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ARCHAEOLOGY OF ROCKS AND THE RELEVANCE OF PETROGLYPHS IN THE RECONSTRUCTION OF HISTORY: AN OUTLINE FROM VOLCAMONICA, ITALY

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Abstract

This paper is a report on the outcome of the writer's participation in an international archaeological field school at Volcamonica, Italy. The aim is to examine petroglyphs and petrographs in archaeology and the applicability of using rocks as archaeological and anthropological data in the reconstruction of history and cultural studies. Theoretically, it is based on archaeological fieldworks and site investigations at Volcamonica. The data of the report are derived from direct archaeological investigation of severalpetroglyphs and petrographs at the sites. Data show palaeo-petroglyphs of several dimensions and features. Field findings indicate that the sites cover a very large area. Also, data reveal that the sites belong to several archaeological eras. Chronologically, the sites are of great antiquity. The study discusses the usefulness of petroglyphs in the reconstruction of history. The study concludes by making a comparative analysis with Nigeria and discussing the usefulness of petroglyphs in the reconstruction of history on a global basis.

Keywords: Archaeology, Fieldschool, Historical reconstruction, Petroglyphs, Volcamonica

Introduction

Petroglyphs are of prime importance in deciphering the past because engravings on rock surfaces contain veritable data of history. Archaeologists are interested in rocks as much as geologists are, but for different purposes, hence, the term "archaeology of rocks" coined by the author, offers a penetrating look into the usefulness of rocks as archaeological database. Archaeological interest in rocks is derived from the huge sources of information that they can give on human activities in the past that will aid the reconstruction of history and the study of ancient cultures. This paper posits that petroglyphs are of immense benefits to archaeologists because of their peculiarities. Archaeologists are wont to lament that the data needed for their work are limited, and highly prone to destruction and distortions. According to Tubi (2017), the dearth of data is a major problem which confronts archaeologists all over the world. Since archaeological data are mostly buried inside the earth, they are invariably subjected to the vagaries of soil conditions, which destroy relics. The problem is further compounded by the destructive activities of nature and humans. However, petroglyphs present a slightly different scenario as data on rocks are more durable than other archaeological data. It is this fact that particularly engenders researchers to petroglyphs. This paper is the outcome of the researcher's participation at an International Archaeological Rock Arts research and field school,Volcamonica, Italy in July-August 2018. The writer was the only African on the team.



Author and Paola Frigerio at Volcamonica



Laboratory analysis at Volcamonica

Historical context of the site

Volcamonica is situated in Lombardy plain, Brescia Province of Italy. It is a valley in the midstof the central Alps of Lombardy. It is a huge site covering about 90 kilometres and is one of the best studied sites in Europe having been a center of intense archaeological research on petroglyphs for several years. Volcamonica derives its name from Camunni, which denotes the inhabitants of the place in the Iron-Age before the conquest of the area by the Romans (Fossati 2018).

Volcamonica possesses tremendous assemblage of petroglyphs. The petroglyphs at Volcamonica are found in over 2500 rocks and the total engravings are over 140,000, making the site one of the largest collections of such in the world. These were made by engraving, hammering and scratching. Since 1914, the area has attracted the attention of researchers who eek to understand the significance of its rock arts. Chronologically, the total assemblages at Volcamonica are of four stylistic groups of the Prehistoric, Epipalaeolithic, Protohistoric and the Iron Age (Giorgi 2018). Currently, the team of professional archaeologists, aficionados and amateurs led by Angelo Fossati, a professor of archaeology, has studied thousands of petroglyphs around Volcamonica. It was listed as a UNESCO World Heritage site in 1979, the first of such in Italy. Chronologically, it covers circa 8,000 years (Fossati, 2018).

Archaeology of rocks and petroglyphs

The term "archaeology of rocks" is a new mint in this study to refer to cultural data on rocks and the study of such data by experts. It refers to the scientific exploration of rocks for evidence of human culture. The term thus covers the whole gamut of scientific exploration of rocks for evidence of human cultural activities from the yore to the present. Rocks possess durability and so they are highly valuable for storing data on past human life. Rock surfaces are like tablets which human beings used/use for documentation and where such occurred, they are sources of data for arcaheologists/anthropologists.

