

RAIN AND ROCK ART IN THE SAHARA: A POSSIBLE INTERPRETATION

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Introduction

The Saharan mountains of the Tassili and Tadrart in Algeria and the Acacus in Libya (fig. 1) are rich in prehistoric paintings and petroglyphs. During the wet period, from about 10,000 BP, these mountains were frequented by hunter-gatherers; around 7,500 BP pastoral populations with their domesticated cattle appeared (Di Lernia 1996; Dunne et al. 2012). With the onset of desert conditions at around 4,000 BP the majority of the population abandoned the Central Sahara. The main route of the migration was to the south because the rivers were still flowing, at least seasonally, towards the Chad basin and river Niger (Gasse 2006). Around 4,000 BP long-standing sites in northern Niger ceased to function as settlements and burials, and for the first time, human occupation is documented well into the Sahel. At the same time, the appearance

in the Sahel of ceramics of Saharan inspiration confirms southwards population movements (Paris 1996; Breunig and Neumann 2002; Haour 2003).

Central Saharan rock art research has traditionally concentrated on description of the figures, determining the styles and the chronology. Very little has been done in terms of the interpretation because of the lack of direct ethnographic records. This paper proposes an interpretative framework for numerous Saharan prehistoric sites, considering the movement of the prehistoric Saharan population towards the Sahel, together with the great antiquity of cultural/religious phenomena related to water,

Spiritual importance of rain

Many African societies associate God with the sky; the same word is often used for God, rain and sky (Mbiti 1969; Haruna 1997). When it rains, the Masa people



Fig. 1. The region of the Tassili, Tadrart and Acacus (Google maps), seen in the circle.



Fig. 2. Wadi Moulenaga shelter (Algerian Tadrart): red lines mark channels carved on the floor.

living near Lake Chad say “God is falling.” The clouds are God’s body and when it starts to rain the Masa and Nuer in southern Sudan and Ethiopia say “God copulates with Earth” or “God gave birth” (Melis 2002). Whereas rain is sacred as a direct manifestation of God, or sometimes even a personification of God, water bodies such as lakes or rivers are entities dominated by water spirits. Water was the main component of ancient rituals: in Egypt the first rite performed at the king’s accession was his symbolic purification with the water of life (Lurker 1980).

In African belief, rain may be invoked by prayers. Rainmaking rituals, both private and public, are reported in all parts of the African continent. River banks, waterfalls, groves, caves or mountains may be used as places of rain rituals. Rainmakers occupy a position of great influence in the community. They not only make rain but also stop it when too much comes or when it is not welcome at a given moment (Mbiti 1969). There are some societies in eastern and southern Africa, which have sufficient rainfall, but where rainmaking is a lucrative and prestigious profession. Offerings or sacrifices often accompany rainmaking rituals. In the Kitui region of Kenya, a girl and a boy drive a goat or a bull around

a hill seven times. Then the animal is slaughtered by old men and some of the blood is poured into a sacred place (Akong’a 1987). A similar concept of a sacrificed animal is known from the ethnography of the San people in South Africa (Lewis-Williams 1981; Dowson 1998). However, San rainmakers do not sacrifice a real animal. They catch a rain animal during altered states of consciousness, and lead it through the sky to the place where the rain is needed, or to the top of a nearby hill. There the animal is killed so that its blood would fall as rain (Lewis-Williams 2004).

Rain rituals are frequently associated with mountains and stones. Although trees are places for prayers, rock is more powerful. During slight droughts, tribes of northern Nigeria offer prayers under a baobab tree, but during severe droughts prayers for rain are offered on top of a rock; rather than beating drums, the priests carry two stones which they hit against each other because the stones symbolize extra power which brings rain (Haruna 1997). Despite the spread of the Islamic and Christian religions, there is still a strong belief that the rock is a source of rain. In the Ethio-Sudanese borderlands when the rainy season fails to come, people pray under a particular rock decorated with ancient



Fig. 3. Kettles with channels (Wadi Moulenaga, Algerian Tadrart).

paintings believed to have magical powers (Fernández 2011). Rain rituals are reported from the Tassili mountains in Algeria. Milk and oil are poured in the Tin Tekelt shelter presenting prehistoric rock art, suggesting that it has been used as a ritual place for several thousand years (Soukopova 2016).

