

Notes on Spoken Oldowan (OLD_{PL}), Including a Meditation on Oldowan Symbolic Art, Marking Motifs, and Concept of the Sacred

The first hominid on the way to our present day species was *Homo habilis* (and/or *Homo rudolfensis*) who lived in Africa during the Oldowan period, two million years ago. There is limited archaeological evidence (Leakey 1971:84, 269, pl. 18 (see note); Harrod 1992) for symbol making during this period, two objects to be specific:



- Olduvai FLK North, Level 1, Upper Bed I, c. 1.75-1.76 MYA, an intentionally grooved and pecked phonolite cobble with some resemblance to a baboon head, perhaps also used as an anvil. (see note)
- Koobi Fora, FxJj1 #302, c. 1.88 MYA, a chopper core with four alternating flakes removed accidentally yielding an inner cleavage plane in shape of a diamond rhomboid; object curated.

I have already written (Harrod 1992) an extended meditation upon the evocative power of the Koobi Fora rhomboid and FLK baboonhead anvil. In that study I argue for the interpretation of the artifact as an intentional resemblance to a baboon head with supporting evidence of Acheulian period NW European baboonhead anvil stones.

It would be very interesting if we could reconstruct what these Oldowan hominids were capable of talking about and in particular what they might be saying about these two objects. There happens to be a way to do this, at least hypothetically. Mary LeCron Foster in a series of papers (1996, 1994, 1992, 1990, 1983, 1978) developed a hypotheses for the structure and root stems of “primordial language” (PL) and for how PL evolved through various prehistoric stages beginning with the Oldowan.

In this brief study I will build on Foster’s hypothetical PL stages to reconstruct spoken Oldowan, at least the root words or ‘lexemes’ of Oldowan. Foster (1996) suggests that the earliest protolanguage—call it Spoken Oldowan—consisted of two ‘phememes’, namely *T and *M, where *M = *m fused with *n and *T = *t fused with *p. The two fusions split into four phememes during the Developed Oldowan or Early Acheulian period and at least two more are added in the Later Acheulian. [Note that that Foster 1990 proposed for the Oldowan period *m, *w, and *y. Foster 1996 argues that *w and *y appear more appropriate for an Acheulian protolanguage.] Foster’s central thesis is that phememes are iconic to mouth gestures and thus

they acquire semantic meaning. She uses linguistic methods for protolanguage reconstruction applying them to array of lexicons from the worlds primary language stocks to reconstruct the semantics of the PL phememes. I draw on the corpus of her writings to characterize the semantics for each phememe.

First, I draw on Foster's semantics of *T and *M. I slightly modify it by seeking semes that emphasize the differential opposition between the two and building upon Foster's semantics for their respective allophemes.

*T = cut or enter and go forward, cutting or entering, going, contact, placement, point, thrust, outward movement, forward, linear; give; penis erection, copulation; strike, kill, butcher; flake a tool; to father, male

from *t = movement toward, butchering, tool manufacture, copulation, entering; contact, precise placement, deictics, throwing at; intrusion
 + *p = movement from, going, giving, penis erection, pointing, killing, stone as weapon, fire; outwardness, forwardness, protrusion, thrust.

*M = nurture and be nurtured, gestate and be gestated, contain and be contained, rounded, fullness, pleasure, sexual satisfaction; join, unite, be coactive with, interrelate; grasp; make one's own, make interior, inwardness; mothering, female

from *m = bounding, mouth, vagina, eating, suckling, grasping/holding, shelter, nurture, mothering; *m1 = me, my, mine, more or *m2 = into, between, grasp, mouth as grasper; betweenness, interrelationship, likeness; coactive, interaction, social intercourse; *m = take, relate to, like, as, created, hidden, result, join, desire, manifest, be united, be fitted
 + *n = bounded, pregnancy, gestation, hearth, nurtured, mothered, blood; rejection; innerness, belonging to, and like; internal; *n = in: in, between, into, inside, interior, dwelling, enter.

I go a step further than Foster does by proposing that the 'mimetic' Oldowan hominids were capable of reduplication of phememes, combination of phememes, and apparently permutation as well. Drawing on the semantics of relevant two-phememe combinations and permutations (Foster 1978) I propose the following semantic field for spoken Oldowan roots. As they are not provided by the Foster references, I develop my own semantics for *T'T and *M'T (*see footnotes for details of derivation*).