Petroglyphs are depictions on rock surfaces made directly by human beings that have survived through time. Etymologically, the term is derived from the Greek word, *petra* meaning rock and *glyphen* meaning to carve. It is a general term in archaeology that covers a wide range of activities ranging from engraving, pecking, incising, abrading, chiseling, scratching, scouring and carving. Petroglyphs are autobiographies of the makers. They come in different types. Archaeological argots for petroglyphs include rock arts, rock pictures, rock

drawings, rock inscriptions, rock carvings, and rock sculptures. Petroglyphs are of the greatest cultural achievements of early humans and the ingenuity of mankind. They give graphic illustrations of the culture of the makers and they remain the first autobiography of mankind. Data indicate that they are the most ubiquitous of human arts found in all parts of the world (Garlake, 2002;Fossati, 2017).

Petroglyphs are highly valuable in archaeological investigations as they shed refreshing anthropological data on the early life-ways of ancient people. Petroglyphs depict human prowess, successes and failures. They reveal the intimate feelings of the humans who lived and made them in the past. They come in variety. They reveal creativity, nascent science, religion and sports. Menu and rites of passage are also depicted with clarity. The totality of petroglyphs represents a great accomplishment of mankind in general, some expressions of the most sublime activities of humans.

Scholars such as Anati (1994), Dowson (1992), Coulson and Campbell (2001) and Garlake (2002),compute that chronologically, the origin of petroglyphs is very old. In Africa, petroglyphs go as far back as the earliest recognizable emergence of the Homo sapiens in the Paleolithic era, circa 27,000-40,000 (Garlake,2002). There are regional variations in the chronological orderings of petroglyphs. While some communities stopped depictions on rocks very many years ago, some continued until recently into the 19th century in some parts of the world (Garlake, 2002).

Global data onpetroglyphs indicate a widespread tradition that is found in all the continents (Anati, 1994;Garlake, 2002;Fossati, 2017;Inshall, 1999; Khan, 2008). Africa has the largest number of rock arts in the world. Important sites which have been studied and documented include the following: Akakus(Libya), which was designated as a UNESCO heritage site, dated circa 12,000-100 Bp, with scenes of elephants, camels, birds, horses, men, music and dancing, Tassili (Algeria), Wai Hammamat (Egypt),Bidzar (Cameroon), Banbari(Central African Republic), Bwalenas Niola (Chad), Air mountains (Niger), and Ogooue Valley (Gabon). Majority of sites in Africa are found in the southern parts of Africa such as Bloombos cave, Drakenberg, and Wonderwerk cave. Tubi (2017) has discussed some of these sites and examined their significance in the reconstruction of African history. In Nigeria, the main sites earlier known are Birni Kudu and Ikom. These sites are receiving attention from scholars. However, the discovery of new sites at Shira (Bauchi State), Dutshen Mesa and Dutshen Murhu (Jigawa State), which are currently under investigation by researchers add to the richness of Nigeria's contributions to the study of petroglyphs (Bakinde and Giade, 2019;Aleru, Abubakar and Hassan, 2019; Hussaini, Abdullahi and Abdulrahman, 2019).

Typology of petroglyphs at Volcamonica

The classification here is based on the types of petroglyphs that the author examined at Volcamonica, Italy. Extensive field study and laboratory analyses of the various types of depictions on rocks at the sites have it possible to identify with clarity some typology of petroglyphs in the area. Petroglyphs at Volcamonica can be divided into five typologies:

Geometric designs: These are carvings on rocks which are mathematical-like. The finality of the exact purpose of this type of petroglyphs is not known yet to scholars working on the sites, but for this researcher geometric petroglyphs suggest nascent form of cognate organization of

the human brain towards a mathematical scientific model. Architectural edifices also featured in some of these engravings.

Anthropomorphs: These are depictions of humans on rock surfaces. They show human physique with identifiable human features. Petroglyphs of this sort have scenes associated with hunting, war, and dancing at Volcamonica.