Some of the mythological themes circulating in Africa today seem to be thousands of years old (Le Quellec 2015). In the field of religion people are extremely conservative and although various peoples in Africa are separated by great distances, their philosophical systems are fundamentally similar (Jahn 1961). Very little has changed from time immemorial in rainmaking rituals in northern Nigeria (Haruna 1997) and in South Africa some sites may have been used for rainmaking rites for thousands of years (Murimbika 2006).

Rock art and rain in the Sahara

Among the earliest forms of Saharan rock art are kettles and cupules (Tauveron 1999; Mori 2000; Soukopova 2017). Anthropogenic sediments inside kettles at Wadi Afar Cave in the Acacus were dated to 8,400 years BP (Cremaschi and Di Lernia 1998). Kettles and cupules were frequently connected to rain water. Whereas large kettles carved on horizontal floors could have served as water containers, small cupules had unlikely practical purposes. Channels leading to/from kettles are common and their connection to rain water is often evident (figs. 2, 3). Cupules and kettles also appear on isolated boulders. Standardized items in the Central

Sahara represent boulders with a single kettle, as they present the same characteristics and the same patterns of manufacture: boulders circa 150 cm x 150 cm were located in front of a shelter facing an open space, and thus usually visible from far away. For example, at In Taborak a boulder with a single kettle was placed under a water cascade (fig. 4). The floor under the boulder was prepared by locating flat blocks as a support. Although during rains water fell into the kettle, it was not a container. The scope was only to let water pass through the kettle because one edge is significantly lower. Moreover, this site is next to an ancient river, so there was no necessity to store water. The kettle is surrounded by 16 deep cupules and several grooves. More than 40 parallel vertical grooves were carved on the wall above the kettle where the rain water flowed down.

At nearby Wadi Bohedien, another boulder with a single kettle surrounded by eight deep cupules was arranged in front of a shelter facing a large space (figs.

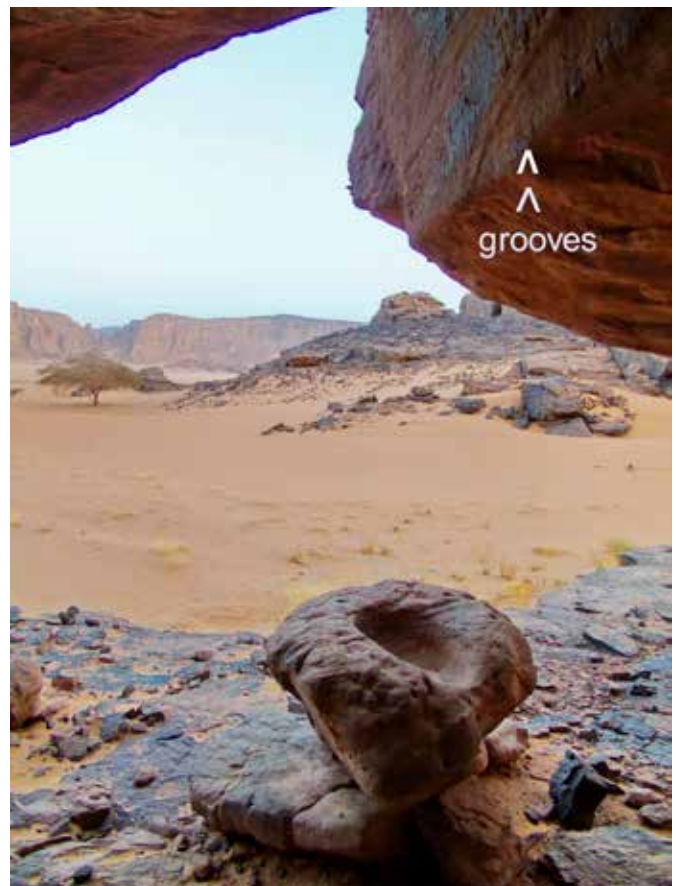


Fig. 4. In Taborak boulder with single kettle surrounded by cupules. The boulder was located on flat blocks under a rain cascade (Algerian Tadrart).