*T = cut or enter and go forward, cutting or entering, going, contact, placement, point, thrust, outward movement, forward, linear; give; erection, copulation; strike, kill, butcher; flake a tool; to father, male

*T ' T = [hypothetical = iterated, repetitive cutting, as in butchery, tool making; *see footnote*]
 = *t-p = (penetration/contact-outward) to move, put through or between; intervene, interpose; intrude; deviate, err, grope about; hot
 =*p-t = (outward-penetration/contact) to move, put through or between;

intervene, interpose; throw, fly; fall, widen, tread; indent, penetrate, imprint, dig a canal, dam, sluice; rip, cleft, fissure, slit, gap, space between; weaken, become soft; conceal, hide, deny

- *T ‘ M** = *t-m = (penetration/contact-bilateral) cut, chew, separate, distinguish, break, take pieces off, chip, half, winnow, sift, suffer, grow thin, fade, tired, faint, wither, be in trouble, emaciated, perish
 = *t-n = (intromissive-interpositive) stretch, pull, extend, lengthen, long, tall, increase in size, endure
 = *p-n = (projective-interpositive) feed, food, nourishment, female, dwelling, breasts, eat
- *M ‘ T** = *m-t = (bilateral-penetration/contact) contact with shared or common between opposite sides; or with a shape of joinedness that emerges or is gestated from out of a womb-like matrix or central, shared source; shared meal, equitable distribution; measure, symmetry, proportion, truth, healing; *see footnote*
- *M ‘ M** = *m-n = (bilateral-interpositive) mental activity, think, sight, pleased, glad, intention, know, lose consciousness, sleep, confusion of mind
 = *n-m = (interpositive-bilateral) take, share, allot, assign lot; have, carry; further, then, also; name, quality; long for, desire intensely; learn, understand; number, division
- *M** = nurture and be nurtured, gestate and be gestated, contain and be contained, rounded, fullness, pleasure, sexual satisfaction; join, unite, be coactive with, interrelate; grasp; make one’s own, make interior, inwardness; mothering, female

A semantic spectrum from *T to *M moves through *T’M and *M’T. *T’M and *M’T appear to be permutative reversals with respect to both their phememic sounds and semantics. The semantics of *T’M is suggested by the root *t-m, i.e., ‘to chip, flake, break or separate off’ as well as ‘suffer, grow thin’, showing that the primary emphasis is on the *T semantics. Tn carries a similar theme with a bit more continuity as well as a more differentially opposed theme ‘increase in size, endure’ which with *p-n’s ‘feed, nourish’, seems allied with the semantics of *M. [Compare the biological concept of ‘jumping genes’.] In contrast to the semantics of *T’M, that of *M’T emphasizes its *M component. At least as I suggest reconstructing it, mt—signifies ‘contact a shared or symmetrical shape between bilateral or opposing sides’ as well as ‘gestation’. *M’T also seems to signify ‘equitable, proportionate distribution’ and thus as implying ‘division’ it shares a seme with *T’M and *T.

In this Oldowan lexicon, *T is structured by the semic opposition or tension between ‘moving from’ and ‘moving toward’; *M by the tension between ‘containing’ and ‘being contained’. Hence, *T + *M combine to create a tension of tensions, between moving from/toward and

containing/being contained. Such complementary tensions of opposites generate analogical significance and metaphoric symbolism.

On the one hand, *T'M and *M'T contrast a negative cutting and flaking—negative because it breaks pieces off and is associated with suffering and withering away—with a positive gestation and emergence of shape of joinedness or symmetry—positive because it is associated with increase in size and endurance as well as a distribution and sharing of sustenance.

On the other hand, by proximity to *T and *T'T, *T'M is associated with the positive cutting and flaking of useful things (tools, carcasses), while, by proximity to *M and *M'M, *M'T's gestated form is associated with newborns and mental ideas, i.e., the useless, nonutilitarian, not a means to an end, for its own sake, perhaps just for contemplation.

Further, in this *coincidentia oppositorum* at the heart of the Oldowan semantic field, we see in *M a complementarity combining nurturing and nurtured in 'one' and in *T a separating and growing tall (magnification) in 'one'. In their combination with see all four semes together. This simultaneity implies the establishment of 'consciousness, gladness, and a quality like one's name.'

