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# Social Anthropological Approach to Holocene Cultural Contexts in the Eastern Maghreb Based on Creative Graphic Expression

Lotfi Belhouchet, Colette Roubet

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Lotfi Belhouchet, Colette Roubet\*

*SOCIAL ANTHROPOLOGICAL APPROACH TO HOLOCENE CULTURAL  
CONTEXTS IN THE EASTERN MAGHREB  
BASED ON CREATIVE GRAPHIC EXPRESSION*

*Abstract*

Holocene graphic expression of the Eastern Maghreb has been underused as an approach to reach a complete understanding of the cultural context; it has not contributed to specifying aspects of interpretable experience, in the hunter-gatherer communities who preceded pastoralists, and the long anthropological and cultural succession associated with the Capsian culture. Graphic information remains insufficient and distant from the anthropological and social factors. Introducing the graphic field as a new element to evaluating creativity of improvisation, expression par excellence of talent and messages, can help us understand how some artists and their communities organized themselves and gathered around shared referents, during the First Great Behavioural Rupture caused by the adoption of pre-agricultural pastoralism, while maintaining and appreciating an exceptional natural state.

KEYWORDS: HOLOCENE, EASTERN MAGHREB, CAPSIAN AND  
PASTORAL NEOLITHIC CULTURES, GRAPHIC EXPRESSIONS.

*Introduction: Literature and humanism*

Social development of Holocene cultures of the Eastern Maghreb is complex. It is therefore valuable to combine analysis of material contexts with various graphic creations that accompanied them<sup>1</sup>. We will present some of these creations in their chronological, environmental, and cultural context. Some typical characteristics are reflected in strong connections between the Eastern Maghreb environment and Capsian behaviours. These characteristics were of such significance to the societies that they were maintained in the foundations of Holocene communities, from the Capsian into the Neolithic of Capsian tradition. These testimonies are a base for language, stories, and voices. The questions

\* We thank our colleague Prof. B.E. Barich (University of Rome La Sapienza) for her constant support. We are very grateful to Rym Khedaier for allowing us to publish the results of his analysis. We thank *Africa. Rivista semestrale di studi e ricerche* for the opportunity to present the results obtained and to open a dialogue with Africanists and other specialists.

1. H. Camps-Fabrer, *Matière et art mobilier dans la préhistoire nord-africaine et saharienne*, Paris, Arts et Métiers Graphiques, 1966.

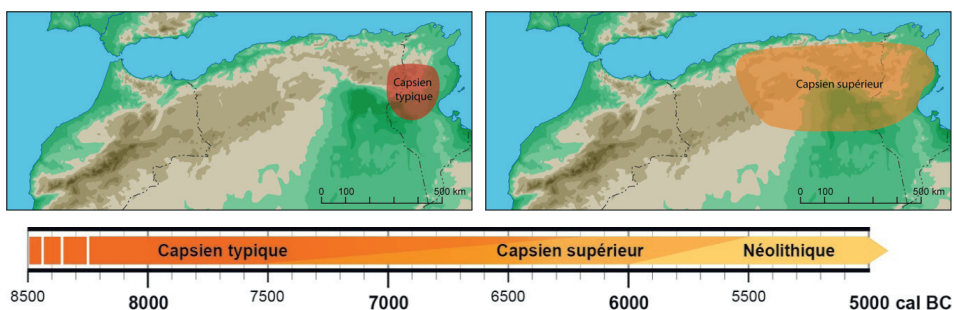


Fig. 1. Chronological trajectory of the Capsian.

Source L Belhouchet, *Du capsien chasseur au capsien pasteur : pour un modèle régional de néolithisation*, Oxford, Archaeopress, *Archéologie du Maghreb* 3, 2022, 10.

raised are part of a particular paradigm that require development of an appropriate theoretical and methodological approach. After pioneering work<sup>2</sup>, we will test social anthropological tools recommended by the semiologist Charles Peirce<sup>3</sup> to approach this theme from a holistic point of view, placing high value on accessing behavioural motivations.

This test leads us to outline a new study, based on new interpretations. Pre-pastoral societies (part 1), then pre-agricultural pastoral societies (part 2) will be presented, with emphasis on graphic creations. This component is neither trivial nor secondary as it reflects immaterial messages and conveys a creative imagination, recapturing a more sensual and nuanced appreciation.

### 1. *The transitional Capsian Holocene Epipaleolithic hunter-gatherer cultures of the Eastern Maghreb*

The beginnings of the Neolithisation process in the Maghreb must be approached with anthropological, social, cultural, climatic, and environmental data. Transitional cultures were established during the final Upper Pleistocene, dominated by the Iberomaursian. This complex took root among indigenous populations of the Mechta-Afalou type who spread across the Tell of the Atlantic and Mediterranean Maghreb before 20,000 cal BP. The Iberomaursian

2. S. Hachi, *Les cultures de l'Homme de Mechta-Afalou. Le gisement d'Afalou Bou-Rhummel (massif des Babors, Algérie). Les niveaux supérieurs 13 000-11 000 BP*, Alger, CNRPAH, 2003; C. Roubet, "Neolithic of Capsian tradition sensu strict", in P.N. Peregrine, M. Ember, eds., *Encyclopedia of Prehistory, Outlines of Archaeological Traditions, The Human Relations Area Files vol. 1*, New York, Kluwer Academics, 2001, 179-219.

3. C.S. Peirce, *Écrits sur le signe*, Paris, Seuil, 1978.

(22,000-11,000 cal BP) underwent several transformations<sup>4</sup> during Holocene times, such as the spread of technical tradition and the appearance of new symbolic expressions.

### 1.1. *The Capsian sensu lato (ninth - fifth millennium cal BP)*

At the site of El Mekta (Gafsa, Tunisia)<sup>5</sup>, a complex of epipaleolithic of hunter-gatherer facies is recognized from the Early and Middle Holocene. This eastern settlement (Fig. 1) covers various physio-geographical domains<sup>6</sup>: the northern, Numidian flysch of the High Tell (Kroumirie-Nefzas-Mogods) is characterised by deposits laying over the Cretaceous formations, folded by tectonic movements. Beyond this lies the Atlas/Dorsal domain skirted by the Medjerda River, and the High Plains which reach the southern Chotts. The vegetation is varied, as it was in the past. In the Tellian areas there are oak woods and a degraded Mediterranean species; toward central and southern areas there is an Aleppo pine savannah<sup>7</sup>. Anthracological studies from southern deposits of the Middle-Upper Holocene indicate landscapes marked by drought.

The Capsian cultural complex comprises two major entities: the Typical Capsian and the Upper Capsian<sup>8</sup>. The latter has been subdivided into units affiliated with regional groups, based on dominant lithic and bone types<sup>9</sup>. By simplifying, the Typical Capsian was defined on macrolithic and laminar production, for large tools, and the Upper Capsian on microlithic and laminar tools, for a diversity of weapons. Symbolic expressions associated with the funerary material reveal behaviours neither totally materialistic, nor based on gathering. Changes in technical behaviour appear with the use of pressure for lithic production. There is Tunisian evidence for this in Upper Capsian to around 8200

4. E.C. Saxon, "Prehistoric economies of the Israel and Algerian littorals: 18 000-8000 BP", PhD Thesis, Cambridge University, Jesus College, 1976, 233; Hachi, *Les cultures de l'Homme*, 29.

5. J. de Morgan, L. Capitan, P. Boudy, "Etude sur les stations préhistoriques du Sud-Tunisien", *Revue de l'Ecole d'Anthropologie*, 20, 1910, 105-136, 206-221, 336-347 and 21, 1911, 217-228.

6. A. Et-Kassab, H. Sethom, *Les régions géographiques de la Tunisie*, Tunis, Publications de l'Université de Tunis, 1981.

7. J. Morales, S. Mulazzani, L. Belhouchet, A. Zazzo, L. Berrio, W. Eddargach, A. Cervi, H. Hamdi, M. Saidi, A. Coppa, L. Chocarro-Pena, "First preliminary evidence for basketry and nut consumption in the Capsian culture (ca. 10000-7500 BP): Archaeobotanical data from new excavations at El Mekta, Tunisia", *Journal of Anthropological Archaeology*, 37, 2015, 128-139; B. Ben Tiba, "Relations pluie pollinique-végétation en Kroumirie (Tunisie septentrionale)", *Ecologia Mediterranea*, 8, 4, 1982, 61-73.

8. R. Vaufray, "Notes sur le Capsien", *L'Anthropologie*, 43, 1933, 457-483; N. Rahmani, "Le Capsien typique et le Capsien supérieur: évolution ou contemporanéité: les données technologiques", PhD Thesis, Université de Bordeaux I, 2003.

9. G. Camps, *Les civilisations préhistoriques de l'Afrique du nord et du Sahara*, Paris, Doin, 1974.



cal BP<sup>10</sup> and around 8600 cal BP on the eastern coast<sup>11</sup>. What was the role of graphic material? Capsian material from seventh millennium BP with ceramics and polished stone was considered as belonging to the Neolithic of Capsian tradition (NTC). This status has been overlooked for too long and a lack of analysis about these societies has prevented the development of social arguments. The eastern Algerian Atlas caves revealed a NTC culture called “Atlasian” pre-agricultural pastoralism, from the end of the seventh millennium cal BP. Recognition of its sociological consequences provides a framework to explain the symbolic manifestations that took place. In Tunisia, excavations carried out in Tellian Kef el Agab (Jendouba town) and inside an Atlasian site of Doukanet el-Koutifa, have provided new data. Pastoral activities through domesticated sheep and goats were introduced by the second half of the eighth millennium cal BP with hunting<sup>12</sup>. Local opportunities focused on ostrich eggs, always present, allow stabilised Capsian diet with inland snail (helicids).