Fig. 5. Wadi Bohedien boulder is located in front of a shelter and facing an open space. The boulder is inclined so that the kettle is visible from faraway (Algerian Tadrart).

5, 6). Even though the boulder is not under a rain cascade, the shelter's wall is decorated with long vertical lines, very similar to the grooves in the previous site, but here they are painted and they exit from an oval form (fig. 7). This painting belongs to the Round Head style which is considered to be at least 8,500 years old (Soukopova 2011). The oval form is interpretable as a cloud and this interpretation has been proposed for eastern and southern Africa where ver-



Fig. 6. Wadi Bohedien boulder with single kettle surrounded by cupules (Algerian Tadrart).

tical lines and dotted stripes have been seen as representing rain falling from clouds, and they were probably connected with rainmaking and fertility rites (Prins and Hall 1994; Smith 1997). The location of the Saharan boulders in an open area, and thus visible from far away, with other forms of rock art in the same place, suggests that these were places designated for public rituals. A general – though exclusively subjective – impression of the decorated boulders is that they represent objects of cult, perhaps ancient altars. Coupled kettles are frequent in the Saharan. They are found on shelters' floors and on boulders. An example of what may have been an important object of cult is the In Tehaq boulder (fig. 8). Two kettles were carved on the edge of the block where rain water fell. Channels leading from kettles suggest that they were not containers. The hypothesis of a ritual function of the boulder is supported by around 200 cupules around the kettles and covering the inclined surface of the block on which three long steps were carved as a support for rows of cupules. The importance of this boulder is testified by the fact that it was reconstituted when in the past it split in two pieces; an attempt to repair the blocks by pushing them together was made but the two pieces do not fit well as the upper part partly covers one of the kettles. Furthermore, the boulder was actively used. Its surface is smooth and



Fig. 7. Wadi Bohedien: Round Head painting representing an oval form with vertical lines. Photo enhanced with DStretch.

polished in the area that has cupules and kettles, but the surface without carvings is rough. The smoothness must have been caused by frequent touching or by staying on the decorated surface and not by running water as the area outside cupules, also exposed to rain, remained rough. In the Central Sahara there are numerous examples of polished surfaces of decorated boulders, which demonstrate frequent physical contact with the rock.

Grooves were also connected to rain. Numerous shelters present carved lines under rain water cascades (figs. 9, 10). These grooves are only several millimetres deep so that their function was not to drain water. They rather seem to symbolically help water go down the wall. In the Central Sahara grooves were certainly created in various periods, but the earliest examples predate the Round Head paintings (Soukopova 2018). Several sites appear as engraved complexes related to rain water. An example is Wadi In Djaren in the Algerian Tadrart, an important ancient water course and the main communication route. Although the river was present here even during dry periods, as still indicated today by kilometres of green vegetation, numerous rock art sites seem to have been created in relation to rain. At the eastern edge of In Djaren a river-facing rock where

rain water used to fall in a large cascade, appears as a decorated unit in which the engraved elements are all related to falling water (fig. 11). Three small kettles at the bottom of the cascade were carved following the same pattern as in previous sites, i.e. water had only to pass through them since their external edge is very low. Next to the kettles there is a cluster of cupules, and on the vertical wall above them there are two paired holes (fig. 12). The same holes are found in the Libyan Acacus more than 90 km away (Mori 2000). On both sides of the cascade there are other cupules, engravings of a bovid, an elephant, and a feline-like creature and cupules mixed with grooves (fig. 13).

A common trait of the examples presented here is that they are located in sites near ancient water courses or they are directly facing ancient rivers. The relationship between the rock art, rain water and the river appears probable and the ritual function of these places is plausible.