In the tension of opposites *T and *M there is also implied reversing movements of progression and regression. There is movement forward and hearkening back; increasing in substance and withering away; suffering and gladness. In speaking these two ultimate words, *T'M and *M'T, the Oldowan hominid appears to have been able to establish a relationship, an intentional intercourse, with these opposite energetic movements. These primal 'words' evoke complementary movements of the human spirit that dwells 'in us' and in our 'outward, manifest, forward thrust' into life.

It is precisely this *coincidentia oppositorum* that appears to be represented in the two tentatively identified symbolic artworks of the Oldowan: the pecked and grooved Olduvai baboonhead anvil and the Koobi Fora accidental rhomboid core.

Each 'symbolic artwork' a tension of opposites.

The baboonhead anvil with its pecked groove and line of peck marks seems to combine the tensive qualities of *T'M. The stone like a baboonhead is pecked and battered all over and specifically pecked with a groove and with four tiny cupule-like peckings down the side. The groove accentuates the forehead and muzzle distinction bringing out the suggestion of iconicity, a vague semblance to a baboon's head. The four pecked indentations suggest a ritualized or mimetic attack (in Oldowan terms *T'T) upon the baboon or that which is 'like' a baboon.

The baboon is a known competitor and prey of primates. The prey of chimpanzees consists largely of primates and giant gelada baboons at least at Olorgesailie D/89B (Middle Acheulian, 747-974,000 BP) were a prime game animal and source of sustenance of *H. erectus* (Shipman et al 1981).

In Oldowan PL terms, this is *T'M, a negative cutting, pecking and battering away at something associated with suffering and withering away. This can be viewed outwardly as a competitor

for sustenance—the loser being the one who will wither as opposed to increase—or inwardly as an energetic force of suffering and withering away. This latter force as opposed to progressive movement would be a regressive movement, a tug backward, perhaps a force of inertia that is a competitor for, so to speak, psychic energy or human spiritedness. Whether or not the Oldowan hominid had a conscious awareness of evolution, this inertial tendency would be experienceable as a force of de-evolution, a force against the gestation and emergence of form, the shape of joinedness. The maker of this work pecked at it as though resisting this tendency and simultaneously hunting, striking at, killing the image of a creature that was a familiar game animal, a source of sustenance. It evokes an almost desperate fight for survival, for increase. It evokes conflict and violence. It evokes a kind of ‘evil spirit’ and resistance to that spirit. It also suggests necessity (Necessitas, Ananke), the pathos of survival that requires the killing of other life forms. The pecking—so orderly, four tiny indentations—suggests establishing a relationship, an interaction, an intercourse with that regressive spirit. Is it a payback that is perhaps a kind of giving-back, a return, a tithe, a sacrifice, so as not to be chewed up, swallowed by the vortex, devoured by it. (Appeasing incipient self-cannibalism.) ‘You have to return something to it. Give something back.’ Then that source of sustenance will be generous.

In contrast to the baboonhead anvil, the rhomboid or diamond core combines the tensive qualities of *M'T. The core has both a ‘bilateral’ (*m) and ‘interpositive’ (*n) quality and the rhomboid shape has both a ‘precise contact, intrusive’ (*t) and ‘protrusive’ (*p) quality.

In the accidental or spontaneous emergence of the rhomboid shape there is an almost paradoxical or miraculous occurrence. The maternal core or essence that is the source of flakes (cutting implements) and as ‘core’ seemingly the opposite of a peripheral flake here gestates within itself a rhomboid shape, a pure geometric shape, a sharp pointed diamond. The core is a ‘matrix of form’ [or in PL = ‘M'T- of form’]. It evokes creativity and the human creative process. The core is generative of a pure geometric shape having a symmetrical diamond quality. The pointed diamond shape—as pointed thus *T-like—is a ‘template of the mind’. (Hence it appears to be a concrete representation of that ‘template of the mind’ that is operative for Oldowan hominids. Compare Donald (1993, 1991) on the notion of a ‘template’ that characterizes a given prehistoric era. And of course note that the phrase itself is infused with Oldowan PL: ‘T'M'T-T of the M'T’.)