These data on diet, dependent on domesticates and hunting, gathering and collecting behaviour, make a confirmation of such an initial Neolithic status throughout Eastern Maghreb dependent on local biotopes<sup>13</sup> with diet based on wild plant. Within this pattern, control of herd development provides a “stock” of food for later consumption. It was by switching to pastoralism that these economic and societal upheavals took place. The spread of pastoralism in the Atlas region gradually set all the communities of Tunisia on a path of economic autonomy, with an “initial pastoral status in a pre-agricultural context, whatever their cultural background”<sup>14</sup>.

Throughout the high plains and savannah areas, this pastoral life led to maintain exploitation of local resources. Could it be that resource protection and a growing feeling of responsibility were conveyed as a graphic message, understood and shared within the community?

10. P.-J. Sheppard, “The Capsian of North Africa: Stylistic Variation in Stone Tool Assemblage”, *British Archaeological Reports International*, 353, 1987, 534; Rahmani, “Le Capsien typique”, 488.

11. L. Belhouchet, S. Mulazzani, J. Pelegrin, “Evolution of a 9<sup>th</sup>-8<sup>th</sup> mil. cal B.P. Upper Capsian Site: The Techno-Typological Study of the Bladelet Production at SHM-1 (Hergla, Tunisia)”, *Quaternary International*, 320, 2014, 28-42.

12. Y. Dridi, N. Aouadi, “Néolithisation et Néolithique de Tunisie : les sites et leur faune domestique”, *Encyclopédie berbère*, 34, 2012, 5481-5488.

13. I. Saafi, N. Aouadi, L. Belhouchet, “Etude malacologique du site Capsien supérieur de Kef Ezzahi (Kairouan, Tunisie centrale)”, in V. Blanc-Bijon, J.-P. Bracco, M.-B. Carre, S. Chaker, X. Lafon, M. Ouerfelli, eds., *L’Homme et l’Animal au Maghreb, de la Préhistoire au Moyen Âge*, Aix-en-Provence, Presses Universitaires de France, 2021, 79-88.

14. C. Roubet, “La gravure holocène du bélier orné en Algérie : chronomètre de l’évolution comportementale du pastoralisme Néolithique Initial (PNI) IX-Vème millénaires cal BP”, *Journal of Material and Environmental Sciences*, 7, 10, 2016, 3778-3799, 3797.

## 1.2. *The Capsian figurative system, what method of analysis?*

Scattered, and disconnected remains of graphic productions were collected during excavations. They were found on various materials (shell, stone, bone, rock face, etc.), in variable formats. Attempts at interpretation by a few scholars led them being compared to African ethnographic data. This produced hypotheses regarding their role in the construction of myths, rites, and stories, without an archaeological support.

Among others, Jean-Loïc Le Quellec, while examining such graphic expressions of prehistoric art in sub-Saharan Africa and seeking to identify a principle of classification into mythograms, logograms, ideograms, or pictograms, concluded that:

En Afrique, les arts rupestres sont de plus en plus souvent considérés comme des documents historiques [...] Outre la question de leur datation, l'un des problèmes posés par leur étude est que leur interprétation est généralement très difficile<sup>15</sup>.

What about the Capsian period and the Neolithic of the Capsian tradition? Graphic works rule out the idea of a simple external, aesthetic, or anecdotal approach for sharing. The first example of a change of paradigm was based on the re-examination of the stone engraved with two foxes from Damous el Ahmar (Nemencha, Eastern Algeria)<sup>16</sup>. That artefact revealed the presence of the butchered body of a lamb abandoned after a feast<sup>17</sup>. A sober recognition of the distressed feelings of an adult shepherd is consistent with the pastoral behaviour of vigilant herders; its non-aesthetic function was to communicate the risks involved by young shepherds. Such aspects of social anthropology had never been considered before. Other Algerian examples can be found in the Constantinois<sup>18</sup>. They all suggest ongoing, brief, and precise life lessons: markers of general behavioural semantics. The engraver did not create a simple graphic representation. He did not reproduce what he saw, but what he thought and felt. This message took on the value of an “icon, indexical sign or symbol”<sup>19</sup>.

This re-examination of the engravings allows us to propose what the original messages were. Such messages are to be found in a narrative structure, sometimes suggested by a known image (animal, vegetable, human) placed in identifiable conditions and positions. These serve as support and marker for initiating a social anthropological approach. In the second part of this study, we will better grasp their importance by looking at the case of Neolithic artist-pastoralists<sup>20</sup>.

15. J-L. Le Quellec, “Arts rupestres, écritures et proto-écritures en Afrique: l'exemple du libyque”, *Afriques*, 1, 2011, 1-23.

16. C. Roubet, *Le gisement du Damous el Ahmar et sa place dans le Néolithique de tradition capsienne*, Paris, A.M.G., 1968, 144.

17. Roubet, “Neolithic of Capsian”, 179-219.

18. C. Roubet, “K51 Khanguet el Hadjar”, *Encyclopédie Berbère*, 27, 2005, 4188-4205.

19. Peirce, *Écrits sur le signe*, 236.

20. Roubet, “La gravure holocène du bélier orné en Algérie”, 3778-3799.

Graphic representation as a widespread human activity most often functions as a sign<sup>21</sup>. We are no longer in the realm of individual intimacy but in the realm of a social convention, shared and experienced in the same way by all the initiates. This graphic domain is a depersonalised language produced by engravers transcending their mental experiences to communicate with others. This graphic expression is a medium, a support for transmission and communication. Consequently, it provides access to the mental and behavioural structures of populations, to their way of experiencing the world. This graphic language says something else important, through its signs. On every creation there is a specific sign, and the question is: how can we discover it?

This approach is based on two documentary sources, archaeozoological and parietal, from the Tellian and Atlasian territories of Tunisia. We will try to show how the graphic narratives support and link two societal points of view. They are significant as an expression of territorial rootedness, and of a societal transformation, which can be deciphered via semiology. Charles Peirce considered the world to be a system of signs whose meaning help to extract and analyse their function in social life. Signs are divided into “icons, indices and symbols”<sup>22</sup>, a classification based on the type of relationship that the sign has with the chosen object:

I) Any image can become a sign; it then falls into the category of the icon, characterised by a particular relationship between the sign and the represented object. This relationship is described as a resemblance. The icon is defined by its similarity and its analogy with the object.

II) Each index/indices maintain a “de facto correspondence” with the object it designates. It is in direct physical relationship with it, but is not analogous to it, although it “subisse réellement l’influence de cet objet”<sup>23</sup>. The clue and the object under study are in an existential relationship and the clue can be seen as a “fragment qui a été arraché à cet objet”<sup>24</sup>. Clues have the following marks:

Premièrement, ils n’ont pas de ressemblance significative avec leurs objets; deuxièmement, ils se réfèrent à des choses particulières, soit une seule unité, soit une seule collection d’unités ou un seul contenu; troisièmement, ils dirigent l’attention sur leur objet par une sorte de contrainte aveugle<sup>25</sup>.

Like the icon, the index does not lose its character as a sign if it cannot be interpreted, but it does if its object is not present.

III) Finally, the symbol has only a conventional relationship with its object: “c’est un signe conventionnel, dépendant d’une habitude (acquise ou innée)”<sup>26</sup>.

21. Peirce, *Écrits sur le signe*, 157.

22. Peirce, *Écrits sur le signe*, 304.

23. Peirce, *Écrits sur le signe*, 147.

24. Peirce, *Écrits sur le signe*, 172.

25. Peirce, *Écrits sur le signe*, 160-161.

26. Peirce, *Écrits sur le signe*, 167.

The symbol, unlike the index or icon, loses its character as a sign if it cannot be interpreted.

To individualise signs and emblems-objects, archaeologists use their trained imagination to virtually reconstruct the images. The analysis must go beyond the current state of the document so that the fragility of the material does not play a role. It is the loss of a major component of this creation that slows down the analysis. The same is true for the masks on pebbles, associated with other materials not preserved or detected, and useful for reconstruction.

### *Case 1: Reconstruction of an initial creation engraved on an ostrich eggshell*

The first phase undertaken by Rym Khedaier<sup>27</sup> and Lofti Belhouchet, consisted of installing a schema of the initial object. This was a delicate process, developed through analysis and experimentation. Use-wear analysis of the engravings on the ostrich egg splinters made it possible to follow the steps of preparation. Ostrich egg surface has a smooth appearance with a low roughness. Using a binocular magnifying lenses (X30 to X50) showed that all the eggshell tests bear apparent streaks on the upper face (Fig. 2, a and b). The second examination under a metallographic reflection microscope (X200) confirmed the macroscopic observation of visible and marked striations and polishes. The striations are in disorder, sparse, and irregular. Some are non-tenuous, but thick and more marked and impregnated than other, which tell us something about an alternative, non-linear gesture (Fig. 2, c). Microscopic observation showed inside traces of ochre. The incisions of the etchings are simple plots of medium width and of small depth, the cross-section of which is mainly U-shaped.

Once the engraving had been created<sup>28</sup>, the artist had partially suggested the original creation near the egg opening. A second stage involved addition of a missing part, made up of unknown elements, which would have had to be prepared and shaped before being combined with the engraving.

### *Case 2: Reconstruction of an initial mask creation*

The analytical approach involved the creation of the mask, via experimentation. The first steps are devoted to the surface of the pebble if necessary. The current state of surface revealed precise markings as striations and perforations. Ascertaining their role, and the reason for their positioning, was essential to reconstruct the sequence stages. Because the preserved object is incomplete and deprived of an important part of its final aspect, it was necessary to consider the addition of missing and unknown complements to understand the final work.

27. We are very grateful to Rym Khedaier for allowing us to publish these results.

28. L. Belhouchet, "Les gravures sur coquilles d'œufs d'autruche en Afrique du Nord: interprétation des décors géométriques", *Sahara*, 19, 2008, 77-84.