Ideomorphs: Ideomorphs are symbolic depictions. Depictions on rock surfaces which represent ideas and symbols of various forms or expressions are also prominent features of petroglyphs at Volcamonica. Majority of these are carvings and engravings of ritualistic drawings and religious ceremonialism. Shamanistic practices are depicted with evidence of altered consciousness in the individuals depicted.

Zoomorphs: There are profuseness of animal representations. They consist of the primary games that were exploited by the community. Hunting scenes were depicted. Deer are very common, so also are elephantsseen in various sections of the sites. The sites also have chiseling and pecking of extinct animals on rock surfaces at Volcamonica.

Ornithomorphs: Figures of birds are also depicted on rock surfaces at the sites. These figures are dated to the beginning of the Iron Age and onwards. The values of these birds as domesticates or wild games conclusively point to rich exploration of their natural resources for menu.

Advantages of petroglyphs in archaeological record: an outline from Volcamonica

Rocks provide huge data to archaeologists. Like soil, rocks are storehouses of information of past human activities and peoples' ways of life. Researchers know the usefulness of rocks as archaeological data base, as a result, data on petroglyphs come from researches of scholars across the world. Petroglyphs are of tremendous advantage to archaeologists in their bid to reconstruct history and interpret cultures. Therefore, rocks are practically able to offer supplementary sources of data to archaeologists, even where there are several data to be excavated. They can equally be complete alternative sources for archaeologists, where there are no data to be excavated. Archaeologists are enamored with rocks because they do not suffer surfeit of problems which are associated with soils; therefore, they have been harnessed to aid archaeological investigations.

The unavailability of indubitable and durable data remains a major problem which confronts researchers. Therefore, the availability of data on rocks is a great value to archaeologists. In fact, rocks offer better sources of data in some context, above other archaeological sources because of several factors. It is apropos to consider three salient points as germane to the concept of "archaeology of rocks":

Durability*:* Rocks are highly durable sources of archaeological data if compared with soil. They depreciate very slowly and last longer if juxtaposed with soils. Petroglyphs can remain unchanged for thousands of years. Though they are subjected to weathering conditions, they are more durable in conserving their data than soil. Since one of the major problems which archaeologists are subjected to is the degradation of soil, archaeological data on rocks offer a more durable sources for the archaeologists. As storehouses of relics, soils are daily laid open

to weather conditions, human activities and animals burrowing. These invariable affect the archaeological information which the researcher might derive from the soil. Petroglyphs are not susceptible to the fast rate of degradation like relics buried inside the earth, therefore, they offer a more durable sources of data for researchers.

Profuseness: The availability of rock surfaces for humans to make depictions is indeed a global phenomenon, although in varying degrees. In addition, rocks are of several varieties in textures, sizes, locations/positions and formations which make them to beuseful to human beings. Archaeologically, one of such usefulness comes in forms of petroglyph. Rocks provide rich avenues for humans to use for drawings, carvings, pecking etc., in their bid to document their history and culture, prowess and ideas.

Variety: Another advantage of petroglyphs is that they occur in varieties of places, designs, sizes, themes and dates. During the fieldwork, the writer observed that there is a wide variety in locations of petroglyphs. Some petroglyphs are on open rock surfaces, some are on rock overhangs, while some are inside caves. Petroglyphs come in varieties. Petroglyphs are of different makes such as engraving, pecking, carving and burrowing. They have various sizes with a mixture of big, small and miniature. Petroglyphs are depicted in various forms as geometric, ideomorphs, animals and humans. In addition, there are multiple scenes of hunting, dancing, war and rituals, which are also depicted.

Usefulness of Petroglyphs to Archaeology

Petroglyphs are of tremendous usefulness to archaeology. Their usefulness can be deduced from some important premises which offer revitalizing data to archaeologists about the past. Generally, petroglyphs, by supplying direct evidence to archaeologists, make the most valuable contributions to the onerous task of reconstructing the past. Petroglyphs offer the best direct illustrations of past human life by the culture-bearers themselves. Also, petroglyphs are autobiographies of the people by the people and for the people, which have survived for archaeologists to decipher. Based on these premises, the following usefulness can be deciphered from the study of petroglyphs in general.