In Oldowan PL terms, the rhomboid is *M'T, a positive gestation of a shape of joinedness or symmetry—positive because it is associated with increase in size and endurance. By proximity to *M and *M'M, *M'T's gestated form is associated with newborns and mental ideas, i.e., the useless, nonutilitarian, not a means to an end, for its own sake, perhaps just for ‘contemplation’ [in PL terms = ‘-M'T'T'-T']. The core rhomboid is an object for ‘meditation’ [in PL terms = ‘M'T'T'T'-']. This is consciousness representing itself, and thus evidence of self-consciousness. This is our first evidence then for the birth of consciousness.

In addition, as representing a maternal matrix that spontaneously generates a diamond form of symmetry, *M'T, the rhomboid core also offers a reminder (-M'T-) with respect to the equitable distribution and sharing of sustenance and especially meat (M'T) and places the notion of sustenance in the context of a ‘the equitable distribution of sustenance given by the mother of all living things’. In this light the emergence of spoken Oldowan accompanies the emergence

of conscious symbols for the equitable distribution of sustenance. [Is this a linguistic transformation upon the chimpanzee begging for meat from a kill? Does the baboonhead then come to symbolize violent and socially destructive competition for meat and the regressive force that engenders such inequity?]

In contrast to the baboonhead anvil, the core rhomboid evokes the progressive quality in human evolution. It evokes the 'good spirit.' In religious terms, the object evokes the sacred as transcendent, wholly other, beyond human control. The rhomboid appears by accident, a by-product of the flaking. A miracle, sheer grace. At the same time, it evokes the 'uselessness' of that which is for its own sake, whether art, spirituality, philosophy. This is the shadow side of the sacred. The beholder is tempted to fall under the spell of feeling useless, inferior, or worthless, while being held in a state of grace.

Thus does it not appear reasonable to imagine that the maker of the FLK baboonhead anvil exclaimed something like "T'M"; the maker of the rhomboid core "M'T"?

Note on the Concept of the Sacred in Oldowan Spirituality

This is an incipient or first notion of the sacred, the numinous, the *mysterium tremendum et fascinans*, which is split *T'M and *M'T. One meets the 'evil spirit' symbolized by the baboonhead anvil full of desperate fear and trembling, dread before its awful majesty. One meets the 'good spirit' symbolized by the core rhomboid full of awe yet also with feelings of grace and love for that which is marvelous, fascinating, gestating and yet wholly other.

Compare Mircea Eliade (1959:9-10) on the concept of the sacred drawing on Rudolf Otto's *Das Heilige* (The Sacred or Holy). "In *Das Heilige* Otto sets himself to discover the characteristics of this frightening and irrational experience. He finds the feeling of terror before the sacred, before the awe-inspiring mystery (*mysterium tremendum*), the majesty (*majestas*) that emanates an overwhelming superiority of power; he finds religious fear before the fascinating mystery (*mysterium fascinans*) in which perfect fullness of being flowers. Otto characterizes all these experiences as numinous (from Latin *numen*, god), for they are induced by the revelation of an aspect of divine power. The numinous presents itself as something 'wholly other' (*ganz andere*), something basically and totally different. It is like nothing human or cosmic; confronted with it man senses his profound nothingness, feels that he is only a creature, or, in the words in which Abraham addressed his Lord, is 'but dust and ashes' (Genesis, 18, 27)."

[Note that in the word '*tremendum*' is the reduplication *T'M'T; in '*mysterium*', *M'T; and in '*numem*' is the reduplication of *M'M'M.]

I find the Oldowan sense of the numinous more nuanced than that described by Otto and Eliade, so colored by their Biblical bias. For our Oldowan ancestors I suggest that the dichotomy is not so much between 'the sacred and the profane', as between two distinct powers of the sacred, the *tremendum* as symbolized by the baboonhead anvil and the *fascinans* as symbolized by the rhomboid core. Each symbolizes its inherent ambivalent qualities or dynamics. Each requires a distinctive 'social intercourse'. Each requires a distinct ritual action to establish a balanced human relationship with its energetic factors.

Note on Oldowan Marking Motifs

Elsewhere I have analyzed the Later Acheulian marking motifs, including cupule, undulating line, convergent and divergent line motif, arc and iterative stroke mark, lattice and shape of space. These appear to constitute gesture-movement-forms self-iconic to their semantics, in other words a kind of Later Acheulian ‘writing’.