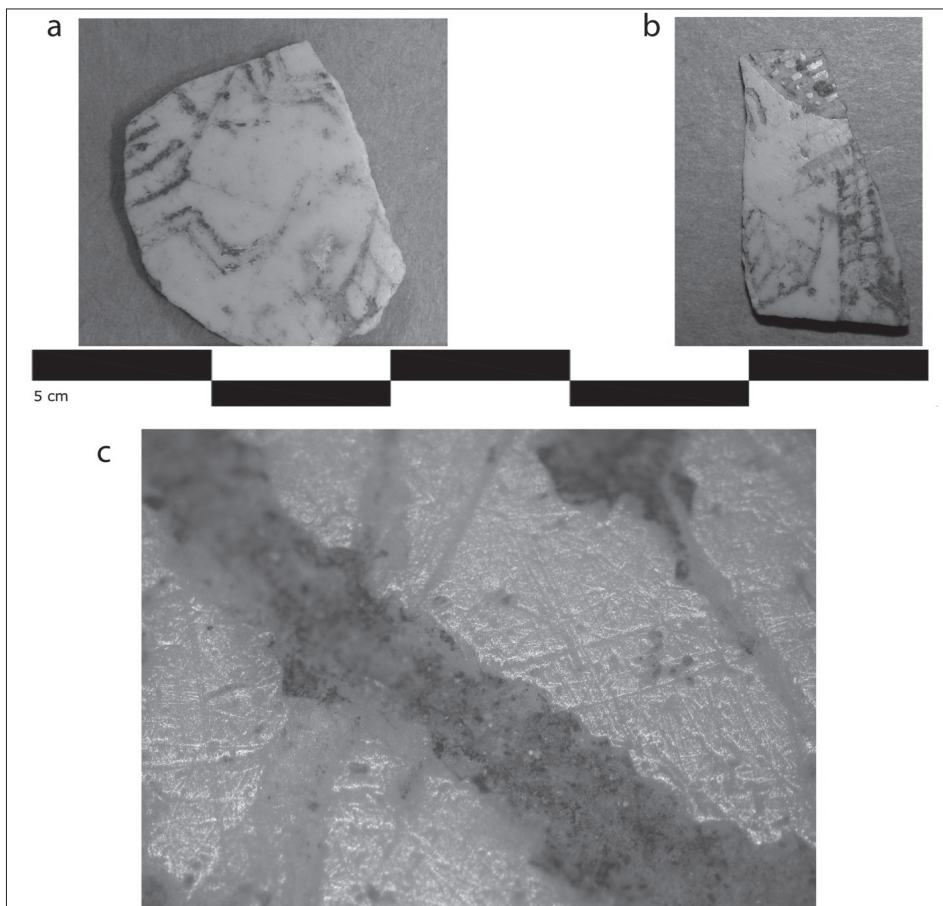


Fig. 2. Use-wear analysis (a, b): two eggshell fragments from Mezzouna capsian site (Tunisia); c: Photo with a metallographic reflection microscope (X200).

Source: R. Khedaier.

Recently, as part of a research project initiated by Meherzia Channoufi<sup>29</sup>, the use of a classical analysis method combining complementary observation and recording tools has proposed a new reading and an advanced interpretation for the “El Mekta-11” pieces:

- The various raw materials are essentially local (Senonian limestone) with flat, smooth surfaces.

29. M. Channoufi, “L’art mobilier chez les Capsiens: étude stylistique technique et tracéologique”, MA Thesis, Université de la Manouba, 2019.

- Incisions with a symmetrical V-shaped cross-section, and incisions with a U-shaped cross-section were identified. Simple V-shaped cross-sections are common.

- U-shaped incisions are rare, occurring on three pieces, difficult to make. They require more work.

- The engraved lines observed are simple, parallel, and slightly oblique. The short strokes are obtained by a back-and-forth movement to give a uniform incision. In the case of some masks, a drill was used to make the holes. This documentation highlights the difficulties of a holistic approach.

### 1.3. *Ostrich eggshell engravings*

Only securely dated artefacts were selected. Epipaleolithic ostrich eggshell production was systematically within a savannah biotope, after the Capsian populations had noted abundant egg deposits. These practices were passed on to the mountain pastoral communities, who came on winter transhumance<sup>30</sup>. Their ingenuity led to other innovations. Following the pioneering work of Ernest-Gustave Gobert<sup>31</sup> on the Tunisian engraving on eggs an orifice in an ostrich eggshell transforms it into a bottle. A single perforation was made to empty the shell. Then, an incised ornamentation was installed around the orifice before “l’application d’ocre sur les deux faces de l’orifice [...], et sur les] décors qui répondent aux exigences prophylactiques réclamées par les esprits primitifs”<sup>32</sup> and “qui ressortent en rouge sur un fond clair de l’œuf d’autruche”<sup>33</sup>.

One of the authors of the present work has recently re-examined these engravings for a general understanding<sup>34</sup>. His study showed that the signs considered as geometric and abstract indicate the indirect presence of an ostrich, which was always shown in the same position in relation to the perforation. The anatomical parts represented were always the same: wings, furcular (wishbone/clavicles), and proximal end of the legs. His study led him to a conclusion that on each opening a single emblematic animal figure had been intentionally created: an ostrich without head or neck. Three graphic styles have been recognised (Fig. 3, 4, 5):

30. C. Roubet, *Économie pastorale préagricole en Algérie orientale: le Néolithique de tradition capsienne. Exemple L’Aurès*, Paris, CNRS, 1979, 595; Roubet, “Le gisement du Damous”, 144.

31. E.G. Gobert, “Les grains d’enfilage en test d’œuf d’autruche”, *Revue Tunisienne, Nouvelle série*, 33-34, 1938, 19-32.

32. H. Camps-Fabrer, *Parures des temps préhistoriques en Afrique du Nord*, Alger, Imprimerie officielle, 1960, 219.

33. Camps-Fabrer, *Matière et Art*, 215.

34. Belhouchet, “Les gravures sur coquilles”, 77-84; L. Belhouchet, “Œuf d’autruche (Coquille)”, *Encyclopédie berbère*, 35, 2013, 5715-5719.



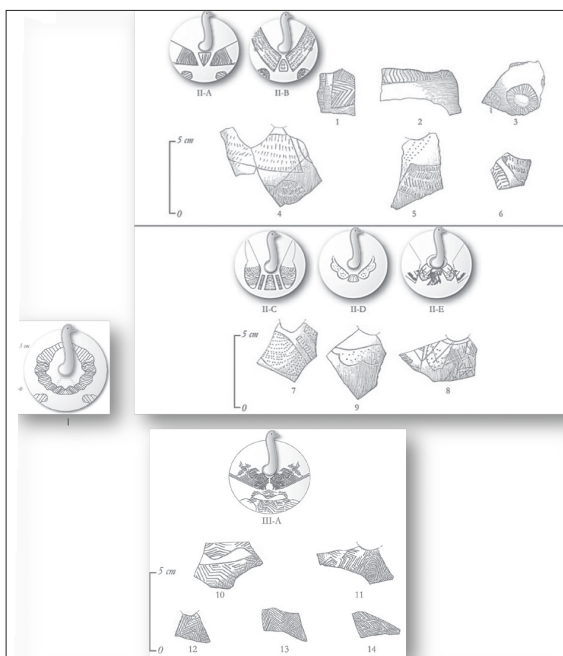


Fig. 3. Ostrich eggshell engravings (from L. Belhouchet's conception). 1: Aïn Khanga; 2, 6 and 8: Abri Clarioud; 3: Redeyef; 4: Doukhane Chenoufia; 7 and 10: Bir Hamairia; 9: Kaf Mazoui; 11: Henchir el-Ihoud; 12: Dj. Hamra; 13 and 14: El-Mekta.

Source: Camps-Fabrer, *Matière et art*.

- Style I is a sinuous and delicate engraved naturalistic creation, The linear incisions correspond to the feathers of the rachis and their parallelism refers to a static attitude. The head and neck were missing.

- Style II is an engraved linear decoration, without head or neck, emphasising plumage and its volume. Fine barbs of the feathers are formed by chevrons or squares, along lines of the rachis. The wishbone is often decorated with sparse and divergent pattern. Filling aspect gives a lively and dynamic expression.

- Style III is a complex decoration capturing a light dynamic, rich of an alive and free ostrich, as if it was snorting. This expressive twirling captured the volume of the ostrich's breast. The full neck is saturated with incisions so fine and numerous that the lightness of the natural plumage seems to be captured on the spot. This still captivates the eye today. A magical perception of the animal, shared as a pure moment of delicately engraved wonder, which suddenly became apparent. This reading had never been proposed before. If the style I gives a peaceful and immobile animal, styles II and III suggest a dynamic expression, which become abstract in style III.

How to complete the graphic creation with the neck and head of the ostrich? We suggest that a plant structure in the form of a coil was placed through the opening of the shell: for the neck. Insertion into the shell required use of a special glue made of Aleppo pine resin.

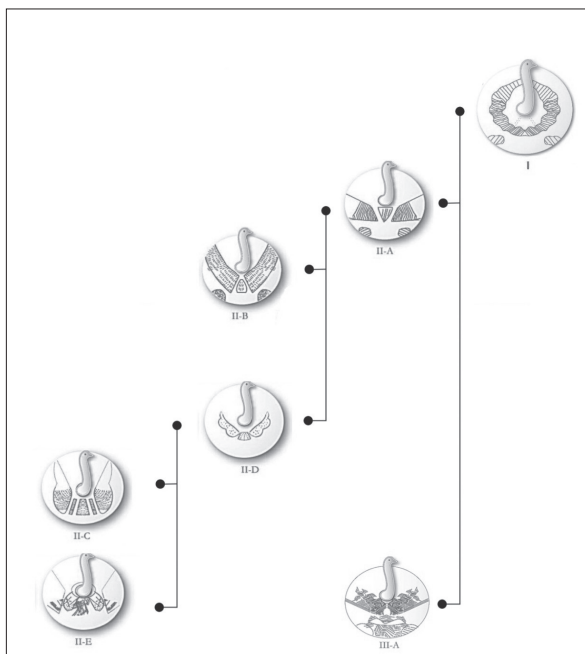


Fig. 4. The figurative classification system of ostrich eggshell engravings.

