

Patterns and process: some thoughts on the incised stones from the Gault Site, Central Texas, United States

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Abstract

We know of 104 incised stones collected from the Gault Site between 1929 and 2007 from various proveniences and contexts ranging from Early Paleoindian (ca. 13,000-9000 cal. BP) to Archaic (ca. 9000-2000 cal. BP) and perhaps Late Prehistoric (1200-600 cal. BP). The stones share affinity with incised and painted stones worldwide in traditions dating back at least 90,000 years. Wherever these objects are produced, the end product does not seem to have retained its importance, and, in fact, the process of manufacture and the patterns employed may have been more important than the decorated object after its initial use.

Résumé – Caractéristiques et processus : quelques réflexions sur les pierres gravées du site de Gault (Texas central, USA)

Entre 1929 et 2003, 104 blocs de pierre ont été récoltés à Gault. Ils proviennent de plusieurs sites et ont été trouvés dans des contextes variés qui relèvent de plusieurs périodes : celles dites Paléo-indienne (env. 13 000-9000 cal. BP), Archaïque (9000-2000 cal. BP), voire de la période préhistorique tardive (1200-200 cal. BP). Ces blocs ont des points communs avec des pierres peintes et incisées de plusieurs parties du monde, où elles peuvent remonter jusqu'à 90 000 BP au moins. Partout où elles ont été produites, elles semblent avoir eu moins d'importance en soi que l'acte même de leur élaboration ; en fait, le processus de fabrication et tout ce qui l'accompagnait auraient été plus importants que l'objet fini – une fois son usage immédiat terminé.

Resumen – Patrones y procesos: reflexiones acerca de las piedras incisas del sitio Gault, Centro de Texas, Estados Unidos

Entre 1929 y 2007 fueron recolectados 104 piedras incisas en el sitio Gault. Las mismas tienen procedencias y contextos diferentes. Estas obras pertenecen a diversos períodos que van desde el Paleoindio Temprano (ca. 13.000-9000 cal. AP) al Arcaico (ca. 9000-2000 cal. AP) y tal vez al Período Prehistórico Tardío (1200-600 cal. AP). Comparten rasgos con piedras incisas o pintadas procedentes de diferentes partes del mundo que poseen una antigüedad de por lo menos 90.000 años. Más allá del lugar en donde se producían tales objetos, el producto final, es decir el objeto decorado, no parece haber conservado la relevancia que sí tuvieron tanto el proceso de manufactura como los patrones empleados en su ejecución.

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Since 1929 more than 100 incised stones are known to have been collected at the Gault site in Central Texas from various proveniences and contexts and have been interpreted by some as unusual or unique in the New World (Bednarik 2003). These objects are not numerous in the early part of the archaeological record, but they have been recovered from contexts as old as 90,000 years ago and from every continent (Bednarik 1984; Gao *et al.* 2004; Dikov 1996; Outes 1916; Plonka 2003; Takayama 1968; Thomas 1983a) and represent a larger tradition widespread geographically over a long period of time. The discovery of incised stones in Clovis contexts at Gault, though not the first Paleoindian engraved stones to be found, indicates the time depth of this tradition in North America. The contexts of many of these objects, manufactured and disposed of seemingly haphazardly, strengthens the hypothesis that the process of manufacture and patterns employed are as important as or more important than the product.

In 1990 a collector named David Olmstead excavated approximately three and a half feet below the surface at the Gault site and found two small, incised limestone tablets with a Clovis projectile point of Alibates chert sandwiched between them (Fig. 1). This find was brought to the attention of Drs. Tom Hester and Mike Collins at the University of Texas at Austin who in 1991 conducted a test excavation in the area Olmstead had worked to confirm the presence of engraved stones with Clovis artifacts. Their test units also found Clovis diagnostics, incised stones and flakes (Collins *et al.* 1991). An examination of Olmstead's back dirt also turned up more of the stones.



Fig. 1. Olmstead find at the Gault Site as reconstructed from his recollections.

