classic Oldowan pebble-core tool tradition, out-of-Africa, ~2.0 Ma to 1.7 Ma

• Wave II: Dispersal of *Homo erectus*, with Middle Acheulian or Developed Oldowan-like tool tradition, out-of-Africa, ~1.0 Ma to 800 ka

• Wave III: Dispersal of *Homo sapiens sapiens* out-of-Africa or SW Asia with Mid-Middle Paleolithic technology, ~150 to 60 ka

  • Wave IV: Upper Paleolithic → 60 ka Global Rock Art Heritage
"So what's this? I asked for a hammer! A hammer! This is a crescent wrench! ... Well, maybe it's a hammer. ... Damn these stone tools."
Acheulian Period Palaeoart
Homo erectus / Homo ergaster

Time Magazine, March 14, 1994
# 2nd Meme of the Evolution of Art, Symbol & Myth

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<th>Era and Techné</th>
<th>2nd Meme: Complex Idea Modeling = Homo erectus/ergaster</th>
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<td><strong>Early Acheulian Period</strong></td>
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<td>- Play of complementary opposed shapes; art as geometric play</td>
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<tr>
<td>- First ‘idea’ as complementarity of abstract (geometric) : concrete (biomorphic) :: similarity : difference</td>
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<td>- ‘The medium is (part of) the message’ – ‘cutting into stone and bone’</td>
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<tr>
<td><strong>Middle Acheulian Period</strong></td>
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<td>Mode I (‘Developed Oldowan’) bipolar reduction (worldwide)</td>
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<tr>
<td>Mode II Middle Acheulian biface shape pairs (e.g., E Africa: ‘handaxe’ &amp; cleaver; SW Asia: ‘handaxe’ &amp; trihedral pick)</td>
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<tr>
<td>- Stereotypical pairing of complementary shapes (contraria sunt complementa, Niels Bohr; coincidentia oppositorum, C. G. Jung; ‘co-poiesis’, Bracha Ettinger)</td>
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<td>= Sheath, the Womb Source of Animacy (Life-Giver) &amp; Vehicle, Cutting Spirit, Energy of Initiative (Death-Giver) (Harrod 2003, 2002 online)</td>
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<td>- Figurative sculpture art flaked zoomorphic, anthropomorphic, geometric and polymorphic sculptures, esp. in Mode I traditions</td>
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<td><strong>Later Acheulian Period</strong></td>
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<td>- Complex ideographic marking or glyph traditions, e.g., cupule, undulating line, strokes, chevron, radiating (‘fan motif’) and convergent lines, embedded rectangles or ‘lattice of space’ (Harrod 2007a ‘Bhimbetka Glyphs’ compared to Kandinsky; Harrod 2007b, 2004 online) use of golden ratio (Feliks 2008, Feliks 2007), (e.g., Bilzingsleben, Germany; Bhimbetka and Daraki-Chattan, India)</td>
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<tr>
<td>- Regional traditions (Mode I and Mode II) of figurative sculpture art: decorated handaxes; flaked zoomorphic, anthropomorphic, geometric and polymorphic sculptures (worldwide)</td>
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**Acheulian (sensu lato)**
- EA ~1.7 to 1.0 Ma
- MA ~1.0 Ma to 500 ka
- LA ~650 to 200 ka
- FA ~300 to 150 ka
Early Acheulian
| Collection/manuporting of exotic objects + red pigment | Gadeb, Ethiopia, Site 8E, 0.7 to ~1.5 Ma  
(WM1979) several pieces of red basalt, which when rubbed yielded red pigment, but no direct evidence of use (CJ 1979; OK1981) |
| Pecked, abraded, incised, serrated or notched objects  
+ Marking traditions, including ‘cupule’, meander line | Gadeb, Ethiopia, Site 8E, 0.7 to ~1.5 Ma  
11 rounded cobbles with pits, similar to Olduvai, Melka-Kontouré, ‘nutcrackers’ (WM 1979) or ‘cupules’  
MNK Main, Olduvai Gorge, Tanzania, Developed Oldowan B, between Tuff IIC ~1.34 Ma? And Tuff IIB ~1.53 Ma?  
‘of 143 sub-spheroids, 12 massive, this largest, 14.5 lb. (Leakey M. 1976. Olduvai Gorge: Excavations in Beds I & II: Pl. 21 and p. 153) natural point and meander line, apparently intentionally worked round to center & emphasize the marks (JBH and cf. Bhimbetka glyph) |
| Exotic tools | Peninj, Tanzania, 1.4-1.7 Ma  
phytoliths on 2 of 3 handaxes, 1 of 2 flakes, suggest chopping wood, on 1 flake removing cortical fibers from branches, likely Acacia; fibers on inner surfaces suggest protection or hafting or possibly from use (DM 2001); biface shaping, application of symmetrical and asymmetrical complementary geometric shapes, apparently playful aesthetic (Harrod J. 2003. ‘Notes on Early Acheulian Stone Tools’)  
MNK Main, Olduvai Gorge, Tanzania, Developed Oldowan B, between Tuff IIC ~1.34 Ma? And Tuff IIB ~1.53 Ma?  
‘lava, 6.5 lbs, pointed both ends, chipped utilization on sides; also utilization indentation 23mm wide, 5 mm deep chipped on one face only’ (Leakey M. 1976. Olduvai Gorge: Excavations in Beds I & II: Pl. 20 and p. 150; ? potential female figurine (JBH)  
Gadeb, Ethiopia, Site 8E, 0.7 to ~1.5 Ma  
4 well-made ovate obsidian ‘handaxes’, for which only known source of obsidian was ~100 km away (WM 1979) |
Early Acheulian Bifaces (Peninj and Olduvai Gorge, Tanzania)