Rain animals

The existence of rain animals is attested to in southern African rock art (Solomon 1992; Dowson 1998; Lewis-Williams 2004; Challis 2005). They are often rounded, fat, hippopotamus-like creatures which bear little



Fig. 8. In Tehaq boulder with paired kettles and around 200 cupules. It was reconstituted after it split in two pieces (Algerian Tadrart).

resemblance to known species. Although there are clear likenesses between depictions, no two rain creatures are identical because the image was a manifestation of the rain man's particular animal, caught and killed by him in the trance. Rain animals are depicted in a head-down position, as a sign of submission and of its impending death (Lewis-Williams and Pearce 2004). The same phenomenon has been identified in the

Central Saharan Round Head art attributed to hunters living in the region from 10,000 BP (Soukopova 2011). There are unidentifiable quadrupeds which bear striking similarities to the southern African rain animals: they are bulky, hippopotamus-like and head-down (fig. 14). Sometimes their bodies are filled with decorative elements interpretable as rain, such as dots or dotted stripes (fig. 15) and parallel lines exiting down from their bodies. The back of these animals is often made of two parallel lines, which is probably a later repainting: if it was indeed a rain animal in a rainmaking place, with each ritual it was simply repainted instead of making a new one. In several cases a double contour is an entire animal, i.e. a larger animal incorporates a smaller animal of the same or similar shape (fig. 14). Their multiple repainting may indicate places of rainmaking rituals.

Human figures and recognisable animals were also connected to rain water. They were deliberately painted under an ancient rain water cascade, so that water crossed vertically their body (figs. 16, 17). The intentional connection to water is evident, especially in those cases where the figures are accumulated next to or under the water cascade, whereas the remaining rock wall is empty.



Fig. 9. Grooves under an ancient rain flow (Wadi In Djaren, Algerian Tadrart).



Fig. 10. Shallow grooves on the rock surface under an ancient rain cascade (Wadi In Djaren, Algerian Tadrart).

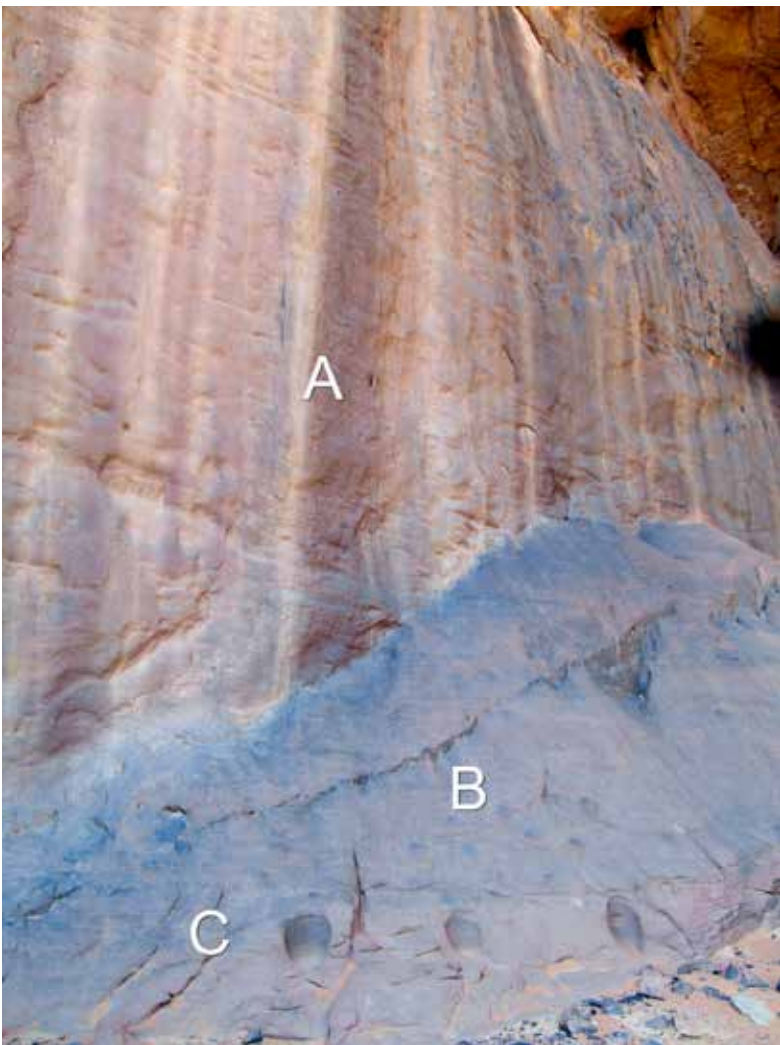


Fig. 11. Engravings under a large cascade: A) double holes; B) cupules; C) three kettles (Wadi In Djaren, Algerian Tadrart).