This was not the first time that incised stones had been found at Gault. A careful search of the collection J.E. Pearce excavated from the site in 1929 found one small incised stone, and an ornately engraved stone was found by A.M. Wilson, one of Pearce's field supervisors, and illustrated in A.T. Jackson's *Picture Writing of Texas Indians* (1938). The other three pictured were found over the years by collectors at the site and illustrate some of the wide variety found there (Fig. 2). When we started this study we had 104 stones though that number is continually changing –there are at least six found recently that have not yet been examined.

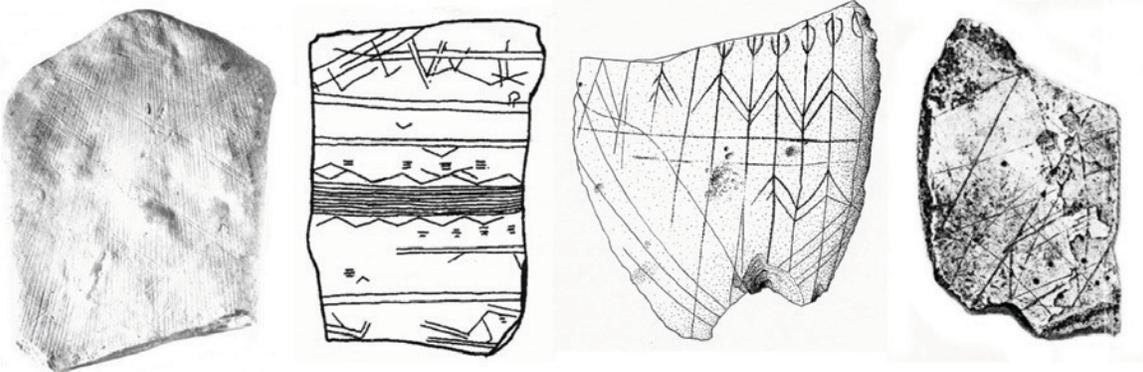


Fig. 2. Wilson's stone (left) and three others found at Gault by collectors (not at the same scale).

Each stone has been inspected visually, with a hand lens, with a binocular microscope, and in some cases under a high-power microscope. Engraved lines were examined for pattern, direction, morphology, and the existence of small, embedded fragments of the engraving tool. Definite patterns were easy to discern on many stones while, particularly for many of the older specimens, perpendicular and parallel lines as well as the characteristics of the lines themselves establishing them as manmade were a good proxy (Bednarik 1998; d'Errico & Villa 1997; Greenfield 2006; Nowell & d'Errico 2007; Shipman & Rose 1984).

Of that 104, a third of them are made of chert with engraving on the soft cortex. Almost all of these are fragmentary, some exhibiting just a few lines and some having indications of the larger patterns. Whatever their meaning, it was evidently ephemeral and sometime after the pattern was incised; the larger pieces were broken up purposefully by the flint knapper.

The remaining two thirds are on limestone. The pieces tend to be thin and most are no larger than the size of an adult hand. These also exhibit tighter, more cohesive designs and, for the most part, are complete rather than fragmented. There are a number of recurrent themes, with paired parallel lines, zigzags, crosshatching and herringbones being the most frequent. Unfortunately many of the designs, particularly the limestone examples, are obscured by heavy calcium carbonate deposits.

Not all of the engraving is geometric. There are a few stones that we believe may be representational. One example is a chert cortical hinge flake that is shaped somewhat like a leaf; its engraved design incorporates a center line with lines radiating out toward the two ends that may intentionally enhance that look. Another is limestone and has a design, on both sides, that incorporates parallel lines meeting with lines terminating in diamonds. It may represent plants or, as often found in iconography elsewhere, fletched darts (Fig. 3).

Forty-one of the original 104 stones have good proveniences ranging from Early Paleoindian (13,600 years ago) to Archaic (9000-1200 years ago). Eight of these so far have been judged to be from good Clovis context (13,500 years ago) and there are a few more from strata we have not yet fully vetted that may also be of Clovis origin. Six of these are of chert and two are very small limestone fragments. Two of the Clovis possibilities still being studied are larger limestone pieces not unlike Olmstead's original stones. These represent some of the earliest provenienced art in the Americas (Fig. 4).



Fig. 3. Possible examples of figurative incising at Gault (not at same scale).