Top: Peninj, 1.4-1.7 Ma (Wynn T. 1989. *The evolution of spatial competence*, fig. 9, 10, 12, 19)
Middle, Bottom: Olduvai Gorge, EF-HR, 1.5-1.66 Ma (Wynn T. 1989. *The evolution of spatial competence*, fig. 29, 30, 20, 25)
(Leakey M. 1976. *Olduvai Gorge Beds I & II*, fig. 66, 63, 67)
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<td>snap, break, ‘unnatural’</td>
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<tr>
<td>EDGE</td>
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<td>CURVILINEAR</td>
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**EARLY ACHIEULIAN BIFACES – LOGIC MODEL OF SHAPES**

Postoj, MIS and RHIN, West Baring, Tanzania (c. 1.9-1.7 MYA) and Olduvai Gorge LUP-DR, Tanzania (c. 1.3-1.5 MYA)


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**Logic Model Diagram:**

- **One Fluted/4 Faces (top/bottom/leftright):**
  - CONVEX ➔ CONVEX ➔ CONVEX ➔ CONVEX ➔ CONVEX ➔ CONVEX ➔ CONVEX ➔ CONVEX

- **Rectilinear/Trimmed:**
  - CURVILINEAR ➔ CURVILINEAR ➔ CURVILINEAR ➔ CURVILINEAR ➔ CURVILINEAR ➔ CURVILINEAR ➔ CURVILINEAR ➔ CURVILINEAR

- **Curvilinear:**
  - CONVEX ➔ CONVEX ➔ CONVEX ➔ CONVEX ➔ CONVEX ➔ CONVEX ➔ CONVEX ➔ CONVEX

- **Two Fluted/4 Faces:**
  - ROUNDED ➔ NATURAL ➔ ROUNDED ➔ NATURAL ➔ ROUNDED ➔ NATURAL ➔ ROUNDED ➔ NATURAL

- **Three Fluted/4 Faces:**
  - CONCAVE ➔ CONCAVE ➔ CONCAVE ➔ CONCAVE ➔ CONCAVE ➔ CONCAVE ➔ CONCAVE ➔ CONCAVE

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Early Acheulian or Developed Oldowan-B Biface (MNK, Olduvai Gorge)

MNK Main, Olduvai Gorge, Tanzania, Developed Oldowan B, between Tuff IIC ~1.34 Ma? And Tuff IIB ~1.53 Ma?
‘lava, 6.5 lbs, pointed both ends, chipped utilization on sides; also utilization indentation 23mm wide, 5 mm deep chipped on one face only’ (Leakey M. 1976. *Olduvai Gorge: Excavations in Beds I & II*: Pl. 20 and p. 150); possible female figurine (JBH)
Early Acheulian or Developed Oldowan-B Sub-spheroid (MNK, Olduvai Gorge)

MNK Main, Olduvai Gorge, Tanzania, Developed Oldowan B, between Tuff IIC ~1.34 Ma? And Tuff IIB ~1.53 Ma?