After working on the decoding of the Later Acheulian markings, I looked with new eyes on the Olduvai FLK North anvil stone, which I had taken following Mary Leakey’s tentative suggestion, to resemble a baboonhead. I could now see that its maker appears to have superimposed upon the zoomorphic shape two kinds of markings. First there is a pecked groove running parallel to the object’s base in a straight or forward thrusting line, which in 3-D circles the object. Second, there is a row or line of four indentations, like tiny cupules, running at an oblique angle to the pecked groove.

At minimum, the groove might be interpreted as an effort at shaping the resemblance to a baboon head. The indentations might be interpreted as just more of the pounding, striking and battering that covers much of the upper surface of the object. It would be an incipient ‘psychogram’, an expression of dynamic, emotional energy. At another level, it is possible to see that the two kinds of markings share a structural complementarity and if so this suggests that they may have a symbolic significance.

The structural complementarity involves ‘groove’ versus ‘peck mark’ (micro-cupule)—in other words, point versus line--and also ‘around it’ versus ‘across it’—in other words, line versus circle or roundedness. This can be formulated as a contrasting and complementary pair of instructions.

(1) Peck a linear groove all the way around it.

Or in Oldowan primordial language terms, (1) = T’-T’-M, where the first T is an action (verb), ‘peck, strike, contact, hit’; the second T is a movement-form, ‘linear groove’ and M qualifies it as ‘round’ the object.

(2) Peck a line of tiny peck marks (micro-cupules) across the face.

Or in Oldowan primordial language terms, (2) = T’-T’T’T’...-T’, where the first T is an action (verb), ‘peck, strike, contact, hit’; the second T is a movement-form, ‘a line, row’, then a series, iteration of T’s, ‘peck marks (micro-cupules)’ and the final T qualifies it as ‘across’ the object, perhaps as butchery cutmarks across meat or bone.

We saw earlier that the two Oldowan palaeoart objects each carry and symbolize an ambivalence between two energies which might be named *M and *T. Now in the case of the markings placed on the baboonhead it is possible to see this ambivalence directly ‘spelled out’.

In sum, if we could make such a semiotic interpretation, then the FLK baboonhead anvil appears to exemplify the earliest archaeological evidence for marking signs or graphemes. It represents one of the beginnings of writing.

Footnotes

Note 1. Mary Leakey describes the FLK North object (1971:84):

“It consists of a phonolite cobblestone measuring 79 x 54 x 49 mm. in which almost the whole of the original smooth cortex surface has been removed by pecking and battering. It is oblong in form, the base and one side being flat, whilst the upper surface and opposite side are convex. One end is blunt and the opposite end obliquely pointed. There is a well-marked artificial groove on the upper surface. This is continuous, except for an area 20 mm. wide where the surface has scaled off subsequently, and for a second area, on the opposite side, where part of the cortex surface still remains. This is approximately 9 mm. wide. The groove varies from 18 to 9 mm. in depth and encircles a raised oval area, measuring 60 x 41 mm., which is pecked over the entire surface. There is no evidence of wear inside the groove, although it is not so coarsely pecked as are other areas of the surface. Experiment has shown that the groove is sufficiently deep to hold a thong or string in position if tied round the stone at this point. On the convex side of the stone and at the edge of the cortex area, there is a line of four symmetrical indentations 3-4 mm. in diameter, either circular or oval in shape, and measuring 0.5 mm in depth, together with two adjacent pitted indentations which are both larger and shallower. Other parts of the surface show additional battering and pitting, with several irregular shallow depressions, apparently caused by wear. No explanation can be offered here, either for the groove or for the line of peck marks; similar artifacts are not known from any other Oldowan assemblage.”

She adds (269):

“This stone has unquestionably been artificially shaped, but it seems unlikely that it could have served as a tool or for any practical purpose. It is conceivable that a parallel exists in the quartzite cobble found at Makapansgat (Dart 1959) in which natural weathering has simulated the carving of two sets of hominid—or more strictly primate—features on parts of the surface. The resemblance to primate faces is immediately obvious in this specimen, although it is entirely natural, whereas in the case of the Olduvai stone a great deal of imagination is required in order to see any pattern or significance in the form. With oblique lighting, however, there is a suggestion of an elongate, baboon-like muzzle with faint indications of a mouth and nostrils. By which is probably no more than a coincidence, the pecked groove on the Olduvai stone is reproduced on the Makapansgat specimen by a similar but natural groove and in both specimens the positions of the grooves correspond to what would be the base of the hair line if an anthropomorphic interpretation is considered. This is open to question, but nevertheless the occurrence of such stones at hominid sites in such remote periods is of considerable interest.”