Fig. 4. Three of the small incised chert flakes from Clovis contexts at Gault. Center example is about 2.5cm wide.

The current idea that anything a cultural community recognizes as art is art is somewhat problematic for archaeologists who are missing the crucial critique by contemporaries and the sociocultural context (Dickie 2001). Our use of the term art is therefore more reflective of our own culture and aesthetics and in no way constitutes a judgment about the original use, meaning, or perception of these objects.

Mobiliary art is not unusual in Texas though it is much more prevalent in the Archaic period. Stones like those at Gault are often found on the surface and in cave sites throughout Texas and also often share design traits with painted stones also found here (Chandler 1996; Chandler 2000; Jackson 1938; Mock 1987; Parsons 1965; Rogers & Bostrum 2001; Watts 1965). These are mostly hand-sized objects but some are quite large. One incised slab of Edwards chert weighs almost 7kg (Fig. 5).

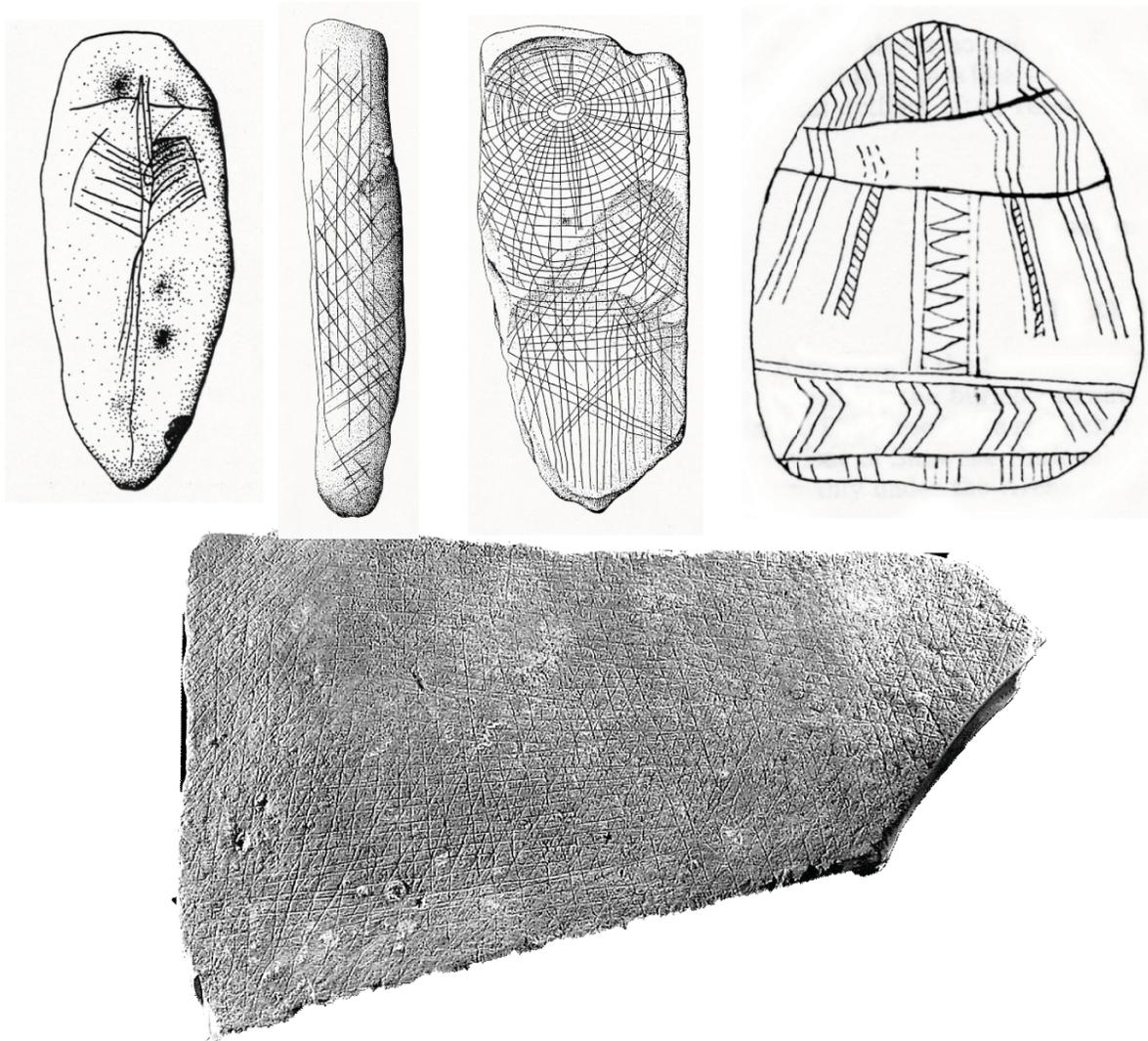


Fig. 5. Archaic and Late Prehistoric Incised stones from Texas (not to scale), chert slab at bottom is 38 cm long.
(From left to right, after: Chandler 1996b; Chandler 1996a; Chandler 1991; Perino 1984; Fayette Co. stone is unpublished.)

Similar objects are not unusual in this hemisphere, having been found throughout North and South America from Patagonia to Alaska in various temporal contexts (Bennyhoff 1957; Browman 1969; Clark 1964; Cleland *et al.