Identification of totemic, ritualistic/religious activities: The first indubitable evidence for spiritual activities of early humans comes from petroglyphs. They give us direct depictions of rituals which took place among the ancients. Religious observances in form of trances and shamanistic rituals are depicted in some engravings at Volcamonica. At Volcamonica, there are pecking of human figures that were indicative of religious ceremonialism. One of the most graphic was the petroglyph of a running man, drawn in a naturalistic style found on Rock 35, which researchers tagged the "running priest". The goddess Cernuunos is shown in one of its earliest depictions in history at Volcamonica circa 6th century BC.

By juxtaposition, some of the best illustrations for these activities come from the Republic of South Africa. The different sites of Bloombos cave (C. 77,000-100,000 Bp) and Drakenberg (C. 20,000-8,000BC) which was designated as a World Heritage Site by UNESCO in 2000, have been studied by researchers. According to Tubi (2017), these sites gave clear evidence of religious ceremonialism among the people who lived and made the petroglyphs. Drakenberg has over 40,000 illustrations on rock surfaces with images of eland, human figures and religious motifs. Clusters of images at Drakenberg depict mythological depth in which deities, animals and humans were involved in ritualistic activities. There are also elements of

cosmological belief systems noticed at the site. Ritualism was also prominent at Bloombos cave in form of carving of abstract symbols and paintings on the body.

Attestation of aesthetics: Aspects of aesthetics and beautification of human bodies are also prominent on petroglyphs. They form the direct evidence of value for aesthetics and beauty among human beings. Dressing/clothing styles are depicted on several engravings at Volcamonica. Similar features are noticeable in sites across the world (Dowson, 1992; Coulson and Campbell, 2001).

Evidence of communication/writing:Indeed, all petroglyphs are communication skills used by early people to document their activities. In particular, elements of nascent writing are seen at Volcamonica. The interpretation of the scripts is not known yet.



Photograph of ancient scripts on rock surface at Volcamonica

Evidence of social and religious life:Prominent features of rituals, music and dancing are found in petroglyphs at Volcamonica. This is also similar in most sites across the globe. There are several indicates of some forms of social life for the people, who engaged in dueling, revelry to celebrate victory over enemies, expression of gratitude to the deity, gathering for fun and may be for other sundry purposes.



Picture showing woman drumming

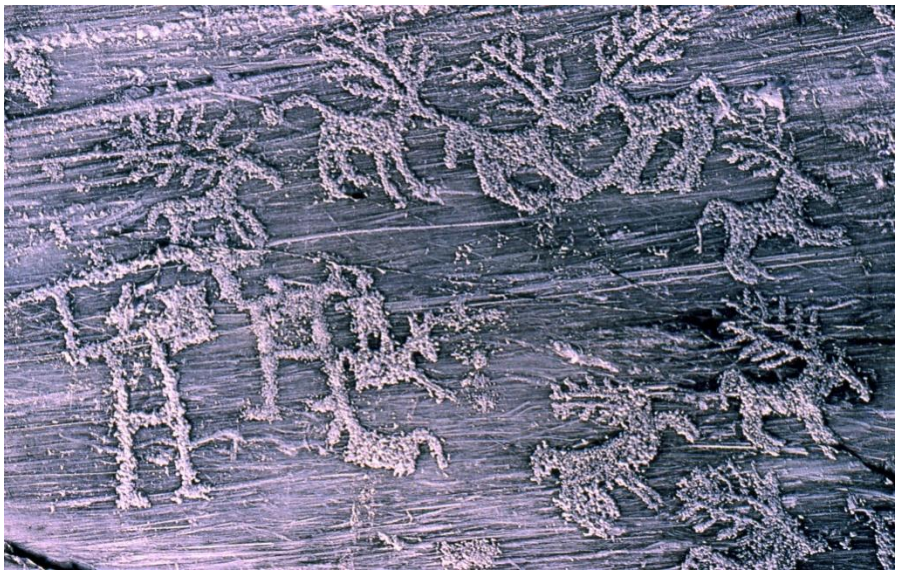
Indication of technology and creativity: There are clear indications of technical prowess by early humans at various sites of Volcamonica. Several depictions of building and construction of huts and houses were seen at the site. In one of the depictions, there are few doubled decked buildingsin which a ladder is seen resting on one of the walls. The purposes of these buildings are not known with certainty to archaeologists. There are depictions of four-wheeled wagon on rock surfaces. Axes with crescent-shaped blades are common features. Weapons of wars include haldberds, axes, daggers, and shields. Interestingly, the presence of cultural continuity is found in the similarity between the prehistoric wagon and the modern ones still in use at Volcamonica environs. It suffices to state that they were signs of impressive creativity on the part of the makers.