Many examples of anvils with shapes resembling monkey (macaque) or baboon-like heads have been found in Northwest Europe, despite the fact that baboon fossils have not been found.

Note 2. Mary LeCron Foster (1996) hypothesizes that there were two Oldowan phememes and they were a fusion of *p and *t and *m and *n:

*T = outward, thrusting, projecting, linear, male; correlated with distance, fathers, male erection and introjection, striking, butchering, tool-manufacture, bringing

*M = inward, containing, enclosing, rounded, female; correlated with ‘home base’, mothering, gestation, eating, feeding, fullness, sexual satisfaction, pleasure, receiving

Note 3. *T ' T. The reduplication *T'T is also missing in the 1978 lexicon. I suggest it as an iteration, repetition or intensification of *T. Perhaps these are the other semes of *tm that pertain to repeated cutting, i.e., chewing, flaking off pieces as in stone tool manufacture or butchering a carcass.

Note 4. *M ' M. Similarly, *M'M means a reduplicated, iterated sequence of 'joins'—the complementary opposite of a sequence of 'cuts'—and this is what we see in *m-n, the essence of mind as a series of 'joins', seeing and making connections and also the 'ownmost' quality possessed by oneself, 'my' thoughts, feelings, ideas, or by things, as their name or as my pleasure and gladness.

Note 5. *M ' T. In the various Foster studies referenced no primordial root *m-t is presented. I see no reason not to propose one. Just on the basis of the overall spectrum of the semantic field constituted by the roots of *t, *p, *m, and *n that she does propose it is possible to extrapolate a root that is the opposite or reversed semantics from *t-m. If *t-m = (penetration/contact+bilateral), then *m-t = (bilateral + penetration/contact). If *t-m suggests cutting or dividing of opposite sides and even weakening, thinning; *m-t would suggest the reverse: contact with the shared or common between opposite sides or contact with something, a shape that is a 'joinedness', that emerges out of or is gestated from a maternal-like matrix. Thus *m-t would mean something like gestation, emergence of symmetrical shape, joinedness. Something like this seems to appear in these PIE and Egyptian lexemes:

PIE: *mē-2 = to measure, as to measure, mark appointed time, time for eating, meal; Grk. *Metis*, goddess of wisdom, skill; Grk. *metron*, measure, proportion, meter, geometry, symmetry; *med- = to take appropriate measures < Old Engl. *metan* = to measure (out), as grain, meal; Ltn. *medēri* = to look after, heal, cure; *meditari* = think about, consider, reflect, meditate; *mad- = moist, wet; drunk; meat, food, mate (with whom one shares food); *mōd- = to meet, assemble (to reach agreement)

Egyptian: mt = vessel, duct, strip (of cloth); mtt = testimony; mtt = exact moment; mtmt = discuss, discussion; mdt = speech, word, matter, affair; m?t (mat) = lioness; m?'t (maat) = truth, righteousness, right-doing, justice, orderly; goddess Maat; mt (variant of mwt) mother; (with the addition of 'y', generally meaning 'to move horizontal') mi = like, according to; my = likewise, accordingly; mit = copy of a document; mitt = like, likewise; mty = precise, exact, regular, usual; mtyt = rectitude. (All of these 'y' forms suggest both a precise placement/contact and a movement between bilaterals that make possible comparison, congruity, conformity or similarity.)

Note 6. Foster (1981:8) suggests that in the Early Paleolithic the phememe *p might have referred to a core tool; *t a flake tool; *m containers and *n its contents. However, I am suggesting in the light of the two Oldowan 'artworks' that for the Oldowan—which Foster (1996) suggests had only two phememes *T and M—*T appears to have denoted flakes and *M cores.

