Lithic flake scars, percussive sound and prehistoric symbols

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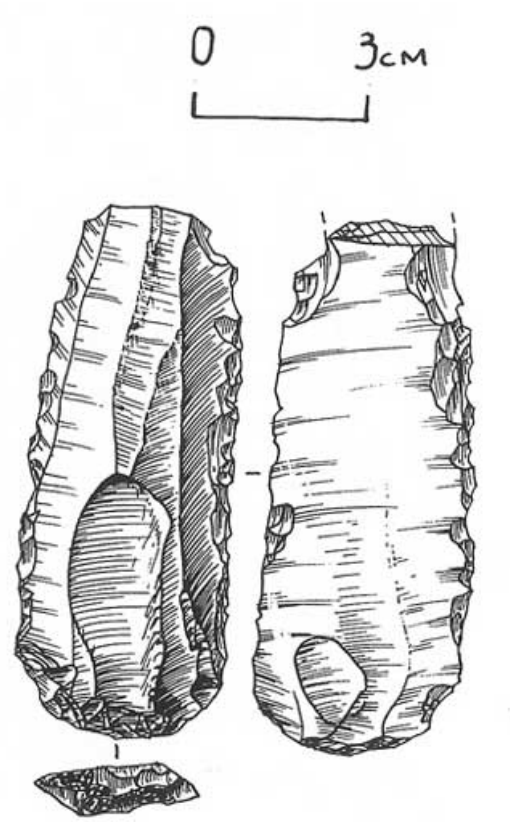


Figure 1. *From Derev'anko et al, p.189.*

The long prevailing industrial bias that has interfered with interpretations of the cultural significance of stone tools, and tool making, has recently been challenged by archaeologists. One approach proposed by Gabriel Cooney (2000: 176-177), emphasises the working of stone at different scales, from the small - artefacts that could be held in the hand - to the very largest - utilisation of heavy blocks. Continuities, which are present within the scales, influence perceptions within the entire spectrum.

This principle, applied to the Palaeolithic parietal art, especially the pecked or hammered sculptures and pictographs, quickly points out inter-relationships. Similarly, the multi-tude of engraved pebbles and plaquettes recovered from sites in western Europe, which once again range in size from those held in the hand to immovable blocks, fall within a scale of stone working.

Different degrees of force, and different angles at which force is directed at stone, produce different kinds of scars. One kind of fracture, a combination of multiple concentric circles, and radiating lines, suggestive of a spider web, is the Hertzian cone, (Whittaker 1994: 12-13). Soft hammer flaking, and pressure flaking, allows for greater control. Elastic materials, such as wood or antler, cause the percussive force to spread out, and to be transmitted more slowly and evenly (Whittaker 1994: 185). Soft hammer flakes are longer and thinner, and possess a more diffuse bulb of percussion (Bordaz 1989: 25). Use of soft hammer and pressure flaking, could produce a distinctive scar which resembled an ellipse.

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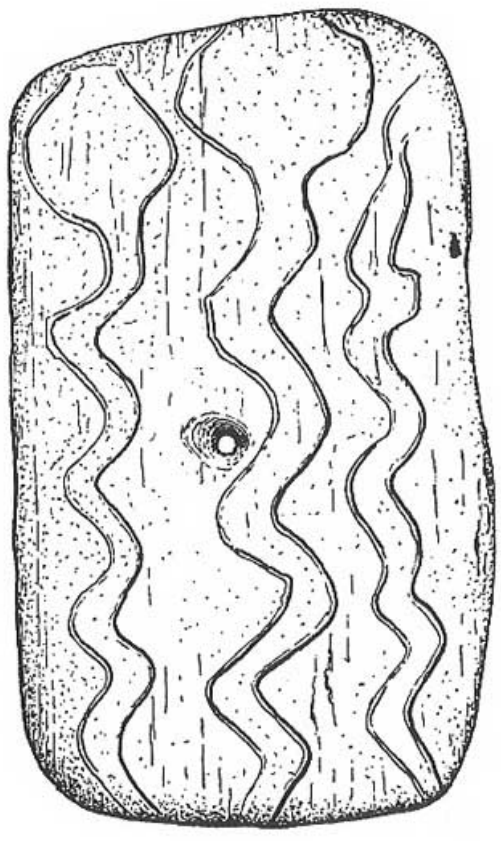


Figure 2. *From Derev'anko et al, p.246.*

When viewed from above, the classic Levallois core may exhibit this same elliptical or looped scar. The transition from the Middle the Upper Paleolithic, is distinguished in part, by a decrease (regionally) in the Levallois technique - practised for the previous two hundred thousand years - and an increase in the occurrence of struck blades and soft hammer usages. The period of transition, usually placed at around 35 - 40 000 years (Mellars 1996: 392), is only a few thousand years prior to the onset of the engraved and painted caves, and the engraved bone and ivory:

Opportunities to arrange or modify the flake scar icons upon a medium such as bone or ivory - that was not subject to the same kind of fracture stresses or inflexibilities as stone - accelerated the development of symbolisation. An analogous situation occurred several thousand years later with the introduction of ceramics in the Neolithic; a plastic and impressionable medium expanded opportunities for experimentation, and thus served as a preparation for the emergence of proto-scripts and writing.