Source: L. Belhouchet's conception based on Camps-Fabrer, *Matière et art*.

Although there is no direct evidence for this plant element, this interpretation does provide a good resolution of the missing anatomy elements. For whom was it designed? Was it a “passage du visible à l’invisible” according to Vanden Berghen’s expression<sup>35</sup>.

How can we not think that this project was intended to be presented to the creator’s community? The decorated eggshell must be connected to a collective, consensual imagination, aimed at the shared expression of respect, recognition, and admiration for this spectacular recreated animal. This is what this reconstruction suggests today when we consider such an elaborate creative process. It fits into an environment of wooded savannah, into collectively shared preoccupations, in a joyful atmosphere turned towards the admiration, conservation of resources, and moderation of egg collecting.

The ostrich was, through its life force, the emblematic animal and icon of the Atlasian Caspian. it served as a reference point for the united communities as and an icon, it strengthened the feeling of belonging to this territory and made their roots sacred<sup>36</sup>.

35. C. Vanden Berghen, “Symbole, symbolique et symbolisme”, 1998, <http://racines.traditions.free.fr/symboles/symbolrs.pdf> (accessed on 21/10/2022).

36. Camps-Fabrer, *Matière et Art*, 304; H. Camps-Fabrer, *La disparition de l’autruche en Afrique du Nord*, Alger, Travaux du CRAPE, 1963, 107.





Fig. 5. Fragments of burnt shells then decorated from Hamda (Tunisia, Upper Capsian).

Source: M. Bovis in H. Camps-Fabrer, “Coquille d’œuf d’autruche”, *Encyclopédie berbère*, 14, 1994, 2093-2100, 2096.

The artists drew the technical solutions for the figurative system from practices in use on other materials, and other artists, to choose processes, motifs, and colours (Fig. 4). Following Pierce’s approach, we could consider that this system functioned as “a law” and operated according to social convention. An image engraved on the ostrich eggshell (the sign) is linked to a single object (the ostrich) thanks to a habit whereby the sign appears as a stylised – and therefore reproducible – general representation of a typical object (a symbol, an emblem). Through stylisation, the icon thus becomes an iconic symbol. It becomes a type that is part of a classificatory figurative system. According to Paoletti “the emblem has the power to create the collective feeling of a moral unity of the group and to generate through its mediation the interaction between the members”<sup>37</sup>. The distribution of decorations on ostrich eggshells in the Eastern Maghreb suggests that the graphic process unfolded in three phases from a centre located in the Gafsa region. The first phase, from Typical Early Capsian, introduced figurative geometric decoration in the Gafsa region. The next two phases, from Typical “evolved” Capsian to Upper Capsian, are characterised by a geographical expansion across the Gafsa-Tébessa regions, and evolution of two decorative ensembles. One developed the figurative geometric decoration, and the other developed the schematic geometric decoration<sup>38</sup>.

37. G. Paoletti, “The Cult of Images: Reading Chapter VII, Book II, of the Elementary Forms”, in N.J. Allen, W.S.F. Pickering, W. Watts Miller, eds., *On Durkheim’s Elementary Forms of Religious Life*, London, Routledge, 78-91, 85.

38. Belhouchet, “Les gravures sur coquilles”, 83.

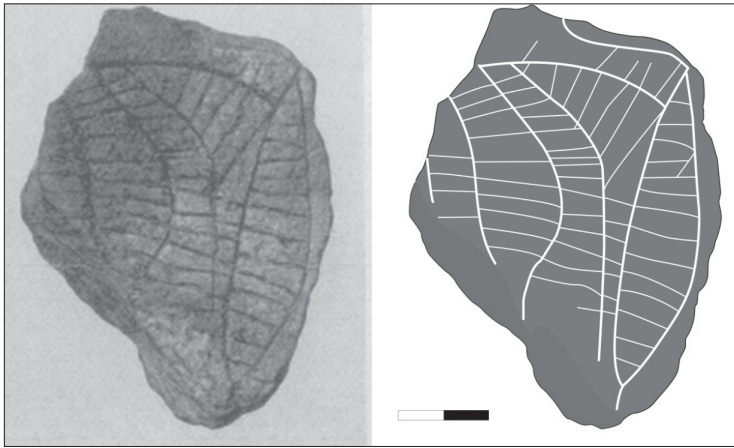


Fig. 6. Engraved limestone from El Mekta (scale: 20 mm). Identification of a bunch of leaves.

Source: Vaufrey, “Notes sur le Capsien”, 466.

#### 1.4. *Stone engravings*

Capsian engravings on limestone were examined by Gobert during the Vaufrey excavations<sup>39</sup>. These engravings led to the identification of a representation, without leading to an understating of the behaviours, these surfaces “ont servi à l’exécution d’un décor ou à l’expression d’une pensée par des aménagements qui ont entraîné une modification dans son aspect initial ou sa forme naturelle”<sup>40</sup>. A new reading of some stone creations comes from the Capsian sites of El Mekta<sup>41</sup>, Relilal<sup>42</sup>, Kef Zoura D<sup>43</sup> and the Neolithic Damous el Ahmar<sup>44</sup>. The El Mekta engraved document (Fig. 6) was created by engraving, and by adding colour. The reddish painting preceded the engraving and covered the entire surface of the bare stone so that the “trait [...] ressortent en ton clair sur le fond rouge”<sup>45</sup>. What also becomes apparent is that the engraved stone must be turned 90 degrees to the left, for looking at the incisions as leaves with veins. The veins have been arranged so carefully, and with such strength, that one has the impression of discovering a composition of three large leaves forming almost a “bouquet”. It is no longer a question of describing geometric incisions in terms of chevrons, curved

39. Vaufrey, “Notes sur le Capsien”, 466.

40. Camps-Fabrer, *Matière et Art*, 205.

41. Camps-Fabrer, *Matière et Art*, 207, fig. 1, plate X.

42. Camps-Fabrer, *Matière et Art*, 226, fig. 1.

43. N. Rahmani, D. Lubell, “‘Dessine-moi une autruche’ La gravure de Kef Zoura D et la représentation de l’autruche au Maghreb”, *Sahara*, 16, 2005, 39-54, 42.

44. Camps-Fabrer, *Matière et Art*, 233 fig. 3, plate X.

45. Camps-Fabrer, *Matière et Art*, 215.

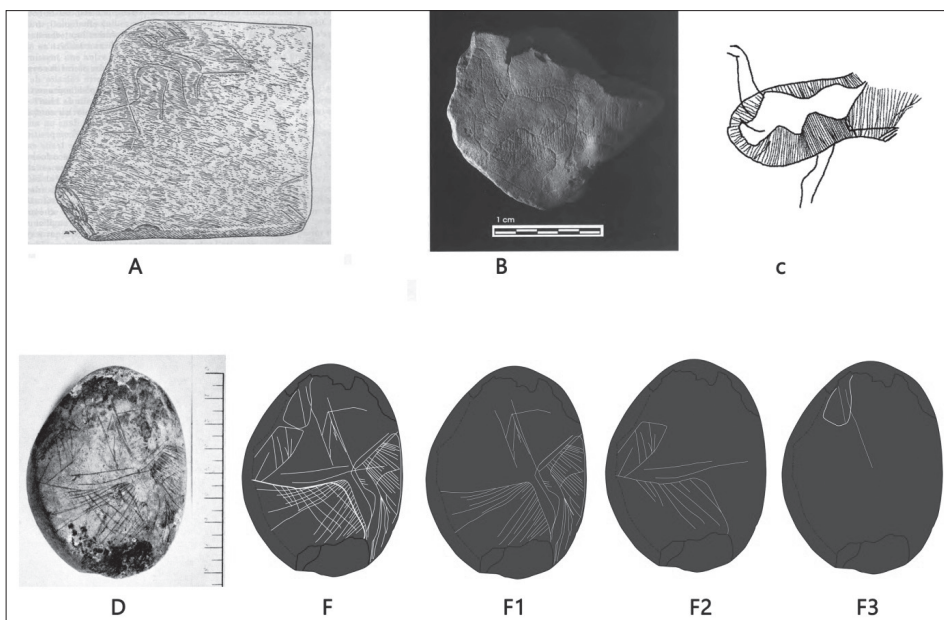


Fig. 7. Engraved stones of Relilai, Kef Zoura D and Damous el Ahmar. A = Relilai, B & C = Kef Zoura D, and D-F3 = Damous el Ahmar.

Source: A and D, Camps-Fabrer, *Matière et art*; B and C, Rahmani, Lubell, “Dessine-moi une autruche”; F, F1, F2, and F3, Belhoucet.

lines, etc. The recognition of this representation allows us to perceive a bouquet of probably three laurel leaves. Seen in daylight, the white veins seen on the ochre background could have made the smooth, glazed leaves glisten. What does this creation suggest?

The recognition of a representation showing a series of leaves is retained, it proposes a graphic message included in two kinds of concerns: aesthetic, environmental, significant of seasonality, for ornamental transformation, wreath; exploitable for curative, therapeutic purposes as decoctions for drinking exploiting the principles and aroma of plants or for medicinal vapour purposes (good smell, fumigation, insect repellent).