* 1984; Coe 1964; Fowler 1966; Francis & Frison 2004; Hill 1992; Holliman 1967; James 1983; Klimowicz 1988; Lee 1981; Logan 1952; Novecosky 2001; Reinhardt 1981; Sandweiss 1996; Schobinger 1995; Schuster & Carpenter 1996; Thomas 1983b; Turpin *et al.* 1996). There are also many representational examples but we have concentrated on geometric designs to make a point. In many places the geometric designs are much more common than representational varieties but academic attention has been nearly entirely on the representational stones (Fig. 6).



Fig. 6. Incised stones from the Americas. Most of are of unknown age though it is thought the North Carolina example is Early Archaic and the Idaho Stone Late Prehistoric. (From left to right, after: Schuster 1968; Daniel 1998; Plew 1981; Schuster & Carpenter 1996; Lee 1981; Schuster & Carpenter 1996.)

It may very well be that engraved stones of Early Paleoindian age are not as rare as thought. Certainly there are issues of preservation and of recognition –engraving on soft cortex, limestone, and sandstone may not survive due to exposure to adverse conditions. Faint lines on chert cortex and small stones may be overlooked particularly when complicated by the presence of a pedogenic calcium carbonate. An example from Gault is covered with a complex geometrical design that is both faint and partly obscured so it can only be seen now with the aid of a mosaic of microphotographs (Fig. 7).

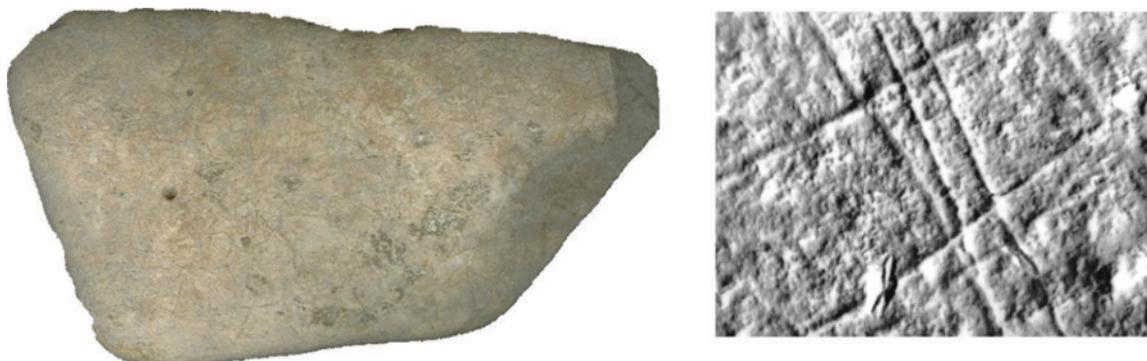


Fig. 7. Incised stone and microphotograph of an area in the center of it showing faint incised lines.