Note 7. Based on the limited archaeological and paleontological evidence, we may assume a ‘mimetic’ culture (Donald 1993, 1991) for *Homo habilis/rudolfensis*. Although Donald allocates this stage to *Homo erectus*, I believe all the evidence points to *habilis* as having a mimetic culture and *erectus* a more complex and sophisticated mental template and world model. If so, I hypothesize an Oldowan sign/symbol mode for each primate communication system and that each mode has a quality of mime, rehearsal, or play.

A. ‘Mind’ = Rhomboid Core / Baboonhead Anvil	underived, ‘uniquely hominid’
B. “Heart” Primordial Language (*m, *t)	derived from primate call systems (‘word’)
Art (‘palaeoart’), e.g. FLK sculpture	facial expression systems (‘icon’)
[Old. Marking : pecking and groove] on FLK sculpture	gesture systems (‘index/deixis’)
[Old. sign language system – predicted]	posture systems (‘signal’)
C. “Libido” Chant Song = babble syllables or PL —predicted	grooming systems (<i>symbolon</i>)
Dance Movement = open/closed circle —predicted	sexual display systems (emblem)

NB. The first art is derived from a primate facial expression communication system. This accords perfectly with the subject of the first art, the Australopithecine found object from Makapansgat with its set of expressive faces and the baboonhead anvil from FLK North 1.

Note 8. Medium of Semiotic (Sign/Symbol) Communication (Respectively by Level)

Virtual or Visualization Space (proximity, continuity, pair, opposite faces,
container/contained, inside/outside, core/surface)

Sound = Vocal Articulatory Tract or ‘Space’

Matter (for modeling, e.g., stone, wood)

Engraving ‘Space’ (or impression surface, e.g., stone, wood, earth)

Manual Movement ‘Space’

Social Gossip ‘Space’ (chatter space)

Body ‘Space’

Note 9. Wynn (1989) identifies basic cognitive operators in the Oldowan mental template as "proximity or nearbyness," "proximity ordered by a constant direction of movement"; "separation," and an order relation, "the pair." Based on Gowlett and Toth, Harrod (1992) argues for adding the concepts of "opposite faces," "this side/other side," "upper side/lower side," and "front/back". The proposed reconstruction of spoken Oldowan appears to be a good match for the Oldowan mental template hypothesis. This match supports the validity of two hypotheses.

Oldowan Cognitive Operators	PL_{OLD} phememe	Semantics
proximity, nearbyness	*T ' T	iterative cutting; next to, near, in contact with
proximity ordered by constant direction of movement	*T ' T	to move, put through or between, interpose
	*T ' M	cut, chip, take pieces off; extend, stretch
separation	*T ' M	separate, distinguish
pair, opposite side or face	*M ' T	contact with shared between opposite sides
	*M ' M	allot, assign share; also; number, division

Note 10. Alexander (1989) expands the notion of mind to include a wide array of mental capacities, and emphasizes one affective value, competition. As Harrod (1992) noted:

Another Oldowan hominid capacity proposed by Alexander as well as Wynn is semiotic ability. In the Piagetian developmental stages, the appearance of symbolic functions and the interiorization of action schemes in representations precede the development of pre-operational intelligence. This includes deferred imitation; symbolic play; the first mental images as internal imitations of actual, anticipated or fantasized external actions or communicative gestures; and verbal evocation of absent things or events not present (Piaget 1973). Pursuing the pre-operational intelligence of the Oldowan mind further, Piaget refers to pre-operations as "representative regulations" which enable thought about states and transformations as "semi-reversible" forms. Pre-operational thought can grasp "duality" of states and transformations, figural collections and thoughts as configurations of concrete things. Such abilities correspond closely to the duality of the action sequences in the technologic of the Oldowan stone tool industry analyzed earlier. Such an evolved pre-operational mind would be well suited to employing, understanding, and communicating the dialectic of core and flake, the various dialectics of the imagination (container/contained, inside/outside, matrix/surface, and so on), the first metaphor, the ontology of stone, and all that we have decoded and amplified on the basis of the Oldowan stone tool assemblage. Pre-operational thought categories also include causality, space and time, motive of actions, justification of action, rudimentary classifications, names, number, and logical relatives. Whether the Oldowan hominids exercised any of these latter abilities has not yet been documented.

In this study hypothesizing a Spoken Oldowan and mapping it upon two Oldowan palaeoart objects, predicted language features are all compatible with the comments of Wynn, Gowlett, Alexander on the Oldowan 'mind/psyche'.

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