The Relilai stone was described by Henriette Camps-Fabrer (Fig. 7, A) as “traits ramifiés en trident et fuseaux nous font insensiblement passer des simples assemblages de traits géométriques [...] à des compositions plus élaborées, et de ce fait, plus hermétiques et difficiles à déchiffrer”<sup>46</sup>. For the Kef Zoura D stone, Noura Rahmani and David Lubell described it as “des motifs et des traits entremêlés qui sont illisibles, mais après une observation lente et attentive, [on]

46. Camps-Fabrer, *Matière et Art*, 266.

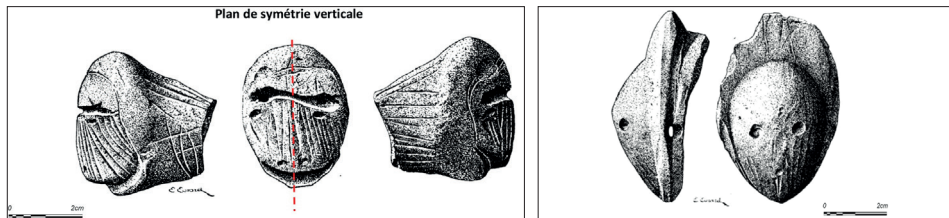


Fig. 8. Mask (head and neck) of El Mekta transformation.

Fig. 9. Mask of El Mekta (face) asymmetrical along the horizontal axis.

Source: fig. 8, Gobert, “El Mekta, station princeps du Capsien”, 42; fig. 9, Gobert, “El Mekta, station princeps du Capsien”, 40.

peut, dès lors, distinguer des ensembles de traits faisant apparaître une silhouette d’autruche<sup>47</sup>. Damous el Ahmar artefact was described by Henriette Camps-Fabrer: “traits, [qui] malgré leur complexité, sont plus régulièrement ordonnés et agencés. [On] pourrait songer à la représentation de pattes d’oiseau ou mieux à la stylisation d’un oiseau en vol<sup>48</sup>”.

When re-examining the Damous el Ahmar and Kef Zoura D, creations we noted that smooth surfaces are apparent. Some of these are the result of natural polishing (Kef Zoura), but others seem intentional (Damous el Ahmar)<sup>49</sup> as a grinding or abrading stone (on a skin perhaps) (Fig. 6, D-F3). Re-examination of the Damous el Ahmar and Kef Zoura D engraved objects leads us to suggest a large bird, probably an ostrich (Damous el Ahmar, Fig. 7, F, F1, F2; Kef Zoura stone D, Fig. 7, B, C). There are stylistic analogies with the engraved ostrich eggs: style I seems to have been adopted on the Kef Zoura D stone (Fig. 7, B, C); and Damous el Ahmar pebble matches style II. The reading of the Relilai stone remains very uncertain.

### 1.5. *Stones sculpted into facial masks*

Another system of decoration conveys much more than just the talent and skills of the artists. This is the transformation of pebbles into images of facial mask from the El Mekta site<sup>50</sup>. The intention was to transform the natural material to a point where it “became” a mask. These pieces are miniatures of masks that were made of organic materials and were lost. Therefore, these models allow us to access information about the lost “true” masks. Initially described and named by Gobert, they are re-examined here. New observations place these creations in an active, mediated situation, bringing to light their function and role.

47. Rahmani, Lubell, “Dessine-moi une autruche”, 42.

48. Camps-Fabrer, *Matière et Art*, 233.

49. Camps-Fabrer, *Matière et Art*, 227.

50. E.G. Gobert, “El Mekta, station princeps du Capsien”, *Karthago*, 111, 1, 1952, 1-79.

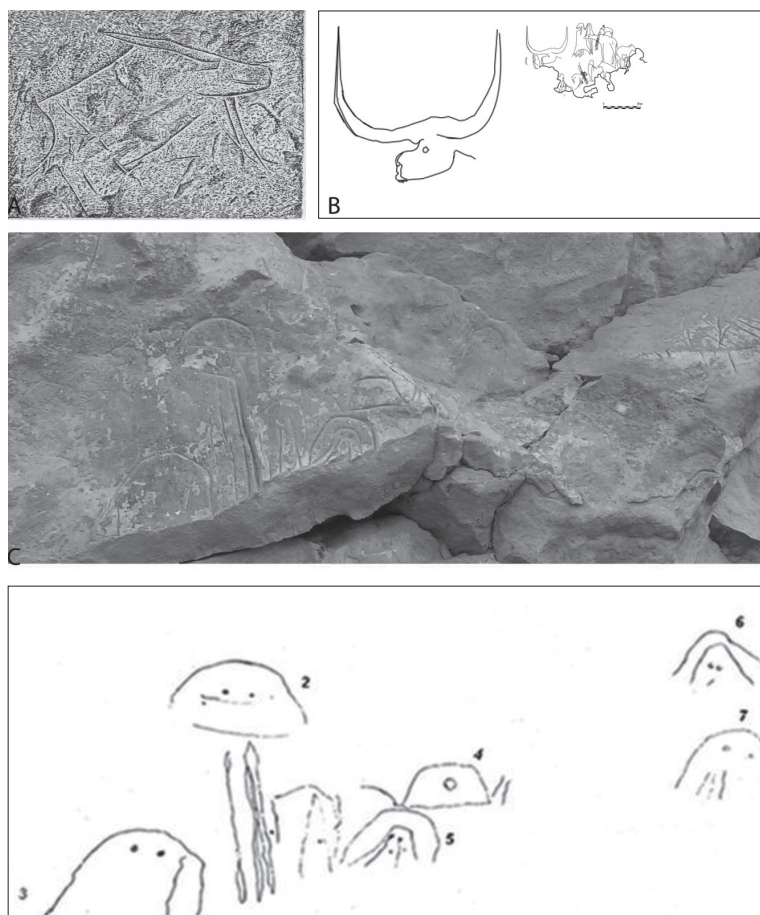


Fig.10 Zoomorphic and anthropomorphic heads (signs of spirits). A) El Mekta; B) Jebal Ousselat; C) Mhaet el Khil shelter

Source: Gobert, “El Mekta, station princeps du Capsien”, 53; S. Yahia Achèche, “Ousselat, Jebel, Tunisie: Préhistoire et art rupestre”, *Encyclopédie berbère*, 36, 2013, 5986-5993, 5992; M. Saidi, “Témoins d’une présence humaine préhistorique et protohistorique autour de la source d’eau d’Oum el Araïs, Sud-ouest tunisien”, S.O.H.A.P.S., Université de Gafsa, 2011, 16-25, 22.

The first mask (Fig. 8) is inscribed on an ellipsoidal pebble. Previous interpretations suggested an animal face. One of its faces is convex, with two deep transverse grooves. The groove at the bottom is turned up at both ends and suggests a half-open mouth. The second groove runs higher and horizontally across the surface. It was carved to form a gutter with a hole at each end, suggestive of an eye in the bottom of an eye socket. Several vertical incisions scar the area between these two grooves. This may have been intended to suggest hair. According to Gobert “il y a aussi deux points analogues percés sur les



joues, au-dessous de chacun des yeux enfoncés dans leur sillon”<sup>51</sup>, apparently suggesting that the artist had engraved the eyes twice. Camps-Fabrer assumes that “la main du graveur [pouvait avoir] trahi l’intention de celui-ci?”<sup>52</sup>. Grebenart and Camps believe that this face has “à la fois un aspect bestial et humain”<sup>53</sup>. If these lower dots are two engraved nostrils, then it is possible to recognise the engraving as a face: a mask.

This recognition as a mask allows for more nuanced observations and a deeper understanding of the features. It can be seen to be animated and metamorphic. By playing with the stone, turning it to the right and the left different profiles appear, suggestive of original, and striking expressions<sup>54</sup>. This solution of vertical pivoting makes the mask – “worn” and augmented – as a living thing, representing a character or a spirit, or an animal or a fantastic creature. As for the two upper holes, they represent the holes worn by an actor as openings to the outside, allowing the actor to see and savour the effect of his performance on the audience. To give life to this mask, the actor probably lent his face to it, and would have had to consider adding mimics, grunts, whistles, vocalizations to animate it and reinforce the suggested mask presence. In this performance, intended to be shared to frighten or entertain an audience, the actor would have had to perfect the mask associated to long hairs a large crown-like plant structure, to the actor’s head. Gestures, sound effects, and special actions, now intangible, gave life and strength to the story of an actor, aided by the creation of a mysterious, masked “being”, embodying situations that were skilfully magnified, preserved in the imagination of the Capsian populations. A living mask that suggests a magical situation.

The mask is a major element of theatre still today. The character charged with embodying “the wise man” masks himself and his character transmits the appropriate indications. He will exploit his transformation to support his message and will produce, through his gestures and various expressions, the elements of response, using fear, warning, direct information and danger.

Ethnography and collection of data from ancient Maghreb societies now enable us to propose that Capsian masks be integrated into an interpretative scheme, similar to traditional situations, as a hypothesis. The disguised figure of Jebal Ousselat has been likened by Jaâfar Ben Nasr<sup>55</sup> to the modern dancing figure, known as *Boujloud* (the man dressed in sheepskin) in Berber folklore. The ram’s head is used as a mask and he may be adorned with snail necklaces and tree

51. Gobert, “El Mekta, station princeps”, 41.

52. Camps-Fabrer, *Matière et Art*, 245.

53. D. Grebenart, G. Camps, “(El-) Mekta”, *Encyclopédie berbère*, 31, 2010, 4853-4855, 4854.

54. Belhouchet, personal note, n.d.

55. J. Ben Nasr, “A propos d’une association de l’homme et du bélier orné sur une gravure de l’abri de R’mada (Jebel Ousselat, Tunisie centrale)”, *International Conference: What Ever Happened to the People? Humans and Anthropomorphs in the Rock Art of Northern Africa Royal Academy for Overseas Sciences*, Brussels, 17-19 September, 2015, 55-61.

branches<sup>56</sup>. According to Ahmed Raqbi<sup>57</sup>, the character of *Boujloud* embodies the ancestors and brings with him health, fertility and prosperity. Depending on the region, variants of this disguised folkloric personality can be cited: Bou Btan, Bou Dellif or Bou Saadia<sup>58</sup>.