Reporting has sometimes been lacking, as when individual finds are relegated to the “misc. artifacts” section of a monograph, set aside for later analysis or misinterpreted (Fig. 8). One of the stones found at Blackwater Draw, the type site for the Clovis culture, has been called an edge grinder or abrader but, if this drawing did it justice, has suspiciously even parallel and perpendicular lines on it (Hester 1972). Chert flakes also exist with incised cortex from Blackwater Draw and one from the Wilson- Leonard Site (Collins 1998). There is a small incised stone from Shawnee Minisink and others without provenience but from sites that suggest a very early context (Joseph Gingerich, personal communication 2005).

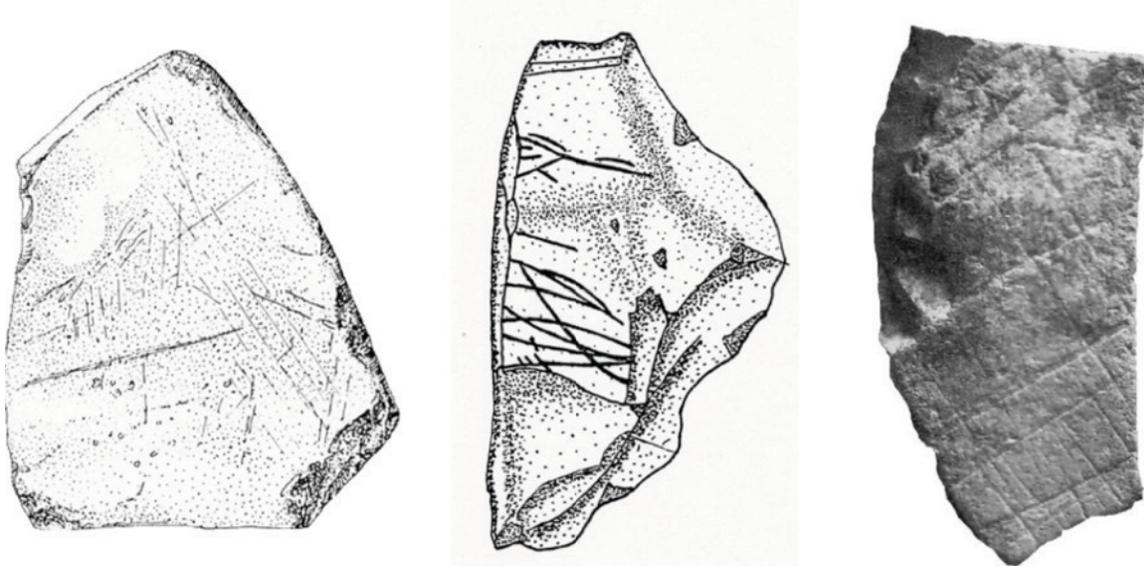


Fig. 8. Incised stones from Paleolithic contexts, Blackwater Draw (left and center) and Wilson-Leonard.
(From left to right, after: Hester 1972; Recorded by Warnica 1963; Collins 1998.)

Site conditions at Gault have precluded preservation of most bone artifacts and left no wood, leather, or gourd skin, yet the design patterns we have seen on engraved stones may also have been applied to these mediums or even tattooed on human skin. A bone from the Aucilla River bears a parallel zigzag (Dunbar *et al.* 1989) as does one from Jacobs Cavern (along with an obvious pachyderm that has sometimes been called a rhinoceros) (Allison 1926). There is also a modified mammoth bone from South Texas (Mandryk *et al.* 2005) and an incised mammoth tusk from Wyoming (Surovell *et al.* 2009).

Many of the earliest examples from the Gault site are engraved lines on the cortex of small flakes struck off a larger decorated core. This may be indicative of a completely different behavior from the small incised pieces of limestone. The truly fascinating thing is that this class of artifact is not unusual worldwide. In India there are cortical dolerite flakes knocked off of cores with incised crosshatching (Brumm *et al.* 2006). Incised stones from France, Spain and Italy are well known but less known are refit engraved cores from Northern Europe (Althin 1951; Fischer 1974; Plonka 2003), incised designs on the cortex of blades in Russia (Khlopatchev 2001), or the incised stones of Mesolithic China (Schuster 1936) (Fig. 9).