Fig. 12. Double holes carved under water cascade (Wadi In Djaren, Algerian Tadrart).



Fig. 13. Cupules and grooves on vertical wall next to the large cascade (Wadi In Djaren, Algerian Tadrart).



Fig. 14 Bulky quadruped head down, with characteristic double back line is interpreted as rain animal (Uan Bender site, Tassili Plateau). Photo enhanced with DStretch.



Fig. 15. Bulky quadruped, head down, with internal decoration made of dotted stripes is interpreted as a rain animal (Tin Barsaoula/Afa site, Libyan Acacus). Photo enhanced with DStretch.



Fig. 16. Round Head male figure painted under an ancient rain water cascade. A half-moon-like object on his left shoulder suggests the ritual character of the painting (Uan Assakamar site, Tassili Plateau). Photo enhanced with DStretch.



Fig. 17. Round Head animal figure painted under an ancient rain water cascade (Uan Bender site, Tassili Plateau). Photo enhanced with DStretch.

Conclusion

Since water has always played a fundamental role in the spiritual life of African societies, this paper postulates a link between prehistoric rock art and rain. Whereas this link is materially visible from numerous engravings and paintings made under rain water cascades, any further interpretations are hypotheses still to be tested. The criteria chosen in this study was the presence of rain water in the sites and its relation with the rock art. The frequent connection of rock art with water cascades was clearly intentional, and the importance given to rain fits with the great importance of rain documented in the ethnography. Obviously, not every rock painting or engraving in the Sahara was connected to water; the rock art had certainly also other purposes. Various criteria should be identified and tested in future research, assuming that researchers are willing to take the risk and abandon the comfort zone of merely recording. Like southern African rock art, where the interpretation has been successfully discussed for nearly 40 years, the Central Saharan rock art study should also make a step forward and open a new, exciting chapter of African prehistory.

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References

- Akong'a, J.
1987 Rainmaking Rituals: A Comparative Study of Two Kenyan Societies. *African Study Monographs* 8(2), 71-85.
- Breunig, P., Neumann, K.
2002 From hunters and gatherers to food producers: new archaeological and archaeobotanical evidence from West African Sahel. In Hassan, F. (ed.), *Droughts, food and culture: ecological change and food security in Africa's later Prehistory*. Kluwer Academic, Plenum, New York, 123-155.
- Challis, W.
2005 "The men with rhebok's heads; they tame elands and shakes": Incorporating the rhebok antelope in the understanding of Southern African rock art. *South African Archaeological Society Goodwin Series* 9, 11-20.
- Cremaschi, M., Di Lernia, S. (eds)
1998 *Wadi Teshuinat. Paleoenvironment and Prehistory in South-Western Fezzan (Libyan Sahara)*, Milano: All'Insegna del Giglio/CNR, 243-95.
- Di Lernia, S.
1996 Changing adaptive strategies: a long-term process in the Central Saharan massifs from Late Pleistocene to Early Holocene. The Tadrart Acacus perspective (Libyan Sahara). *Colloquium* 30, 195-208.
- Dowson, T. A.
1998 Rain in bushman belief, politics and history: the rock-art of rain-making in the south-eastern mountains, southern Africa. In Chippindale, C., Taçon, P. S. C. (eds), *The archaeology of rock art*. Cambridge: Cambridge University Press, 73-89.
- Dunne, J., Evershed, R. P., Salque, M., Cramp, L., Bruni, S., Ryan, K., Biagetti, S., di Lernia, S.
2012 First dairying in 'green' Saharan Africa in the 5th millennium BC. *Nature* 486, 390-394.
- Fernández, V. M.
2011 Schematic Rock Art, Rain-Making and Islam in the Ethio-Sudanese Borderlands. *African Archaeological Review* 28(4), 279-300.
- Gasse, F.
2006 Climate and hydrological changes in tropical Africa during the past million years. *Comptes Rendus Palevol* 5(1-2), 35-43.
- Haour, A. C.
2003 One Hundred Years of Archaeology in Niger. *Journal of World Prehistory* 17(2), 181-234.
- Haruna, A.
1997 Rituals and Ceremonies Accompanying Rainmaking among the Guruntum and Bubbure People. In Jungraihtmayr, H., Barretteau, Daniel, Seibert, U. (eds) *L'homme et l'eau dans le bassin du lac Tchad = Man and water in the lake Chad basin*. Paris : ORSTOM (Colloques et Séminaires). Séminaire du Réseau Méga-Tchad, Francfort (DEU), 1993/05/13-14, 227-239.
- Jahn, J.
1961 *Muntu. La civiltà africana moderna*. Giulio Einaudi editore S. p. A.
- Le Quellec, J. C.
2015 En Afrique, pourquoi meurt-on ? Essai sur l'histoire d'un mythe africain, *Afriques* online, Varia, at <http://afriques.revues.org/1717> ; DOI :10.4000/afriques.1717 (accessed 28 July 2015).
- Lewis-Williams, D. J.
1981 *Believing and Seeing: symbolic meanings in southern San rock paintings*. London: Academic Press.