Today, if we remove from our minds the current reality of the inanimate object, a trace of the immense power of this mask is accessible: this mask remains truly “inhabited” and impregnated with the memory of its creator-actor. We can access the powerful character of an actor, the hero of a major social event: he is once again alive in human imagination.

There are two other masks from El Mekta (Fig. 9). They were created in the same way and were intended for performance. El Mekta served as a famous meeting place, for festive gathering and entertainment. This interpretation, revealing the presence of masked actors, in a place of celebration and festival, led to the recognition of a place of Great Memory.

The carved stone masks of El Mekta thus represent only a part of the original composite mask-object. Here, as the profile shows, it is possible that on this much flatter mask the eye perforation goes through the rock. By virtually reconstituting the entire ensemble of elements, we can better understand and appreciate the carved stone artefacts.

However, one of the difficulties in studying Capsian graphic figuration is that the same subjects can represent very diverse concepts, which is why it is appropriate to define these material witnesses by their appearance rather than by their nature. In this sense, masks are indexical, they are signs referring to their objects (the spirits, Fig. 10). The primary objective of the archaeologists who usually investigate these phenomena is to determine the nature of the representation and not its appearance. Imagining the reconstructed role and use is never a consideration.

To summarise the new interpretations here (Table 1): for the engraved opening of ostrich eggshells, anthropological interpretation highlights the distinctive characteristics of an ostrich breast, typical of a permanent immobility, maintaining the respect of a whole community. For the masks, the analysis implies the creation of several possible entities (Tab.1); the transformations give rise to an exceptional dynamic “hero”, valued by its creator, the author of the metamorphoses. The fixed graphics of the dynamic postures of the ostrich, engraved on shells, enhanced with bright colours (dye), is enhanced by the imagination of each ob-

56. A. Hammoudi, *La victime et ses masques. Essai sur le sacrifice et la mascarade au Maghreb*, Paris, Seuil, 1998, 254.

57. A. Raqbi, “La symbolique de Achoura et des imaaचार au Maroc: le cas de Tiznit”, in A. Elkhanboubi, ed., *Tiznit: une cité à la croisée des cultures. Le patrimoine culturel de Sous. Fouilles dans les structures et les manifestations*, Actes du colloque de l’Université d’Hiver, Tiznit, Association Issmoun, 2009, 27-35.

58. L. Joleaud, “Gravures rupestres et rites de l’eau en Afrique du Nord”, *Journal de la Société des Africanistes*, 1933, 3, 1, 197-282; A. Robert, “Bateleur”, *Encyclopédie berbère*, 9, 1991, available online <http://journals.openedition.org/encyclopedieberbere/1448> (accessed on 18/11/2023).

*Table 1. Two Capsian art projects: around the opening of ostrich egg and on pebbles.*

	ENGRAVING AROUND THE OPENING MADE ON OSTRICH EGGSHELL	FACIAL MASKS ON STONE
1- Variety of represented subjects	Single, isolated, partial representation of an ostrich	Representation of several entities: animals, humans, spirits
2- Permanence of image	Unique, fixed, and long-lasting image	Image evolving, circumstantial, in time
3- Operating mode	Self-contained image, emblematic messages of life, presence and abundance	Image embodied and voiced by an actor, special purpose
4- Variety of material	Unique material (eggshell): standard shape, standard patterns, standard dimensions	Mixed material: different shape, patterns, colours, dimensions...
5- Object autonomy	Anatomical creation completed by adding and fixing composite, complementary attributes	Anatomical creation completed by adding and fixing composite, complementary attributes
6- Functioning	Static role, posed, ceremonial uses	Mobile role, ceremonial uses

Source: L. Belhouchet.

server, bringing the representation to life. With the “bottle” placed on a stable support the representation was intended to be seen from afar, to be shared and appreciated collectively. These delicate material and decoration – such as engravings filled with ochre – can be easily damaged, which limits handling.

On the other hand, a metamorphosis mask brought the effect of surprise to the audience. The actor wearing the mask was responding to, and immediately in empathy and dialogue with everyone. It was the plant supplements added to the small pebble mask, designed to enhance the impact of the mask, that triggered and enhanced the sense of fear or joy. The gestures, vocalizations, and sound effects would have reinforced the message and created a lively scene, captivating the audience: this pebble is the only part that remains.

## *2. “Artistic” creations during the pastoral, pre-agricultural neolithic or the Caspian tradition*

New evidence and studies of artistic creations emphasise the impact of a relative continuity of Capsian traditions on the subsequent behaviour of populations of the same origin, anchored on the same territory. It is now recognised that the cultur-



al and social shifts brought about by breeding in a pre-agricultural context were communicated graphically on the walls of shelters or on pebbles and plates. This new evidence shaped our study, and we have chosen several examples, including the results of recent work carried at the site of Doukanet el-Khoutifa.

A Brief review of archaeozoological data:

- Kef el-Agab cave in the Northern High-Tel, remains from the cave of Kef el-Agab 70, indicate the practice of animal husbandry in a hunting context with a group of caprines, among the remains of Bovini, Alcelaphini, Reduncini, Antilopini, Caprini, Suidae, Canidae, Felidae, Hyenidae, Herpestidae, Lagomorphs, insectivores, rodents, ostrich, and many terrestrial Helix (snails).

- Doukanet el-Khoutifa shelter in the Tunisian Middle Dorsal. Successive Neolithic cultural contexts have provided a series of 14C AMS dates<sup>59</sup>. The earliest date for the first settlement is (SU 4135) is 6330 ± 40 B.P. (Muse-530, between 5463 - 5217 cal B.C.). Remains of the earliest occupation level (SU 4128) have been dated to 6190 ± 40 B.P. (Muse-537, estimated 5288 - 5029 cal B.C.). The end of the occupation has been fixed at 5425 ± 35 B.P. (Muse-538, estimated 4347-4233 cal B.C.). First breeding of caprines in the second half of the 6th millennium, is associated with hunting of wild mammals (gazelles, hartebeests and equids). Towards the fifth millennium cal B.C., herding practices were accompanied by increased consumption of domestic animals without reduction of the hunted fauna (cattle, African buffalo, kob, *Redunca redunca*, wild boar, lion, golden jackal, wild cat, red fox<sup>60</sup>). Consumption of wild plants like sweet acorns of oak (*Quercus* sp.), legumes (*Lathyrus* / *Vicia* sp.), and pine (*Pinus halepensis*) is without evidence for domesticated plants. A pre-agricultural phase, in the wooded context of the Tunisian Dorsal, is surrounded by plains that remained in their natural state<sup>61</sup>, as an earlier site in mountainous Eastern Algeria like the Capéletti Cave in the Aurès which dates to the sixth millennium cal B.C.<sup>62</sup>. Herding allowed the Tunisian communities to delay slaughter of some animals. This would have been a decision that must have involved controlling the development of domestic livestock. This highlights a behavioural break with the predatory Capsian system implying the development of new methods of domestic herd management and a revaluation of the value of wild fauna capital.

59. S. Roudesli Chebbi, J. Zoghalmi, "Les restes humains de Doukanet el-Khoutifa", *Africa, Revue des Etudes Phéniciennes-Puniques et des Antiquités Libyques*, 20, 2004, 75-97; S. Mulazzani, L. Belhouchet, L. Salanova, N. Aouadi, Y. Dridi, W. Eddargach, J. Morales, O. Tombret, A. Zazzo, J. Zoghalmi, "The emergence of the Neolithic in North Africa: A New Model for the Eastern Maghreb", *Quaternary International*, 410, 2016, 123-143.

60. Dridi, Aouadi, "Néolithisation et Néolithique de Tunisie", 5481-5488.

61. C. Roubet, B. Ouchau, "Pastoralisme néolithique initial au Maghreb", *Encyclopédie berbère*, 32, 2015, 6154-6169, 6157.

62. Roubet, *Économie pastorale préagricole*, 206.

- The cave-necropolis of Redeyef in the southern Atlas region. The site of Redeyef is one of the most studied<sup>63</sup>. The burials of adults and children have been detailed<sup>64</sup>. The faunal data<sup>65</sup> belong to two superimposed archaeological levels, one to the transition from the Capsian to the Neolithic, and the other to a settlement of Neolithic of Capsian traditions<sup>66</sup>. The archaeozoological assemblage includes *Ovis* sp., alongside *Bos primigenius*, *Bos* sp., *Alcelaphus buselaphus*, *Ammotragus lervia*, *Equus* sp., *Ceratotherium mauritanicum*, *Canis aureus*, *Vulpes* sp., *Felis caracal*, *Herpestes ichneumon*<sup>67</sup>. The initial breeding of sheep and goat was associated with hunting. This diversity should be borne in mind when considering the ways in which behavioural transformations of living in the mountains are reflected on the engraved walls.

### 2.1. Introduction of the first domestic animals in the Moroccan Rif Region

These Early Neolithic sheep all belonged to “variétés du mouton à poil de l’espèce *Ovis longipes Fitzinger*”<sup>68</sup>. How can we explain the appearance of domestic sheep among the food remains of the populations occupying the caves before the sixth millennium BC? Two hypotheses deserve attention.