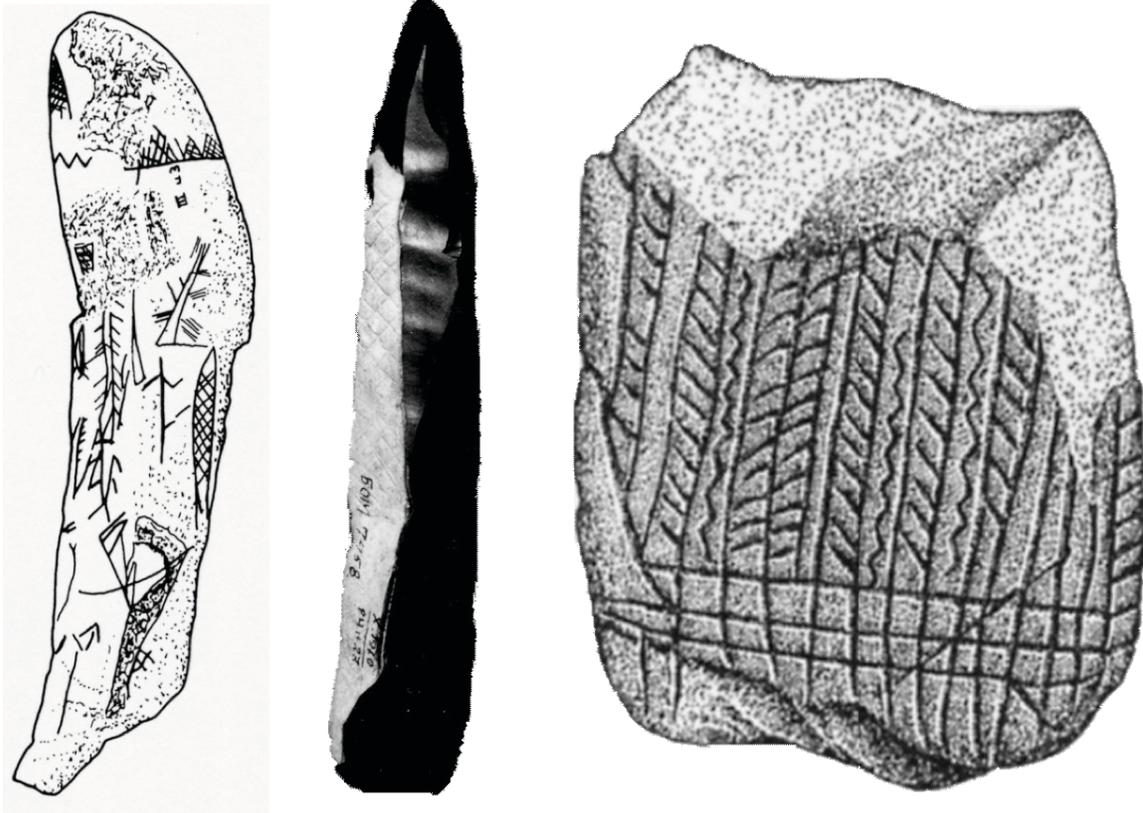


Fig. 9. Reconstructed core from Holmegard V (Denmark, Maglemose), incised blade from Khotylevo 2 (Russia, Gravettian) and incised stone from China (Mesolithic). (From left to right, after: Fischer 1974; Khlopatchev 2001; Schuster & Carpenter 1996.)

And this human behavior may be very old (at least 75,000 years and perhaps as old as 90,000 years) as indicated by the ochre from Blombos Cave (Henshilwood *et al.* 2009) or the flake from Qafzeh (Hovers *et al.* 1997). Most research into these artifacts has tried to find a meaning or use for the stones –unfortunately far too often a search for the one TRUE meaning.