- Lewis-Williams, D. J.
2004 *The Mind in the Cave. Consciousness and the Origins of Art*. London: Thames and Hudson.
- Lewis-Williams, D. J. and Pearce, D. G.
2004 Southern African San Rock Painting as Social Intervention: A Study of Rain-Control Images. *African Archaeological Review* 21(4), 199-229.
- Lurker, M.
1980 *The Gods and Symbols of Ancient Egypt*. London: Thames and Hudson.
- Mbiti, J. S.
1969 *African Religions and Philosophy*. London, Ibadan, Nairobi: Heinemann.
- Melis, A.
2002 *I Masa: Tradizioni orali della savana in Ciad*. Pisa: Edizioni Plus – Università di Pisa.
- Mori, F.
2000 *Le grandi civiltà del Sahara antico*. Bollati Boringhieri editore, Torino.
- Murimbika, M. E.
2006 'Sacred Powers and Rituals of Transformation: An Ethnoarchaeological Study of Rainmaking Rituals and Agricultural Productivity during the Evolution of the Mapungubwe State, AD 1000 to AD 1300', thesis submitted to the Faculty of Humanities, University of the Witwatersrand, Johannesburg, in fulfillment of the requirements for the degree of Doctor of Philosophy, Johannesburg.
- Paris, E.
1996 *Les sépultures du Sahara nigérien du Néolithique à l'islamisation : 1) Coutumes funéraires, chronologie, civilisations ; 2) Corpus de sépultures fouillées*. Paris: ORSTOM.
- Prins, F. E., Hall, S.
1994 Expressions of fertility in the rock art of Bantu-speaking agriculturalists, *African Archaeological Review* 12, 171–203.
- Smith, B. W.
1997 *Zambia's ancient rock art: the paintings of Kasama*. Livingstone: National Heritage Conservation Commission of Zambia.
- Solomon, A.
1992 Gender, Representation, and Power in San Ethnography and Rock Art, *Journal of Anthropological Archaeology* 11, 291-329.
- Soukopova, J.
2011 The earliest rock paintings of the Central Sahara: Approaching interpretation, *Time and Mind: The Journal of Archaeology, Consciousness and Culture* 4(2), 193-216.
- Soukopova, J.
2016 Saharan rock art sites as places for celebrating water, *Expression: Quarterly e-journal of Atelier in cooperation with UISPP-CISNEP. International scientific commission on the intellectual and spiritual expressions of non-literate people* 12, 67-72.
- Soukopova, J.
2017 Central Saharan rock art: Considering the kettles and cupules. *Journal of Arid Environments* 143, Special Issue on Rock Art in Arid Environments, 10-14.
- Soukopova, J.
2018 Decorated boulders and other neglected features of the Central Saharan rock art. *Journal of Arid Environments* 156, 96-105.
- Tauveron, M.
1999 Planchers rocheux aménagés du Sahara central. *L'Anthropologie* 103(3), 391-419.