Holocene radiocarbon and archaeozoological data from southern Spain and Rifan Morocco, allows us to consider a probable introduction of sheep via the western Maghreb<sup>69</sup>. One of the authors<sup>70</sup> hypothesised this because of domestic caprines in the caves of the Neolithic Rif (Morocco), dated to the seventh millennium cal BC<sup>71</sup>. In the Atlasian Oranian region, neighbouring the Rif, this introduction was quickly accompanied by representations of the ornamented sheep

63. E.-G. Gobert, “L’abri de Rédeyef”, *L’Anthropologie*, 23, 1912, 151-168; L. Balout, *Préhistoire de l’Afrique du Nord. Essai de chronologie*, Paris, Arts et Metiers, 1955, 384; R. Vaufray, *Préhistoire de l’Afrique, t. 1, Maghreb*, Tunis, Institut des Hautes Etudes de Tunis, 1955, 127; Camps-Fabrer, *Matière et Art*, 373; Camps, *Les civilisations préhistoriques*, 283.

64. J.-L. Heim, “Révision des documents anthropologiques de Redeyef et du Djebel Fartas, conservés à l’Institut de Paléontologie Humaine”, in C. Roubet, *Economie pastorale préagricole en Algérie orientale. Le Néolithique de tradition capsienne. Exemple l’Aurès*, Paris, CNRS, 1979, 474-477, 476.

65. Dridi, Aouadi, “Néolithisation et néolithique de Tunisie”, 5481.

66. Vaufray, “Notes sur le Capsien”, 463, 464.

67. Dridi, Aouadi, “Néolithisation et néolithique de Tunisie”, 5481.

68. G. Camps, “Bélier à sphéroïde (Gravure rupestre de l’Afrique du Nord)”, *Encyclopédie berbère*, 9, 1991, 1417-1433, 422.

69. F. Nekkal, J. Linstäter, H. Aouraghe, B. Bougariane, “Ifri Ouzabour: L’extrême extension de la culture cardiale sur le littoral méditerranéen sud (Rif oriental, Maroc)”, *Bulletin de l’Institut Scientifique*, 37, 2015, 55-76; F. Nekkal, “La genèse du Néolithique dans la région du Rif oriental: contexte chrono-stratigraphique et culturel”, PhD Thesis, Université Mohammed Premier, 2015, 272.

70. Roubet, “La gravure holocène du bélier orné en Algérie”, 3778-3797.

71. C. Roubet, “Le bélier orné Holocène: emblème tribal et médiatique du pastoralisme atlasique en Algérie”, in Blanc-Bijon, Bracco, Carré, Chaker, Lafon, Ouerfelli, eds., *L’Homme et l’animal au Maghreb*, 389-400.

and their shepherds. These engraved images are preserved in the Ouled Nail Mountains, the Dj. Amour and the Ksour<sup>72</sup> etc. Combination of C14 chronology and faunal data provides evidence for this introduction which implies contact and exchange with other groups, regions and cultures<sup>73</sup>.

## 2.2. Ceremonial “gift” of a domestic animal and exchange in the Early Neolithic: Anthropological perception

The theme of exchange has been considered by one of the authors of the present work<sup>74</sup>, on the basis of exogenous cultural goods of high symbolic value inside caves sediments. This phenomenon has not been found in earlier Capsian cultural (*sensu lato*) contexts. These artefacts are large blades, polished material, axes, adzes, and objects of adornment. Found in the Capéletti cave in the Aurès, it has been assumed that they were obtained through exchanges. Exchanges which took place between the local population and non-pastoral traders were attracted by transhumant grazing domestic animals. These exchanges might have been ritualised with ceremonial gifting. This hypothesis<sup>75</sup> invoked the French ethnologist Marcel Mauss<sup>76</sup>. Another one of the authors also proposes to relate the initial introduction of domestic mammals into the Eastern Maghreb to these exchanges, well described, documented and traced by Bronislaw Malinowski<sup>77</sup>.

According to these analyses, it seems that a system of social relations based on reciprocal giving was established as early as the Neolithic period, thanks to previously ritualised exchange procedures, socially accepted. Regarding the ceremonial exchange, Mauss specifies that such act includes a procedure of recognition, leading to the identification, acceptance, and honouring of others by handing over the object of their desire. Peirce explains that this type of gift is based on a triadic relationship made up of three inseparable markers<sup>78</sup>. The markers form a structure, defined by Claude Lévi-Strauss<sup>79</sup>. For Marcel Henaff:

72. Roubet, “La gravure holocène du bélier orné en Algérie”.

73. F. Nekkai, *La genèse du Néolithique dans la région du Rif oriental : contexte chronostratigraphique et culturel*, PhD Thesis, Université Mohammed Premier, Oujda, 2015; Roubet, “La gravure holocène du bélier orné en Algérie”.

74. C. Roubet, “‘Statut de berger’ des communautés atlasiques néolithisées du Maghreb oriental, dès 7 000 BP”, *L’Anthropologie*, 107, 2003, 393-442; C. Roubet, “Khanguet el Hadjar”, *Encyclopédie Berbère*, 27, 2005, 4188-4205.

75. C. Roubet, “Pastoralisme et ruralité néolithiques dans l’Aurès avec la grotte Capéletti, entre 7500 cal BP et 4500 cal BP”, *Aouras: Société d’études et de recherches sur l’Aures antique*, 3, 2006, 18-36, 31.

76. M. Mauss, *Œuvres: I. Les fonctions sociales du sacré*, Paris, Éditions de Minuit, 1968, 634.

77. B. Malinowski, *Argonauts of the Western Pacific: An Account of Native Enterprise and Adventure in the Archipelagoes of Melanesian New Guinea*, London, Routledge & Sons, 1922.

78. Peirce, *Écrits sur le signe*, 71.

79. C. Lévi-Strauss, “Anthropologie structurale deux”, Paris, Pion, 1973, 451.

toute relation impliquant deux agents et un objet échangé, présuppose une *norme d'échange*; elle n'est donc pas l'addition de deux gestes séparables, du genre A donne la chose O à B et B reçoit O de A; c'est d'emblée et par définition que les partenaires et la chose échangée – l'élément médiateur ou la chose donnée – sont, comme dit Peirce, en relation *selon une loi*<sup>80</sup>.

For Charles Peirce, exchange constructs a relationship established according to a consented law. This institution establishes a strong symbolism and a founding alliance of a freely consented peace between the members. This is, by hypothesis, how the gesture of a ritual gift of the ram in the Early Neolithic could be interpreted, as “obligatory and free” in the words of Mauss<sup>81</sup>.

### 2.3. *Analysis of parietal figurations from the pastoral Holocene of Tunisia: Early Neolithic parietal engravings*

Parietal representations in Tunisia are mainly related to the pastoral Holocene phase. An anthropological reading of some of them evokes stages of animal behavioural transition, from fully wild towards an initial domestication phase. They are important graphic accounts. The supreme expression of talent and message, that can help us understand how a few creators and their communities organised themselves shared reference points on the occasion of the First Great Behavioural Rupture brought about by the adoption of preagricultural pastoralism, while maintaining and appreciating an exceptional state of nature.

The Ghorfat er-Rmada station (Jebel Ousselat region) located at an altitude of 715 mt., on the right bank of the Ellouz wadi was mentioned in 2003 by J. Ben Nasr<sup>82</sup> and reported by S. Yahia-Achèche. The images show:

des animaux de la faune sauvage côtoient des espèces domestiquées; des personnages et des théranthropes (mi-hommes, mi-animaux) sont aussi représentés en étroite relation avec les animaux. Les figures s'imbriquent les unes aux autres. [...] De même, avec la présence du *Syncerus caffer antiquus*, qui s'est maintenu en Afrique du Nord jusqu'au Néolithique, nous pensons pouvoir classer ce type de gravures parmi les gravures anciennes appartenant au Néolithique<sup>83</sup>.

This panel (Fig.11) has not yet been the subject of a detailed analysis: here we make a first proposal. To approach it, it requires isolation of the juxtaposed subjects, so great is the complexity. It is the restrained domestic animals that first attract attention. Long double restraints, made probably of wood passed around

80. M. Hénaff, “Anthropologie du don: genèse du politique et sphères de reconnaissance”, in C. Lazzeri, A. Caillé, eds., *La reconnaissance aujourd'hui*, Paris, CNRS Éditions, 2009, 471-196, 482.

81. M. Mauss, “Essai sur le don. Forme et raison de l'échange dans les sociétés archaïques”, *L'Année sociologique*, 1, 1923-1924, 30-186, reprinted in M. Mauss, *Sociologie et anthropologie*, Paris, Presses universitaires de France, 1968, 145-279.

82. J. Ben Nasr, “Nouvelles peintures rupestres de l'abri Aïn Khanfous (Jebel Ousselat, Tunisie Centrale)”, *Sahara*, 14, 2003, 145-148.

83. Yahia-Achèche, “Ousselat”, 5991.

the necks of several sheep serve as evidence of a sustained vigilance. This restraint, not preserved archaeologically, is an ingenious invention that allows the control of the animal's diet and the moment of copulation. It emphasizes that the sheep thus restrained could neither graze nor ride an ewe.

If we accept that the engravings are juxtaposed and form pairs of subjects, the engraved complexity can be understood through a subdivision into "scenes", those of 5 sub-units (A-E), framed here. In sub-unit E (Fig. 11), a figure recognisable as dominant by size, is standing in a static position, with his head (seen in profile) turned to the left. His body and arms are entirely masked by a large, stretched sheep skin, so only his bare feet are visible. This tall figure appears to be playing the role of a "master". We could establish here a thematic link with the previous El Meka role of the masks (noticed above). This hidden figure is a sort of popular special character, locally and specially chosen to protect domesticated animal, unknown elsewhere in the Atlasic areas. In sub-units B, C and D, are shepherds and animals of domestic and wild status. Their positioning and grouping form two registers: a lower one comprising three sub-units (B, C and D) and an upper one with two sub-units (A and E).