Consider a shortened version of a list developed from the speculative literature on meanings and uses for the engraved stones (Fig. 10). The list starts out simply with doodles or graffiti and progresses to utilitarian items and into the realm of the spiritual and supernatural. Some are fascinating to think about; figurative maps for instance, the work done in Iberia on certain classes of engraved stones as heraldic devices, and the notational hypotheses pioneered by Alexander Marshack (Gortner 1988; Lillios 2002; Marshack 1991). For any particular hypothesis the stone’s context, material or design may help eliminate a number of possibilities –for example a tabular piece of limestone is unlikely to have knapping guidelines on it. But that still leaves a wide range of possibilities and we have to be careful about the assumption that there is one meaning for a class of artifacts. With the Gault stones as a sample, for instance, it is unlikely that the chert artifacts, incised and later broken up, have the same use or meaning as the limestone tablets.

Suggested Meanings/Uses for Incised Art	
Doodles, Graffiti	Utilitarian
Ornamental Art	Jewelry
Maps, Geographic indicators	Edge grinders, Cutting boards
Representational	Pottery or pigment stamps
Plants, Animals, Natural world	Shaft straighteners
Clothing, Textiles	Sling stones
Fossils	Toys, Gaming pieces
Basketry	Heraldic device, Ethnic identifier
Pottery	Knapping guidelines
Anthropomorphic	Ownership marks
Tattooing	Ritual, Rites of passage
Meteorological, Astronomical	Talisman, Amulets
Notational	Sympathetic magic
Time, Quantity	Healing stones
Mnemonic device	Accentuate or concentrate power
Entoptic phenomena	Offerings (gratitude, votive)

Fig. 10. Suggested meanings and uses for portable incised art in scholarly articles.

One of these possibilities, entoptic phenomenon, has drawn a lot of attention in the rock art community. Entoptic phenomena are visual effects whose source is within the eye itself, hard-wired into our nervous systems. Some of these we are all familiar with, like “floaters” which are the little drifting blobs in the eye’s fluid. Phosphenes are another example, the perception of light without light actually entering your eye. “Form constants” are produced beyond the eye in the cortex itself. Some of these phenomena take the form of geometric figures like zigzags, grids and lines. Much has been published about the possibility that these recurrent figures are produced by people in altered states of consciousness with much of the focus on psychoactive drugs (Hodgson 2000; Hodgson 2006; Lewis-Williams & Dowson 1988; Pettifor 1996).

Yet there is a significant amount of research that suggests that trances and psychoactive drugs are unnecessary. These patterns are apparently hard-wired into our cortex and studies with small children and chimpanzees find them drawing these same patterns unaided (Morris 1962). One study looked at over 300,000 children’s drawings and found that, at about the age of two, these same geometric patterns begin to appear in their drawings (Baker & Kellogg 1967; Kellogg *et al.* 1965). It does not seem to be important that you see or visualize one of these patterns but rather that we already, from birth “know” the patterns. Both the biological/psychological studies and the massive amount of data collected by Carl Schuster regarding the worldwide prevalence of the same motifs argue for a biological basis for the patterns themselves (Schuster *et al.* 1986-1988). Schuster’s work also reveals the problems inherent in seeking one “true reason” for the meanings in any particular pattern.

This paper has concentrated on incised stones but these same patterns appear in many mediums. One of our colleagues on the Gault Project insists that these are reflections of the patterns in basketry and fabrics –and perhaps in some instances they are. But these patterns also appear on bone, wood, leather, shell, ceramics, and even on human beings. Just as no one explanation can describe the many reasons for making these engraved

stones worldwide, no one explanation can clarify their meaning. Ethnographic examples can be found of similar objects used as votive offerings, healing stones, mnemonic devices, amulets and objects of power. We are cognizant, as our own analysis continues that our discreet segregation of that category for monograph purposes may obscure the hypothesis that these incised patterns were not exclusively used on stone objects.

It has been said that there is no Clovis rock art (Straus *et al.* 2005). If art is, as one definition states: "the application of skill and creative imagination" then certainly these engraved stones constitute art. What surprises us more than the denial of Clovis art is the idea that, given this known human behavior worldwide with such great time depth, that we should not expect such art and seek it out. Many of the engraved stones were identified at Gault precisely because we were specifically looking for them.

We may never be able to discern a meaning from the stones found at Gault. The meanings of these engravings likely changed through time and with changing sociocultural contexts. As previously discussed, they may even have differed among a single culture. More important is the fact that these patterns are a part of humanity's common heritage, patterns that connect all humans worldwide.

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