Photograph of buildings on rock surface at Volcamonica

Indication of cultural contacts: Peoples' contacts were engraved at the sites. Contacts inform of invasion and wars were seen on the rocks. By comparison, more graphic illustrations come from Drakenberg, South Africa, where the advent of Europeans into that part of Southern Africa, was clearly identifiable on the engravings(Dowson, 1992;Tubi, 2017).

Corroboration of hunting, diet and menu: Petroglyphs are also capable of shedding light on the ancient dietary practices of the people. There are clear depictions of plough at Volcamonica. Manypetroglyphshave scenes of hunting. Games killed were also shown. Animals depicted include deers, antelopes, eland, several unidentifiable animals and birds. The killing of a large animal was celebrated with dancing. The use of plough with varied typology in the prehistoric period is certified at the Neolithic period at Volcamonica. Also, evidence for menu also comes from several parts of the world. Bloombos cave in South Africa for example has evidence of dietary practices with bones of consumed animals equally used for fishing (Tubi, 2017).



Picture showing hunting scene

Comparative study of Nigeria and Italy

The paper draws a comparative study between the study of petroglyphs in Nigeria and Italy. The relevance of petroglyphs in both climes has been acknowledged by scholars such as Aremu, Oghoadena and Owoeye (2014) and Fossati (1993). However, the state of the level of petroglyphic studies thus far accomplished in both countries are poles apart. Italian experience is full of consistency in research, funding and international exposure. Nigeria's state has been marked by inertia. It was the internationalization of research of Italian rockarts that drew this researcher to Volcamonica, who came in amongst researchers across the globe. Historically, the study of petroglyphs in Nigeria started since the colonial time when European researchers and writers like Fagg, Warren, Sasson, Marshall, Vaughan, Murray, Willet, Father Simon, amongst others, reported the presence of rock paintings in the country. Data from both countries show great disparities. While sites in Nigeria are few namely Birni Kudu (Kano State), Gudun and Womdi (Bornu State), Kukuruku Hill (Edo/Kogi States), Yankari (Bauchi State), Eshure (Ekiti State), Ekoi (Cross River State) and Ogidi Ela (Kogi State). Other related sites are the monoliths of Ikom and Ile-Ife, and the soap stones of Esie. Italian petroglyphs are counted in thousands, comparatively speaking.

The makers of the rock paintings in both countries are not known, because they fall into the prehistoric period. Furthermore, data from both countries show similarities in forms of depictions on the rocks. These are human beings, animals, naturalistic drawings, etc. Also, the rockarts of both countries provide early representations of scripts and documentations of knowledge. In the words of Aremu, Oghoadena and Owoeye (2014, p. 129), they "portrayed their mental templates" and they were "observant, innovative and creative".

Conclusion

This paper identifies and discusses the usefulness of petroglyphs in the reconstruction of humans' past ways-of-life. Volcamonica provides good sites for the study of petroglyphs. The sites represent the best of international cooperation among archaeologists, amateurs and aficionados in the field of archaeological fieldwork and field school. The paper notes that there is dearth of petroglyphical study in Nigeria. So far, scholars have noticed and studied only

few rock arts sites which have come to light in Nigeria. With the preponderance of suitable rocks in Nigeria and a massive landmass, the indication that the country would have more sites is plausible if there were concerted efforts in researches to discover new petroglyphs.

This paper concludes by positing that petroglyphs are veritable autobiographies of bygone civilizations. They are "written" sources of data on ancient culture, which aid the reconstruction of history. Petroglyphs are very valuable sources to archaeology because they give direct documentations of human prowess. They reveal the inner movements of their makers, their creativity, philosophy, menu, science and religion. Petroglyphs are sublime achievements of early mankind.

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