Sub-unit B shows a lamb with defined horns, calm and static, although heavily hobbled and moving away from a shepherd who is following it with a curved stick. Sub-unit C shows another static figure facing a female boar, with carefully engraved udders, calm, as if under his protection. The figure holds out his hand in a familiar gesture. Supposedly tamed here, this boar is not yet fully domesticated and its status as a food resource must be discounted here. At this stage of Holocene Neolithisation, this usually hunted mammal occupies an ambiguous position in relationship to humans; its half-wild/half-domestic status takes into account its condition and its role, in the absence of juveniles.

Sub-unit D presents a new character with a stick, chasing a shy carnivore, of the wild dog or hyena type. It appears to be uncomfortable in its surroundings, although it is under surveillance, with its tail low, its body bent and curved, and fleeing in the opposite direction. This combination testifies to the vigilance of the shepherd.

The three types of characters shown in B, C and D form a group of young shepherds taking care of their domestic animals. Placed under the gaze of the master shepherd in disguise (sub-unit E), they are assistants. A certain hierarchy from size and graphism evokes the training of shepherds, at an initial stage, through the details of intimidating practices intended to scare away a carnivore. Today's observer is witness to an initial moment which can be placed in a chronological context, thanks to the precise engraving. This highly original "graphic narrative" is a rare and precious document.

Sub-unit A contains a large male bovid, an aurochs, a species of *Bos taurus primigenius* rather than *Syncerus caffer antiquus*. The engraved head framed by its large horn is suggestive of a specific environment, typically Atlasic and attractive to various species, some of them dangerous. This animal imposes itself by its size, its powerful physical strength, its bellicose character. This image

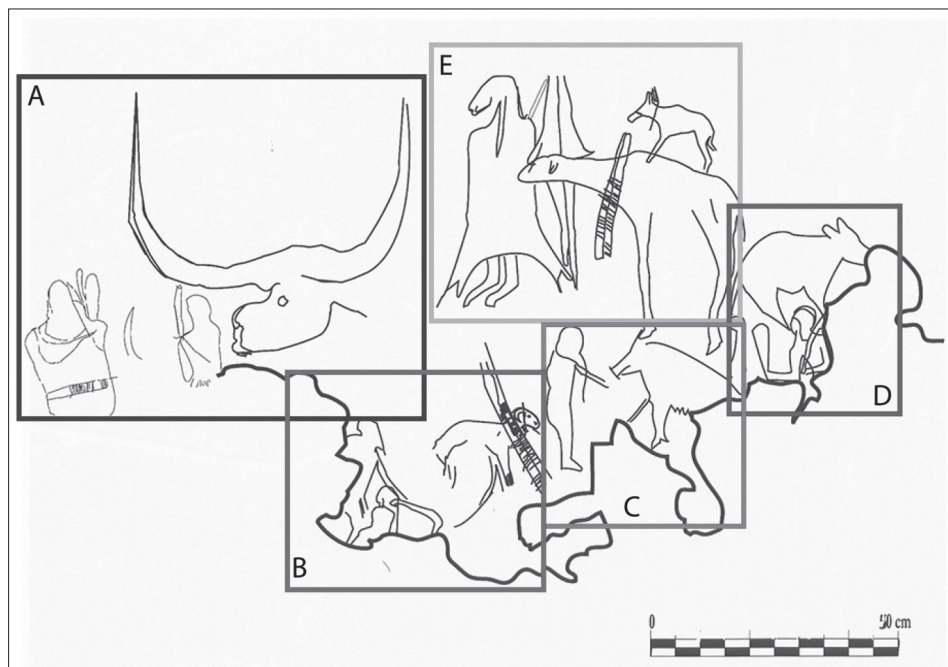


Fig. 11. Survey of engravings from Ghorfat Rmada. J. Ousselat (According to S. Yahia-Achèche, unpublished cutting of the panel into five sub-units by L. Belhouchet). Drawing : S. Yahia-Achèche. five sub-units : L. Belhouchet.

would support the master shepherd in sub-unit E and his dispersed assistants. This great aurochs would therefore no longer be an isolated and disconnected animal, its presence would act here as an indexical sign of the animal's protective spirit, it would be its "indexical dimension". Master, assistants-shepherds and aurochs, united in spirit, would be implicitly linked and protected. This sign would operate within social convention and in relationship to the situation described<sup>84</sup>. The two sub-units A and E, linked to the others by the complete narrative deliver a message of vigilant symbiosis.

In sub-unit E, the engraver designates the restrained and ornamented lamb (*ovis longipes*) the main subject of special vigilance. This sheep is wearing an imposing triangular ornamental device, placed between the horns. An ornament that makes it sacred. The engraver reports on a ritualisation put in place by a masked and disguised shepherd master accompanying his ram that is adorned with an emblem. The disguise of one and the emblem-coat of the other accentuate the prestige of each and reinforce the symbolic power of the scene. This is another way to engrave symbolic situations implying masks and disguise presence.

84. E. Granjon, "Le symbole: une notion complexe", *Protée*, 36, 1, 2008, 17-28.



The sobriety and conciseness of the message, transcribed without effect or aesthetic digression, presents an original “relational charter”, evoking behaviours that archaeologists cannot have access to.

This engraving from Tunisia is not comparable with those reported in the Saharan Atlas of Algeria<sup>85</sup>, but we can consider the graphic links uniting this ornamented ram to those of the eastern regions, located in Libya (Gara Um El Mansur)<sup>86</sup>.

In the rock art stations of the Algerian Atlas such as Aïn Naga, Gada el-Kharrouba, Bou Alem, Khrelouat Sidi Cheikh or Dakhilet el-Ateuch the rams are shown decorated with a light and unidentified spherical structure, sometimes accompanied by a shepherd who is neither disguised nor masked. G. Camps states that “pour donner plus de prestance à l’animal, un agencement a été conçu pour l’obliger à redresser la tête”<sup>87</sup>.

The creativity of the artists of the Ghorfat er-Rmada, Jebel Ousselat provides very new elements of response to the theme of the beginnings of animal domestication in the Eastern Maghreb. In the engraved pastoral sub-unit (E) of the Jebel Ousselat, there is nothing to indicate sacrifice, yet everything suggests it<sup>88</sup>. The study could be extended, but this would go beyond the scope of our approach.

### Conclusion

When we try to combine all the data (behavioural, archaeozoological, graphic, etc.) produced synchronously by the same populations on the same territories, as was the case in Tunisia during the Middle Holocene, their convergent information opens a window on previously unrecognised expressions of their imagination. The graphic images lend themselves to an appropriate semantic analysis despite the disparate and insufficient state of their documentation. The aim of this approach was to reconnect the threads of the life experience of hunter-gatherers and then of transhumant pastoralists.

Our objective was to insert a documentary ensemble that has remained marginal. We are testing the concept of a smooth transition from a dominant predatory/gathering way of life with still Palaeolithic references, to a pastoral and transhumant life regulated by the existence of a close animal and human solidarity. The semantic formulations, specific to each document, give access to unsuspect-

85. G. Camps, “Bélier à sphéroïde”, 1417-1433; C. Roubet, “La gravure holocène du bélier orné en Algérie : chronomètre de l’évolution comportementale du pastoralisme Néolithique Initial (PNI) IX-Vème millénaires cal BP. RQM 8, Nador 2015”, *Journal of Material and Environmental Sciences*, 7, 10, 2016, 3778-3799.

86. J. Jelinek, “The Gara um il Mansur rock art site in Tripolitania”, *Anthropologie*, 20, 2, 1982, 151-162, 153, 154.

87. Camps, “Bélier à sphéroïde”, 1433.

88. C. Lévi-Strauss, *Le totémisme aujourd’hui*, Paris, Presses Universitaires de France, 1965.

ed behavioural traits. deciphering the messages reveals a creative imagination, capable of transcribing nuances and facts that appear in their beauty and naturalness, testifying to a sensitivity and an admiring contemplation of the world. It is then possible to access a strict and concise language, which can be approached with empathy. We can suggest semantics: terror of an animal capture, beauty of foliage in the wind, joy of an amusement, all of which evoke an unperceived experience.

Holocene prehistory must be able to build bridges with the methodological work of anthropologists. Modern archaeology, which must remain objective and approach the “hard sciences” in its own way, must not confine itself to expressing only what can be counted and examined through an economic, technical and chronological prism. The place of behaviour, while evoking a domain of the possible, of the sensitive, of the human in a word, which is also accessible to us, could enable us to perceive cautiously and hypothetically, aspects of the social and symbolic domain which are so decisive in the unfolding of life. And in this hypothesis, what could be more expressive than graphic expression?

Let us return to the results presented in this study. We could better understand how the Caspian *sensu lato* peoples developed a certain taste for brief and incisive dialogue, using shell or piece stone for receiving messages; a message expressed through an expressive graphic medium, a support for a direct and precise language. The artefacts and sources studied here support and respond to each other, and we can, with due caution, develop hypotheses regarding the evolution of behaviour during the important societal transition that began during the Holocene. By identifying the signs present on each object one by one, the semiotic analysis takes into consideration the behavioural and empathic ensemble of the creator of each work, a prelude to the elaboration of a creation. This semantic approach shows great explanatory potential, allowing us to discover the creator’s intentions as soon as the coordinated movements of the artist’s mind and hand can be traced and reproduced. This method would be capable of capturing the tenuous threads of a sensitive thought, the emotion that preludes the creation of unforgettable scenes. This anthropological approach led to an analysis of each “document”, which distinguished its characteristic details from others, and brought to light the element that was significant in each work, which thus allowed a brief but precise expression of an important message. This would be a new way for a holistic understanding of the Eastern Maghreb Holocene cultures.