An engraved image style, which Rosenfeld (1977), has characterised as "profile figures," is a simplified depiction of female form encountered predominantly on stone plaquettes. Its most basic form was that of a loop or ellipsoid, singly or in groups, with the possible inclusion of animal figures. Anatomical details were sometimes added, especially the breast and arm stump; one single figure from Gonnersdorf, possessed "the whole arm clearly bent at the elbow and a hand indicated by a few strokes suggesting fingers" (Rosenfeld 1977: 95).

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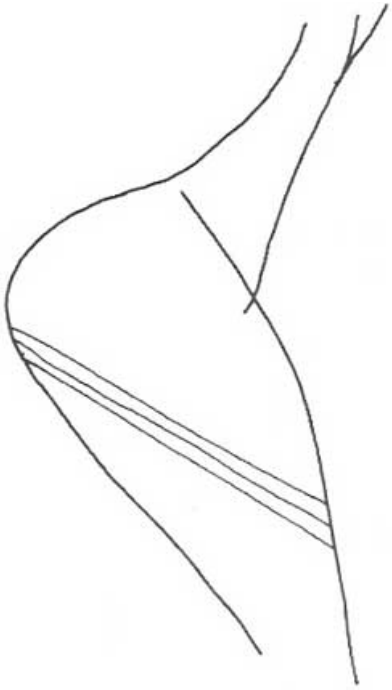


Figure 3. *From Rosenfeld, p.92.*

The proliferation of this complex, tightly controlled bone, antler and ivory technology is a radical innovation in the technological records of Europe without parallel in the preceding Middle Palaeolithic industries of the region.

In one instance at Olknitz, the profile figure was merged with stone tools: The Olknitz pebbles are flat oval pebbles which have been retouched by percussion flaking along a greater or lesser part of their periphery in order to shape them to an outline which has some resemblance to that of profile figures. Many of the pebbles, including one which is entirely naturally shaped, have been coated in red ochre (Rosenfeld 1977: 104).

Associations of the profile figure and the plaquettes, and the crudely rendered forms that appear, might be linked to the practice of fragmentation, deliberate breakage, inclusion in domestic refuse. Some of the largest of slabs at Gonnersdorf, have been reconstituted from over fifty fragments. Slabs were engraved at every stage in the breakage process (Bahn & Vertut 1997:103).



Figure 4. *From Rosenfeld, p.921.*

Identifying the symbolised sound of lithic percussion may not be beyond our capacities. Languages have

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retained an onomatopoeic descriptive for the striking together of objects or breaking - crack, click, crash - that is pervasive, as revealed by archaic word root reconstructions, and ethnographic data. Swadesh (1971: 200-202) conjectured that at an early phase in the history of language, "certain syllables came to be associated with the sounds made by definite classes of objects on impact".

One reason that the 'ka or 'ca' sounds became linked to percussion is that sounds with abrupt onset, p-t-k, often occur as the onomatopes for that phenomenon, with increased metallicity represented by the k (Anderson 1998: 143). In the Indo-European languages, ker is the root descriptive of loud noises and birds; ker is also the root for words pertaining to horned animals. Sker is the root for words that pertain to cutting, as are the roots skeri, and skeru. Swadesh maintained that a vocable could be used simultaneously "to symbolize impact, the action leading to impact, or one of the objects involved". (200-202).

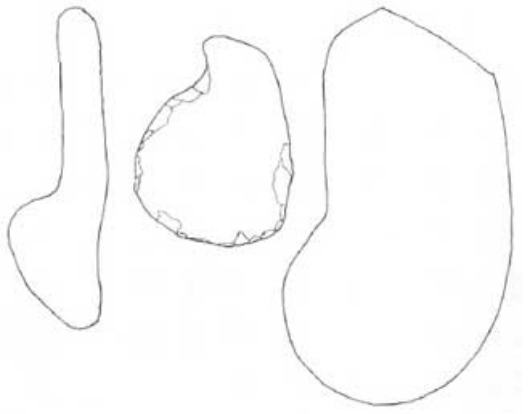


Figure 5.

In ancient Akkadian the word meaning 'to break in fine pieces', was daqa:qu; in Arabic daqqaqa, dakka, to be pounded (Greenberg 1966: 52). Ancient Egyptian, which belonged to the Afro-Asiatic group, contained numerous words for breaking, engraving, or cutting, which incorporated the ka sounds; khetkhet; 'cut into pieces', kheti, 'to engrave', kha, to engrave or carve, qehqeh, 'to cut stone'.

The Navajo Indians possessed the word ka'j to describe "the power of the sound produced when one flint comes in contact with another" (Reichard 1970: 227). This example not only conforms to the above pattern, but relates to a lithic material.

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