‘of 143 sub-spheroids, 12 massive, this largest, 14.5 lb. (Leakey M. 1976. Olduvai Gorge: Excavations in Beds I & II: Pl. 21 and p. 153)
apparently flaked around to center and emphasize the natural dot-point and meandering line; cf. Bhimbetka glyph (JBH)
Meme #2A: Early Acheulian: Play of Symmetric and Asymmetric Shapes

It’s all about the play of making shapes,

playfulness of creative imagination

with respect to symmetric and asymmetric complementarity of opposite shapes.
# Middle Acheulian Symbolic Behaviors

Gesher Benot Ya’aqov, Israel, ~750-780 ka *(GN2000)* angular quartz crystals occur in the same deposit as two naturally perforated ‘bead-like’ crinoid fossils natural to site *(GN1991)*  
Zhoukoudian Cave, China, Loc. 1, Layer 5-10, ~600-800 ka *(BN2004)*, Upper 8, Quartz Horizon 2: ~20 quartz crystals, 1 perfect fully faceted, probably from 7 kilometers away and spheroids *(Pei 1931:120; BL1985; BR1991)*  
16R Dune, Thar Desert, Rajasthan, >390±50 ka *(MS1992, JH2005)*, quartz crystal manuports *(PSo2001)* |
| **Use of pigment** | Hunsgi II and V, Hunsgi Valley, Karnataka, India, >350 ka  
ocher nodules and hematite with wear facets and striations, evidence for ‘pigment crayons’ *(NN2003; BR1990, BR1993, BR1994)* |
| **Pecked, abraded, incised, serrated or notched objects** | Gesher Benot Ya’aqov, Israel, ~750-780 ka  
46 pitted cores, blocks and slab; 8 pitted flakes and flake tools; extensive evidence for edible nuts, including varieties requiring hammer and anvil to crack open, so infer that was use of pits *(GN2002)* |
| **Spoken language (circumstantial evidence)** | hyoid with modern morphology, Sima de los Huesos (‘Pit of Bones’), Spain, ~530 ka *(MI2008; Martinez et al 2009)* |
| **Exotic tools** | bifaces: handaxe and cleaver/trihedral pick, sometimes paired *(Harrod J. 2002. ‘Notes on Middle Acheulian Spirituality’ online)* |
Middle Acheulian Exotics

• Singi Talav, Didwana, Thar Desert, Rajasthan, >800 ka (CG2010); 6 complete quartz crystals from different crystal flowers and probably transported to site, no use-wear, too small for tool manufacture, non-local (BR2003, BR1993; JH2005); (figure above) Bednarik (1994 fig. 4) after D’Errico, Gaillard and Misra (1989)

• Gesher Benot Ya‘aqov, Israel, ~750-780 ka (GN2000), where angular quartz crystals occur in the same deposit as two naturally perforated ‘bead-like’ crinoid fossils natural to site (GN1991)

• Zhoukoudian Cave, China Locality 1, Layers 5-10, 600-800 ka (BN2004), Upper 8, Quartz Horizon 2: ~20 quartz crystals, 1 perfect fully faceted, probably from 7 kilometers away and spheroids (Pei 1931:120; BL1985; BR1991)

• 16R Dune, Thar Desert, Rajasthan, >390±50 ka (MS1992, JH2005), quartz crystal manuports (PSo2001)
Gesher Benot Ya’aqov, Israel, ~750-780 ka

46 pitted cores, blocks and slab; 8 pitted flakes and flake tools; extensive evidence for edible nuts, including varieties requiring hammer and anvil to crack open, so infer that was use of pits (GN2002). Pits on flakes?? Utilitarian and non-utilitarian???
Olduvai Gorge: Middle Acheulian cleaver and handaxes

Olduvai Gorge, Bed IV, HEB Level 3, 600–800 ka
1 cleaver, 5 handaxes, fine-grained green phonolite
photo: John Reader; Leakey (1994: pl. 15)
Oloigesailie walk to Site A. Excavated M. Leakey and L. Leakey

Photo James Harrod
Olorgesailie Site A – Member 10: ~ 662±4 kya (Deino and Potts 1990)
Handaxes, cleavers, other artifacts, cobbles, blocks – all transported to the site. Excavated M. Leakey and L. Leakey 1943-1947   Photo James Harrod
Olorgesailie Site A – Member 10: ~ 662±4 kya (Deino and Potts 1990)
Handaxes, cleavers, other artifacts, cobbles, blocks – all transported to the site. Excavated M. Leakey and L. Leakey 1943-1947 Photo James Harrod
Olorgesailie Site B – Member 7: ~ 974±7 kya -1.0 Ma (Deino and Potts 1990)
Excavated M. Leakey and L. Leakey (1943) Photo James Harrod
Olorgesailie Site B – Member 7: ~ 974±7 kya -1.0 Ma (Deino and Potts 1990)

Handaxes, cleavers, flakes, spheroids, cobbles and blocks. Bones 80+ *Theropithecus oswaldi*;
adult and juvenile bones smashed for marrow. Excavated M. Leakey and L. Leakey (1943) Photo James Harrod
The Catwalk site, Olorgesailie

Olorgesailie, Member 7, H/6 A, ca. 800 ka
Predominantly handaxes and cleavers, some scrapers, picks; *H. erectus*
photo: James Harrod
Olorgesailie, Catwalk Site Shed

Photo: James Harrod
Olorgesailie Catwalk Site, Member 7: ~ 974±7 kya -1.0 Ma (Deino and Potts 1990)

Large handaxes, cleavers average 23 cm, largest 33cm, average 1.6 kg, largest 2.7 kg. Discovered M. Leakey; re-excavated Glynn Isaac (1963-65)

Photo James Harrod
Olorgesailie Catwalk Site, Member 7: ~ 974±7 kya -1.0 Ma (Deino and Potts 1990)

Large handaxes, cleavers average 23 cm, largest 33cm, average 1.6 kg, largest 2.7 kg. Discovered M. Leakey; re-excavated Glynn Isaac (1963-65)

Photo James Harrod
Olorgesailie - View SW
Photo James Harrod
Olorgesailie - Site E, F: – Member 1: ~ 992 ±39 kya (Deino and Potts 1990)
Site E: *Elephas recki* humerus, hippo and equid bones, crude handaxes, flakes. Excavated L. Leakey
Photo James Harrod
Olorgesailie Site F ‘Hippo’ – Member 1: ~ 992 ±39 kya (Deino and Potts 1990)

Single hippo carcass; core-tools, scrapers, choppers, small, crude handaxes, flakes. Excavated L. Leakey (1944); tool inventory G. Isaac (1976)

Photo James Harrod
Olorgesailie Site F ‘Hippo’ – Member 1: ~ 992 ±39 kya (Deino and Potts 1990)
Single hippo carcass; core-tools, scrapers, choppers, small, crude handaxes, flakes. Excavated L. Leakey (1944); tool inventory G. Isaac (1976)
Photo James Harrod
Olorgesailie Site F ‘Hippo’ – Member 1: ~ 992 ±39 kya (Deino and Potts 1990)
Single hippo carcass; core-tools, scrapers, choppers, small, crude handaxes, flakes. Excavated L. Leakey (1944); tool inventory G. Isaac (1976)
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Olorgesailie Site F ‘Hippo’ – Member 1: ~ 992 ±39 kya (Deino and Potts 1990)
Single hippo carcass; core-tools, scrapers, choppers, small, crude handaxes, flakes. Excavated L. Leakey (1944); tool inventory G. Isaac (1976)
Photo James Harrod
Figure 40. (a) A diagram illustrating the concept that the various categories of larger tools form zones within a field of morphological variation. (b) The frequencies of the major categories in the overall Olorgesailie sample. The percentages are represented as a three-dimensional histogram with the forms distributed essentially as in A.
St. Acheul, France: ‘handaxe’ and cleaver

photo Willard Whitson in Tattersall online (2008: fig. 5)
Regional Middle Acheulian Traditions: Abstract Complex Idea Modeling (Biface Pairing)

L: Lanceolate handaxe and trihedral or quadrahedral pick
R: Handaxe and cleaver

illustration: James Harrod
Meme #2B Middle Acheulian: Idea Complex Model
= ‘Lattice of Space’
from Homo habilis to Homo erectus
Sheath, Womb Source of Animacy (Life-Giver)
Vehicle, Cutting Spirit, Energy of Initiative (Death-Giver)